Tree Survey, Arboricultural Impact Assessment and Arboricultural Method Statement

for a scheme of two detached dwellings on land at Harps House, Wells Road, Draycott, Cheddar, Somerset, BS27 3SF

for Salmon Planning Company

10 January 2017

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Survey Ref: IMT-SPC-201701

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Summary

- The Client is proposing a development scheme of two detached houses with garaging and access driveways, conversion and extension of barn to single dwelling and conversion of outbuilding into residential annex on land to the rear of Harps House, Wells Road, Draycott, Somerset, BS27 3SF. A proposed site plan PL3534/3 has been provided following the initial tree constraints survey.

- The potential effect of development on trees, whether statutorily protected or not, is a material consideration that is taken into account in dealing with planning applications. British Standard 5837: 2012 *Trees in relation to design, demolition and construction* (The Standard) describes how trees should be taken into account in designing a scheme and protected during and following the construction phase.

- This report includes a full tree survey compliant with the recommendations of BS5837: 2012 undertaken by a qualified arboriculturalist. It categorises the trees by quality and provides information on the above and below ground constraints imposed by trees. It includes a plan to a suitable scale that shows the tree survey information, retention categories and tree RPAs. The majority of trees on site have been categorised as Category B trees. Some other less significant trees have been given a C quality category.

- Tree surgery work for purely sound arboricultural reasons has been recommended. This includes re-pollarding the large Horse Chestnut T4, felling a dead Horse Chestnut in Group 1, and removing deadwood from some trees. Other minor pruning work has been recommended.

- Following arboricultural discussion, the making of the Tree Preservation Order, and subsequent pre-application advice from Mendip District Council, the proposal has been significantly amended from the initial (withdrawn) planning application 2016/0362/FUL for three dwellings. The revised scheme now is now for only two new dwelling buildings and carports, and includes the removal of only three B category individual trees and two category C groups of trees (six trees within these groups). There are minor incursions within the RPAs of retained trees, but given the age, good condition and good vitality of the trees concerned, the incursions will have no significant impact on tree health and longevity. The protection of the remaining RPA areas from any construction activity is central to achieving this.

- Pruning specifications to lift the canopies of retained trees, as well as all other construction considerations and the adequate physical protection of retained trees are detailed within the Arboricultural Method Statement and Tree Protection Plan.

Contents

1. Introduction

1.1. The Client is proposing a development scheme of two detached houses with garaging and access driveways, conversion and extension of barn to single dwelling and conversion of outbuilding into residential annex on land to the rear of Harps House, Wells Road, Draycott, Somerset, BS27 3SF. Only the proposal for the two detached houses require arboricultural consideration. A proposed site plan PL3534/3 has been provided following the initial tree constraints survey. The scheme proposal has undergone amendment since its initial layout and specification in response to the making of a new Tree Preservation Order to protect trees at the site, and the withdrawal of planning application 2016/0362/FUL for three dwellings. A pre-application site meeting was held on 27 January 2017 with the Mendip District Council Tree Officer.

1.2. Under the UK planning system, Local Planning Authorities (LPAs) have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected or not, is a material consideration that is taken into account in dealing with planning applications.

1.3. British Standard 5837: 2012 *Trees in relation to design, demolition and construction* (The Standard) assists decision-making with regard to existing and proposed trees in the context of development. It describes how trees (their root systems, stems and canopies) and future movement and growth should be taken into account in designing a scheme, and how trees should be selected for retention and protected during and following the construction phase. The objective should be to achieve a harmonious relationship between trees and structures that can be sustained in the long term.

1.4. Most Local Planning Authorities (LPAs) expect a planning applicant to demonstrate that they have followed the logical sequence of events described in Figure 1 of the Standard. In summary, this includes a survey of trees to categorise their individual quality and identify the below and above ground constraints they place on the developable area. This should take place at as early a stage as possible to inform the conception and design process. The feasibility of the scheme is determined by, amongst many other factors, the constraints imposed by good quality existing trees, and the ability to successfully retain and protect them throughout the development process (which may include special engineering requirements).

1.5. This report provides information on the tree-related constraints existing currently at the site to help inform the development potential of the site. Advice is provided on tree condition and quality, and tree surgery work for purely sound arboricultural reasons has been recommended.

1.6. An Arboricultural Impact Assessment for the proposed scheme is provided. An Arboricultural Method Statement and Tree Protection Plan details how damage to retained trees during construction will be prevented.

2. Constraints from existing trees

2.1. Statutory protection

2.1.1. A new Tree Preservation Order (TPO) reference M1337 was made by Mendip District Council on 7 April 2016 to protect 12 Sycamore, five Common Ash and three Horse Chestnut trees growing at the north east end of the site and along the north west boundary. The trees are protected as two groups of trees, and include (with reference to tree numbers assigned in this report) to trees T1 to T17 and Group G1. The TPO was made in response to the submitted proposal in planning application 2016/0362/FUL for three dwellings. A search of the DEFRA Magic map[1] found no further statutory wildlife designations on the site.

2.1.2. The surveyed trees might be used by nesting birds in the future. Under The Wildlife and Countryside Act 1981 as amended and the Countryside and Rights of Way Act 2000 all species of wild birds, their eggs, nests and chicks, are legally protected until the young have fledged. Tree work is best carried out outside the bird nesting season, which typically extends from March until September, although in some cases it may begin earlier than this. If work must be carried out within the bird nesting season, the trees should be inspected to ensure that birds are not nesting in the trees to be worked on. If nesting birds are present the work must not proceed.

2.2. Summary of the tree population

2.2.1. The trees on site are mainly mature Sycamore, Common Ash and Horse Chestnut. A line of Sycamore and Horse Chestnut line the north eastern boundary with Vicarage Lane, and grow on top of a shallow quarried rock face. This tapers down towards the south because an earth and stone ramp has been improved from Vicarage Lane to provide rear access. Along the northern boundary is a line of Sycamore and Common Ash; fairly evenly spaced and forming a good visual screen to the site.

2.2.2. The tree survey data are presented in the Tree Schedule in Appendix C and the Tree Constraints Plan in Appendix D. The Tree Constraints Plan shows the calculated or estimated Root Protection Areas (RPAs) for the individual trees. A site visit on 27 January 2017 confirmed that there have been no significant changes in tree condition or health since the initial Tree Survey report IMT-SPC-201602. The only change has been the removal and replanting of the semi-mature Walnut T17.

[1] Available at http://magic.defra.gov.uk/

2.3. Tree quality assessment

2.3.1. The Standard requires that trees should be categorised by an arboriculturalist to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring. The assessment takes into account arboricultural, landscape and cultural values including conservation. The categories and their criteria are detailed in Table 1 of the Standard (see Appendix B), and are categories U, A, B and C.

2.3.2. The majority of trees on site have been categorised as Category B trees. Category B is a wide category into which most trees of reasonable but not outstanding quality would fall. They can be summarised as those of moderate quality with a remaining life expectancy of at least 20 years, such as those downgraded from A because of impaired condition such that they are unlikely to be able to be retained beyond 40 years, OR trees lacking the special quality necessary to merit an A category. Sycamores T5 and T6 have been assessed as Category B2 trees (see table in Appendix B) because their value comes from being part of a group, and have an arguably lower quality as individual trees. Horse Chestnut T4 has been given a B category despite its poor structural integrity because of extensive decay. This is because the recommended work to re-pollard the tree will provide an extended useful life expectancy and preserve its interest and value.

2.3.3. The Standard defines category C trees as those of low quality with a life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. They include unremarkable trees of very limited merit or of such impaired condition that they do not merit higher categories. The following trees have been given the C categorisation because of either small size, structural defects or general poor and declining health: G1 Horse Chestnuts, which includes a dead tree and some small and insignificant trees which have been suppressed in their growth by adjacent trees; G4 Apples and G5 Common Ash because of their small size and low amenity value. G5 Common Ash are also poorly placed to develop further because they grow at the foot of the stone boundary wall.

2.4. Species characteristics

2.4.1. Sycamore trees can cause conflict with residential properties because of their tendency to provide a home for aphids which secrete 'honeydew' onto structures, driveway and vehicles below, on which sooty mould usually grows. This can create a maintenance burden for anyone living below or near to them.

2.5. Below ground constraints of retained trees

2.5.1. The Root Protection Area (RPA) is a layout design tool. It is a notional shape indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. The RPA assumes that a tree is growing in open unobstructed soil, and so does

not account for things such as changes in ground level, impermeable surfaces or structures and excavations. It is not a prediction of the morphology and distribution of a tree's roots.

2.5.2. The RPAs represent below-ground constraints for a development. They are shown as green circles around the trees on the Tree Constraints Plan in Appendix D.

2.5.3. The RPAs of T3 Horse Chestnut, G1 Horse Chestnuts and T4 Horse Chestnut have been modified because the grow above a shallow quarried rock face. Inspection of the trees and site suggests that the trees will not have been able to root within the site to their immediate west. However, because the rock face tapers to become more shallow towards the south, the RPAs of T1 and T2 Sycamores have not been modified. The Mendip District Council Tree Officer recognised, at a pre-application site meeting on 27 January 2017, that the complex topography and rooting conditions at the north-east end of the site will have severely restricted root development of trees T1-T4 and G1 into the developable area of the site.

2.6. Above ground constraints

2.6.1. Above ground constraints include the existing canopies and the growth of existing and newly-planted tree canopies in the future.

3. Arboricultural Impact Assessment

3.1. Impact assessment

3.1.1. The Client is proposing a development scheme of two detached houses with garaging and access driveways, conversion and extension of barn to single dwelling and conversion of outbuilding into residential annex on land to the rear of Harps House, Wells Road, Draycott, Somerset, BS27 3SF. Only the proposal for the two detached houses require arboricultural consideration. The proposal is shown in Proposed Site Plan PL3534/3. It includes improvement of an existing agricultural access from Vicarage Lane to serve Plot 2. In considering tree retention and the arboricultural impact of the development and to inform the design and plans for the site the following factors have been taken into account:

3.2. Trees identified for removal or tree surgery work for reasons of sound arboricultural management

3.2.1. Regardless of development potential for the site, it is recommended that the following tree surgery work (which is also specified in the Tree Survey Schedule in Appendix C) is carried out as part of general sound arboricultural management: It has been initially proposed to retain Ivy within the retained trees because of the biodiversity value of Ivy, and its evergreen screening value.

- Fell the dead Horse Chestnut in Group 1 (second tree from north) to avoid future collapse.
- Re-pollard the Horse Chestnut tree T4 close to the previous pruning points at about 2m from the ground to extend its life and prevent stem failure.
- Remove deadwood and other specified pruning work to T2, T3, G1, T7 and T8.

3.3. Tree retention and removal, and the impact of any tree losses

3.3.1. Development proposals can cause trees to be removed either immediately to make way for the development, or in the future because of damaged roots or soil structure, or through a need for pruning.

3.3.2. The Standard states *(para. 5.1.1)* that certain trees are of such importance and sensitivity as to be major constraints on development or to justify its substantial modification. However, it also states that care should be taken to avoid misplaced tree retention because 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-construction demands for their removal.

3.3.3. The following trees are proposed to be removed:

- T5 Sycamore, B2
- T6 Sycamore, B2
- T7 Sycamore, B1
- G4 Apple (2 trees), C1
- G5 Common Ash (4 trees), C1

3.3.4. The removal of Sycamores T5 and T6 will have a low impact on public amenity. The removal of Sycamore T7 will have a low impact on public amenity. Its removal (along with the recommended re-pollarding of Horse Chestnut T4) will cause the loss of some screening between the site and the adjacent property The Vicarage to the north. However, new planting is proposed to replace this screening and is outlined below. The removal of Apples G4 and Ash trees G5 will have no negative impact on public amenity.

3.4. Proximity of structures to trees: the building and excavation footprint and its impact on tree health, stability and longevity

3.4.1. The ability of a tree to tolerate some disturbance and alteration of its growing conditions depends on various circumstances, including the nature of the site and the age of the tree, amongst others.

3.4.2. The Standard recommends *(para. 5.3.1)* that the default position should be that new structures, including new surfaces such as driveways are located outside the rooting areas of trees to be retained (the green RPAs shown on the Tree Constraints Plan in Appendix D).

3.4.3. The Plot 1 dwelling location causes a minor incursion into the RPA of Common Ashes G2 (B1). The location of the dwelling has been amended following arboricultural discussion. Given the age, good condition and good vitality of these trees, the incursion will have no impact on their health and longevity.

3.4.4. The Plot 1 carport location causes a minor incursion into the RPA of Sycamore T16 (B1). The location of the carport has been amended following arboricultural discussion. Given the age, good condition and good vitality of the tree, the incursion will have no impact on its health and longevity.

3.4.5. The Plot 2 carport causes a very minor incursion into the RPA of Sycamore T8 (B1). Given the age, good condition and good vitality of the tree, the incursion will have no impact on its health and longevity.

3.4.6. The improved access to Plot 2 and its driveway cause a minor and somewhat technical incursion into the RPAs of Sycamore T1 (B1) and Sycamore T2 (B1). The nominal RPAs of these trees have been shown as circles on the Constraints Plan, but it is recognised that the interplay

of tree location, site gradient and topography and rooting conditions is complex in this instance, and cannot follow the simplified model provided by the Standard. These and other trees along this line grow on the quarried rock face, and the complex topography and rooting conditions at the north-east end of the site will have severely restricted or prevented root development into the developable area of the site. The east access slope appears to historically have been built up with imported rubble etc. Therefore, if planned, supervised and executed with adequate physical protective measures in place, the improvement and installation works will have no significant impact on tree health and longevity.

3.4.7. It is essential that the guidance on foundation design and depth within NHBC Chapter 4.2 Building near trees is adhered to.

3.5. The working and access space needed for the construction of the proposed development (which might involve facilitation pruning), and the requirement to protect the above and below ground parts of the trees from damage during construction activities

3.5.1. For Plot 1 dwelling, Ash T14 and Ashes G3 will require crown lifting/branch length reduction to a maximum of 2 metres from finished wall position, and 1 metre above finished ridge height (maximum 9 metres for 8 metre ridge height). This is required only so far as is necessary to provide clearance from the proposed building and space needed for scaffolding. This will have a low impact on public amenity, and no significant impact on tree health or longevity.

3.5.2. For Plot 1 carport, Ash T15 and Sycamore T16 will require crown lifting/branch length reduction to a maximum of 2 metres from finished wall position, and 1 metre above finished ridge height (maximum 5 metres for 4 metre ridge height). This is required only so far as is necessary to provide clearance from the proposed building and space needed for scaffolding. This will have a low impact on public amenity, and no significant impact on tree health or longevity.

3.5.3. For Plot 2 dwelling, Sycamores T11, T12 and T13 will require crown lifting/branch length reduction to a maximum of 2 metres from finished wall position, and 1 metre above finished ridge height (maximum 9 metres for 8 metre ridge height). This is required only so far as is necessary to provide clearance from the proposed building and space needed for scaffolding. This will have a low impact on public amenity, and no significant impact on tree health or longevity.

3.5.4. For Plot 2 improved access, driveway and carport, facilitation pruning will be required to lift the canopies of Sycamores T1 and T2, Horse Chestnut T3 and T4 (and possibly G1) and Sycamore T8 to provide a maximum of 2 metres from finished carport wall position, and 1 metre above finished ridge height (maximum 5 metres for 4 metre ridge height) of the carport, and 3m clearance over the driveway to improve domestic vehicle access. This will include the removal of the secondary (smaller) 24cm diameter stem of T2 Sycamore. Horse Chestnut T4 is advised to be re-pollarded in any case in the interest of sound arboricultural management, and so its canopy would be temporarily removed. This will have a low impact on public amenity, and no significant impact on tree health or longevity.

3.5.5. All required tree surgery work is detailed as above in the Arboricultural Method Statement in Appendix F.

3.5.6. Consideration must be given to tree protection during the construction phase, including access requirements for machinery and deliveries, site storage compound and any office and welfare requirement. The LPA will expect the RPAs of retained trees to be adequately protected with fence barriers for the duration of construction, to be installed following any preliminary tree surgery work, and before any other site preparation begins. Standard tree protection fencing is Heras-type welded panels securely fixed onto a vertical and horizontal scaffold framework, well-braced to resist impacts. These 'Construction exclusion zones' (CEZs) are then maintained free of any works, excavation, storage of materials, storage of spoil, dumping of waste, washing of equipment, mixing of cement or chemicals, fires, vehicle movements or deliveries until all construction work has finished.

3.6. The effect that construction requirements might have on the amenity value of the trees, both on or near the site, including the effects of pruning to facilitate access and working space

3.6.1. In deciding whether to grant planning consent, the LPA will consider whether retained trees have been afforded adequate protection against damage during the construction phase. Planning consent will be subject to the tree protection fencing being properly sited, installed and maintained. (Tree protection measures are detailed in the Tree Protection Plan in Appendix E and the Arboricultural Method Statement in Appendix F).

3.7. Infrastructure requirements in relation to trees, e.g. underground and above ground services, highway safety and visibility splays, etc.

3.7.1. New services on this site will require installation with trench excavation. The same considerations for new structures must be given to new services, which should avoid passing through the RPAs of retained trees. Technical solutions such as trench-less percussive boring and hand-dug broken trenches are available for the installation of services if absolutely necessary and well-justified.

3.8. The proposed end use of the development: shading of buildings and open spaces, privacy and screening, future direct damage to structures, future pressure for removal and seasonal nuisance

3.8.1. Sycamore trees, which are a feature of the site, may cause conflict with residential properties because of their tendency to provide a home for aphids which secrete 'honeydew' onto structures, driveway and vehicles below, on which sooty mould usually grows. However, the provision of garaging within the development will minimise the need to park vehicles beneath the canopies of trees.

3.8.2. The proposed dwellings are afforded good direct sunlight to the south, although the front garden of Plot 2 has a more shaded character.

4. Conclusions

4.1. This report has detailed the existing tree-related constraints on the site. The majority of trees on site have been categorised as Category B trees. Some other less significant trees have been given a C quality category.

4.2. Tree surgery work for purely sound arboricultural reasons has been recommended. This includes re-pollarding the large Horse Chestnut T4, felling a dead Horse Chestnut in Group 1, and removing deadwood from some trees. Other minor pruning work has been recommended.

4.3. Following arboricultural discussion, the making of the Tree Preservation Order, and subsequent pre-application advice from Mendip District Council, the proposal has been significantly amended from the initial (withdrawn) planning application 2016/0362/FUL for three dwellings. The revised scheme now is now for only two new dwelling buildings and carports, and includes the removal of only three B category individual trees and two category C groups of trees (six trees within these groups). There are minor incursions within the RPAs of retained trees, but given the age, good condition and good vitality of the trees concerned, the incursions will have no significant impact on tree health and longevity. The protection of the remaining RPA areas from any construction activity is central to achieving this.

4.4. Pruning specifications to lift the canopies of retained trees, as well as all other construction considerations and the adequate physical protection of retained trees are detailed within the Arboricultural Method Statement and Tree Protection Plan.

4.5. **Signed:** **Date:** 10 January 2017

Ian Monger

5. Appendices

A: Relevant background and administrative information
B: Site visit, data collection and interpretation
C: Tree survey schedule
D: Tree Constraints Plan
E: Tree Protection Plan
F: Tree Protection Fencing specification
G: Protective Fencing Sign

Appendix A: Relevant background and administrative information

1. Brief

1.1. This report is prepared by Ian Monger Trees on behalf of Salmon Planning Company Ltd. Proposed Site Layout Plan PL3534/2 was provided following completion of the initial tree survey and was used to prepare the initial Arboricultural Impact Assessment (AIA). Following layout design iteration, the revised scheme now is now for only two new dwelling buildings and carports, and the AIA of this report is based on Proposed Site Layout Plan PL3534/3.

2. Inspector

2.1. Ian Monger has been Senior Tree Officer at North Somerset Council – a unitary authority, and has worked in arboriculture since 2005. Ian Monger is a Professional Member of the Arboricultural Association (MarborA)[2].

2.2. Ian holds the following additional qualifications relevant to this report:

- LANTRA Professional Tree Inspection September 2011
- Practitioners Guide to Visual Tree Assessment September 2009
- ABC Awards Level 3 Technician's Certificate in Arboriculture November 2008
- BSc (Hons) Environmental Science, The University of Greenwich, July 1996

2.3. Ian Monger is an independent consulting arboriculturalist who carries £1 million Professional Indemnity and £2 million Public Liability insurance provided by Hiscox[3]. Further details are available at www.ianmonger.co.uk

3. Limitations

3.1. This tree survey and quality assessment has been made using Visual Tree Assessment (VTA); which means visually while standing at ground level, and using binoculars where appropriate. No invasive or other internal decay detection devices have been used to assess the condition of stem, buttress zone or roots of any of the trees.

3.2. Under certain circumstances, roots can affect foundations, drains and other underground services. The visual inspection I have undertaken does not take these issues into account.

[2] The Arboricultural Association, The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL. www.trees.org.uk

[3] Hiscox Insurance Company Ltd, 1 Great St Helen's, London, EC3A 6HX. Policy number 1792516. www.hiscox.co.uk

3.3. This survey is not a tree safety inspection or risk assessment. Where clear hazards have been identified, these have been reported in the tree survey recommendations. It is recommended that a tree safety inspection and risk assessment is carried out following the significant change in site use following development.

3.4. The assessments are made on the basis of conditions found at the time of the inspection on 28 October 2015. A site visit on 27 January 2017 confirmed that there have been no significant changes in tree condition or health since the initial Tree Survey report IMT-SPC-201602. Trees are dynamic structures and site circumstances can also change. Therefore, recommendations made in this report are limited to a period of one year only. Any significant change to the site that may affect trees, or have implications for the planning process (such as level changes, hydrological changes or extreme weather events) will necessitate a re-assessment of the trees on the site.

4. Technical terms

4.1. A glossary of technical terms is available at http://www.treeterms.co.uk/

5. References

- BS5837: 2012 'Trees in relation to design, demolition and construction – recommendations', BSI, London.
- BS 3998: 2010 'Tree work - recommendations, BSI London.
- NHBC Standards 2007 'Buildings Near Trees' (Chapter 4.2), NHBC Amersham.
- 'The Body Language of Trees' A handbook for failure analysis. Claus Mattheck and Helge Breloer, 1994, TSO, London.
- 'Diagnosis of Ill-health in trees' R.G Strouts and T.G Winter, 2004, TSO, London.
- 'Principles of Tree Hazard Assessment and Management', David Lonsdale, 1999, TSO, London.

Appendix B: Site visit, data collection and interpretation

1. Site visit and method of data collection

1.1. A site visit was made by Ian Monger on 28 October 2015. Weather conditions at the time of inspection were clear and sunny with excellent visibility. The inspection followed the Visual Tree Assessment methodology described by Mattheck & Breloer[4]. The survey followed the recommendations in paragraph 4.4 of the Standard, and collected the data listed in paragraph 4.4.2.5. Trees were categorized according to paragraph 4.5 and Table 1 – Cascade chart for tree quality assessment, and the root protection areas (RPAs) of the trees calculated according to paragraph 4.6 of the Standard.

1.2. Only those trees considered to be liable to be impacted by the development proposals and construction activity, or needing to be demonstrated to be beyond the zone of influence, have been included in the survey.

1.3. Trees have been allocated an individual tree number, which is used to identify them throughout this report, on the Tree Schedule and on the Tree Constraints Plan. There has been no need to identify trees on site with individual tags.

1.4. The collected data are presented in the Tree Schedule in Appendix C. Data shown in bold is estimated. Data are also shown graphically on the Tree Constraints Plan in Appendix D.

1.5. The following information is given in the schedule:

- **Tree Reference No:** Sequential reference number used on the Tree Survey Schedule and plans. 'T' signifies an individual tree, 'G' a group of trees and 'W' woodland.
- **Tree Species:** Common name and scientific name.
- **Height (m):** Where a clear and unobstructed view of the tree is possible, a clinometer is used to measure tree height to the nearest 0.5m. Otherwise tree height is estimated.
- **Stem diameter (mm):** This is a key measurement used to calculate the RPA (Root Protection Area) of trees. The measurement is taken using a girth tape at 1.5m above the ground, and in accordance with Annex C of the Standard. For single-stemmed trees a

[4] Mattheck, C. and Breloer, H. (1994) *The Body Language of Trees: A handbook for failure analysis*. The Stationery Office, London.

single measurement is taken. For trees with 2 to 5 stems a mean of the combined stem diameters is calculated. For trees with more than five stems an average is taken. For trees that cannot be accessed because they are off-site, surrounded by dense vegetation or have heavy Ivy cover, an accurate measurement cannot be made. Instead an estimate is provided. If trees are assessed as a group or woodland feature, generally the largest tree within the group or woodland is measured.

- **Branch spread (m):** Taken as a minimum at the four cardinal points, to derive an accurate representation of the crown, and plotted on the tree constraints plan.

- **Crown clearance (m): The** height above ground level of the lowest part of the main canopy, to inform on ground clearance, crown/stem ration and shading.

- **Lowest branch height (m):** The height above ground level of the first significant branch, to inform on ground clearance, crown/stem ration and shading.

- **Life stage:** A classification of the age of the tree. In the case of woodlands and groups this is based in the oldest tree.

Y – Young	Recently planted trees less than a quarter of life expectancy.
SM – Semi-Mature	Established trees less than a third of predicted life expectancy.
EM – Early Mature	Trees between one-third and two-thirds of predicted life expectancy.
M – Mature	Trees over two thirds of predicted life expectancy.
OM – Over-Mature	Trees which have reached a point of senescence which may result in lowering of vitality.
V – Veteran	A tree of significant age (with a large girth) which provides cultural, landscape or ecological value.

- **General observations:** Particularly of structural and physiological condition (e.g. the presence of any decay and physical defect).

- **Remaining contribution (years):** Estimated remaining useful amenity contribution: <10 years, 10+ years, 20+ years, 40+ years.

- **Retention category:** Trees are categorised according to the criteria shown in Table 1 below. The colour of the tree canopy on the Tree Constraints Plan indicates the category of each tree. The purpose of the categorization is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring. The Standard states *(para. 5.1.1)* that certain trees are of such importance and

sensitivity as to be major constraints on development or to justify its substantial modification. However, it also states that care should be taken to avoid misplaced tree retention because 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-construction demands for their removal.

- **RPA (Root Protection Area):** The RPA of each tree is calculated according to section 4.6 of the Standard and is plotted on the Tree Constraints Plan as a red circle.

- **Preliminary work recommendations:** Any management works that should be carried out regardless of development proposals for the site. Generally, recommendations for management works are used sparingly, for instance where there is a significant safety concern. Work that might be required in relation to specific development proposals are considered within the separate Arboricultural Method Statement.

BS5837:2012 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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012]* ***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 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	

Taken from Table 1: Cascade chart for tree quality assessment, BS5387: 2012 *Trees in relation to design, demolition and construction – recommendations.*

2. Site description

2.1. The site is a rear garden, or paddock located within the village of Draycott, about 3km to the south east of Cheddar, Somerset. It is within the Local Planning Authority area of Mendip District Council, and located at Grid Reference ST 47667 51221. The site is at a height of approximately 57m dropping to 51m above mean sea level. The site is over Mercia Mudstone[5].

2.2. At the rear of the property (the survey site) is a stone wall-bounded paddock of field which has been recently ploughed, although not otherwise sown and has given over to weed species.

2.3. The site has vehicular access from the front (west) past the main dwelling and also from Vicarage Lane to the east. This east access is steep and uses a slope which appears to have been improved with the addition of soil and stone.

Figure 1: View from inside the site looking north east towards T1 Sycamore to G2 Common Ash.

[5] British Geological Survey data.

Figure 2: View from Vicarage Lane looking north towards the rear entrance gate and T1 and T2 Sycamore.

Figure 3: Detail of the decaying Horse Chestnut T4 recommended for re-pollarding to extend its life.

Appendix C: Tree Survey Schedule

Tree Ref. No.	Species	Height (m)	Has the stem diameter been estimated?	Stem diameter (mm)	Branch Spread (m)				Lowest branch height and orientation	Crown clearance from ground	Life Stage	Health & vitality	Structural condition	General Observations	Preliminary Recommendations	Estimated Remaining Contribution (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
					N	E	S	W											
T1	Sycamore	10		500	0	7	8	10	2 S	4	M	G	G	Two stems from ground but further soil excavation may find that these are mature basal shoots from Sycamore T2 adjacent. Ivy on stems.	None.	40	B1	6.0	113
T2	Sycamore	16		930	8	9	9	11	0 W	4	M	G	G	Root flare has developed on rock face and reaches lower level. Ivy on stem. Previously pollarded at 8m with mature regrowth. Deadwood. Old pruning wounds.	Remove basal shoots.	40	B1	11.2	391
T3	Horse Chestnut	13		600	7	7	3	7	2.5 W	0	M	G	G	Ivy on stem. Low branch stub at 2.5m to west. Deadwood.	Remove low branch stub at 2.5m to west. Remove signifi-cant deadwood.	20	B1	7.2	163

Tree Ref. No.	Species	Height (m)	Has the stem diameter been estimated?	Stem diameter (mm)	Branch Spread (m)				Lowest branch height and orientation	Crown clearance from ground	Life Stage	Health & vitality	Structural condition	General Observations	Preliminary Recommendations	Estimated Remaining Contribution (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
					N	E	S	W											
T4	Horse Chestnut	13		900	6	6	5	10	0 W	4	OM	G	P	Old low pollard now decayed with three main hollowed 'u'-shaped rams-horned stems from ground. Poor structural support for continued growth.	Re-pollard at 2m.	20	B1	10.8	366
T5	Sycamore	15		350	3	0	4	6	3 W	3	M	G	F	Ivy on stem.	None.	40	B2	4.2	55
T6	Sycamore	11		230	3	5	2	1	2.5 W	2	M	G	G	Ivy on stem.	None.	40	B2	2.8	24
G1	Horse Chestnut	11		300	3	6	3	7	2 W	3	M	G – D	G – D	Group of five trees of varied size. Two trees are small and suppressed. Planted on top of small quarried rock face. RPA cannot extend to west. Ivy on some stems. Second tree from north is dead. Deadwood.	Fell dead tree. Remove signifi-cant deadwood.	20	C2	3.6	41
T7	Sycamore	17		540	7	6	7	3	3.5 S	5	M	G	G	Two independent stems from ground. Ivy on stems. Deadwood.	Remove signifi-cant deadwood.	40	B1	6.5	132

Tree Ref. No.	Species	Height (m)	Has the stem diameter been estimated?	Stem diameter (mm)	Branch Spread (m)				Lowest branch height and orientation	Crown clearance from ground	Life Stage	Health & vitality	Structural condition	General Observations	Preliminary Recommendations	Estimated Remaining Contribution (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
					N	E	S	W											
T8	Sycamore	17		570	9	4	10	6	2.5 S	2	M	G	G	Two independent stems from ground. Ivy on stems. Deadwood.	Remove signifi-cant deadwood.	40	B1	6.8	147
T9	Common Ash	16		340	6	0	7	2	7.5 N	5	SM	G	G	Ivy on stem.	None.	40	B1	4.1	52.0
T10	Sycamore	14		480	5	2	8	5	2 W	2	M	G	G	Ivy on stems.	None.	40	B1	5.8	104.0
T11	Sycamore	15		330	2	6	7	3	3.5 S	1	M	G	G	Ivy on stem.	None.	40	B1	3.9	49.0
T12	Sycamore	14		430	7	3	7	6	3.5 S	2	M	G	G	Ivy on stem.	None.	40	B1	5.2	84.0
T13	Sycamore	11		350	7	3	7	7	3 S	4	M	G	G	Ivy on stem.	None.	40	B1	4.2	55.0
G2	Common Ash	14	Y	670	8	5	8	5	3.5 S	3	M	F	G	Five stems visible. No access to stem bases because of dense under-growth. Deadwood. Ivy on stems.	None.	40	B1	8.0	203.0

Tree Ref. No.	Species	Height (m)	Has the stem diameter been estimated?	Stem diameter (mm)	Branch Spread (m)				Lowest branch height and orientation	Crown clearance from ground	Life Stage	Health & vitality	Structural condition	General Observations	Preliminary Recommendations	Estimated Remaining Contribution (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
					N	E	S	W											
G3	Common Ash	11	Y	600	7	4	7	4	3 S	3	M	G	G	Four stems visible. No access to stem bases because of dense under-growth. Ivy on stems.	None.	40	B1	7.2	163.0
T14	Common Ash	13	Y	350	5	5	5	5	2 N	4	M	G	F	Previously pollarded at 2m. Poor access to stem bases because of dense undergrowth. Ivy on stem.	None.	40	B1	4.2	55.0
T15	Common Ash	14	Y	350	6	6	6	7	2 N	4	M	G	G	Poor access to stem bases because of dense undergrowth. Ivy on stem.	None.	40	B1	4.2	55.0
T16	Sycamore	14	Y	400	5	5	5	7	2 N	2	M	G	F	Two stems from 1m with compression stem union. Some bark loss, but no cracking of union. Poor access to stem bases because of dense under-growth. Basal shoots. Ivy on stem.	None.	40	B1	4.8	72.0
T17	Walnut	-	-	-	-	-	-	-	-	-	SM	-	-	Tree removed since initial survey and replanted elsewhere.	-	-	-	-	-

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Tree Ref. No.	Species	Height (m)	Has the stem diameter been estimated?	Stem diameter (mm)	Branch Spread (m)				Lowest branch height and orientation	Crown clearance from ground	Life Stage	Health & vitality	Structural condition	General Observations	Preliminary Recommendations	Estimated Remaining Contribution (Years)	BS5837: 2012 Category	RPA Radius (m)	RPA m²
					N	E	S	W											
G4	Apple	4.5	Y	150	3	3	3	3	1 n/a	0	SM	G	G	Two trees with bramble infestation in crowns. Previously lopped as typical orchard trees.	Cut back under-growth if trees are to be re-tained.	20	C1	1.8	10.0
G5	Common Ash	8		150	3	3	3	3	2 n/a	3	SM	G	G	Four trees growing tight against stone boundary wall. No future growth potential without damage to wall.	None.	20	C1	1.8	10.0
T18	Deodar	9	Y	300	4	4	4	4	3 n/a	2	M	G	G	Tree in neighbouring garden. Well-maintained 1.5m tall stone wall between.	None.	40	B1	3.6	41.0

Appendix D: Tree Constraints Plan

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Appendix E: Tree Protection Plan

Appendix F: Arboricultural Method Statement (AMS)

1. Introduction

1.1. This Arboricultural Method Statement (AMS) and the accompanying Tree Protection Plan in Appendix E of this report highlights the issues that must be considered prior to and during the construction of two detached houses with garaging and access driveways, conversion and extension of barn to single dwelling and conversion of outbuilding into residential annex on land to the rear of Harps House, Wells Road, Draycott, Somerset, BS27 3SF.

1.2. It is intended to be read and understood by the Project, Groundwork and Build contractors and their staff.

2. General

2.1. This section sets out the basis of the methodology for all proposed works in relation to retained trees and their Root Protection Areas (RPAs).

2.2. A copy of this AMS will be available for reference on site by the Project, Groundwork, and Main Build contractor(s) and will form the basis of the management of all works relating to the trees on the site following commencement of the project.

3. Site Location

Harps House
Wells Road
Draycott
Somerset
BS27 3SF

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4. Contact details

4.1. Planning Consultant

Mr N Salmon
Salmon Planning Company
2 Priory Road
Wells
Somerset
BA5 1SY
Telephone: 01749 671500

4.2. Groundwork Contractor

Not known.

4.3. Main Build Contractor

Not known.

4.4. Arboricultural Consultant

Mr I Monger
Ian Monger Trees
Eyrie Cottage
93 Bowbridge Lane
Stroud
Gloucestershire
GL5 2JH
Telephone: 07793 742088
Email: ian@ianmongertrees.co.uk

4.5. Local Authority Tree Officer

Mr B Walsh
Tree Officer
Mendip District Council
Cannards Grave Road
Shepton Mallet
Somerset
BA4 5BT
Telephone: 01749 648999

5. Legislation and Guidance

5.1. BS5837: 2012 Trees in relation to design, demolition and construction – recommendations. British Standards Institute. (http://www.bsigroup.com/)

5.2. BS3998: 2010 Tree work – recommendations. British Standards Institute.

5.3. Construction (Design & Management) Regulations 2007. (http://www.legislation.gov.uk/uksi/2007/320/contents/made)

5.4. Traffic Signs Manual Chapter 8 – Traffic safety measures and signs for road works and temporary situations, Part 1 Design and Part 2 Operations. Department of Transport/Highways Agency, 2009. (https://www.gov.uk/government/publications/traffic-signs-manual)

5.5. National Joint Utilities Group Publication Volume 4: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. (http://www.njug.org.uk/publication/52)

5.6. Town and Country Planning Act 1990. (http://www.legislation.gov.uk/ukpga/1990/8/contents)

5.7. Town and Country Planning (Trees) (England) Regulations 2012. (http://www.legislation.gov.uk/uksi/2012/605/made)

5.8. Trees in Focus – APN 12: Through the trees to development. (http://www.treehelp.info/)

6. Project management and responsibilities

6.1. General site management

6.1.1. It is the Project/Groundwork/Build Managers' responsibility to ensure that the detail of the arboricultural method statement and any agreed amendments are known and understood by all site personnel. A copy of this AMS and the accompanying Tree Protection Plan in Appendix E of this report will be available for reference on site by the Project and Site Managers, and will form the basis of the management of all works relating to the trees on the site following commencement of the project. The Site Manager shall induct all personnel who could have an impact on trees on the content of this document. The Arboricultural Consultant is on hand to explain any aspect which is not understood by Managers.

6.1.2. It is the responsibility of the Project/Groundwork/Build Managers' and all site staff to ensure that any planning conditions attached to planning consent are adhered to at all times, and that a monitoring regime in regards to tree protection is adopted on site.

6.1.3. The Lead Contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fencing will remain in position until completion of ALL construction works on the site.

6.1.4. It is the Project/Groundwork/Build Managers' responsibility to ensure that the Arboricultural Consultant is called upon: in good time to attend meetings; to advise on forthcoming operations; to agree dates/times for site meetings that coincide with the operations concerned;

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and immediately if a problem arises.

6.2. **Order and phasing of works**

6.2.1. The order and timing of work needs to be carefully managed to ensure adequate protection of trees. The final details will be agreed before any preparatory site work begins, and will be reviewed if necessary with the Arboricultural Consultant during the development. In outline it is proposed that in the interests of protection of the trees the development should follow the phasing below:

i) Preliminary tree surgery work.
ii) Construction Exclusion Zone (protective fencing and temporary ground protection) installed and approved.
iii) Main build proceeds.
iv) All construction work including snagging completed.
v) Construction Exclusion Zone removed.
vi) Soft landscaping work completed.
vii) Project completion.

7. Preliminary tree surgery work.

7.1. All tree surgery work must be carried out by a suitably qualified, experienced and insured arboricultural contractor and must meet the recommendations of British Standard BS3998: 2010 Tree work – recommendations.

7.2. The following tree pruning will be carried out before any other site activity takes place:

- T1 Sycamore: Lift canopy to give 3m clearance over the driveway access.
- T2 Sycamore: Remove secondary (240mm dia.) stem over access. Remove basal shoots. Lift canopy to give 3m clearance over the driveway access.
- T3 Horse Chestnut: Remove low branch stub at 2.5m to west. Remove significant deadwood. Lift canopy to give 3m clearance over the driveway access.
- T4 and G1 Horse Chestnuts: Lift canopy to give 3m clearance over the driveway access.
- G1 Horse Chestnuts: Fell the dead tree (second tree from north). Remove significant deadwood.
- T4 Horse Chestnut: Re-pollard close to the previous pruning points at about 2m from the ground, or wherever is appropriate.
- T5 Sycamore: Fell and mechanically grind stump.
- T6 Sycamore: Fell and mechanically grind stump.
- T7 Sycamore: Fell and mechanically grind stump.
- T8 Sycamore: Lift canopy to provide a maximum of 2 metres from finished carport wall position, and 1 metre above finished ridge height (maximum 5 metres for 4 metre ridge height).
- G4 Apple (2 trees): Fell and mechanically grind stump.
- G5 Common Ash (4 trees): Fell and poison stump with Glyphosate plugs, or mechanically grind.
- Sycamores T11, T12 and T13 lift crown and reduce branch length to a maximum of 2 metres

from finished wall position, and 1 metre above finished ridge height (maximum 9 metres for 8 metre ridge height).

- Ash T14 and Ashes G3: lift crown and reduce branch length to a maximum of 2 metres from finished wall position, and 1 metre above finished ridge height (maximum 9 metres for 8 metre ridge height).
- Ash T15 and Sycamore T16: lift crown and reduce branch length to a maximum of 2 metres from finished wall position, and 1 metre above finished ridge height (maximum 5 metres for 4 metre ridge height).

8. Access for Construction Works – Plant and Machinery

8.1. The Groundwork (if separate) and Main Build Contractors will assess whole-project access requirements when preparing the Health and Safety Plan and Construction Method Statement and must inform the Arboricultural Consultant of any potential conflicts with trees or the tree protection barrier. This will allow conflicts to be resolved with the approval of the Local Planning Authority Tree Officer.

9. Installation of utilities to the new dwellings

9.1. Any underground utilities to serve the new building **must** be installed outside of the RPA of any retained tree. Installation will comply with NJUG Volume 4 - Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees, available at http://www.njug.org.uk/publications/

10. Construction Exclusion Zones

10.1. The Construction Exclusion Zone (CEZs) are formed with protective fencing and temporary ground protection. These measures have been approved by the Local Planning Authority. Planning consent is conditional upon them. They protect the trees during construction work by preventing damage to the tree roots and compaction of the soil.

10.2. The CEZs are to be afforded protection at all times and will be protected by fencing as detailed below. THERE SHALL BE NO:

- works
- activities
- excavation
- storage of materials
- storage of spoil
- dumping of waste
- washing of equipment
- mixing of cement or chemicals

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- fires
- vehicle movements or
- deliveries

within the CEZs unless otherwise specified within this method statement or expressly agreed with the project arboriculturalist or Local Planning Authority Tree Officer.

10.3. All staff on site must be briefed on the purpose of the CEZs and potential repercussions for the Client and contractors if one is breached.

10.4. If it is deemed necessary to carry out any activities within a CEZ, the prior approval of the Arboricultural Consultant or Local Authority Tree Officer must first be obtained.

10.5. The CEZs will be maintained until all excavation, building and construction activity including snagging and the installation of the new driveway has been completed.

11. General precautions

11.1. No materials that are likely to have an adverse effect on tree health will be stored or discharged within 10 metres of the trunk of a tree that is to be retained. Stored material may include:

- Oil
- Diesel/petrol
- Bitumen
- Cement

11.2. No fires will be lit within 20 metres of the trunk of any tree that is to be retained.

11.3. Concrete mixing will not take place within 10 metres of the trunk of any tree.

11.4. Nothing should be attached or fixed to any part of any tree.

12. Installation of Tree Protection Barrier and temporary ground protection to create the CEZ

12.1. Following preliminary tree surgery work, and before the commencement of any works on site, including demolition or excavation, temporary protective barriers and ground protection must be installed in the positions shown on Tree Protection Plan in Appendix E.

12.2. The barriers must be sited in accordance with the Tree Protection Plan, and off-set from any build elevation by a maximum of 1.5m (see section 14 below). The fencing must be constructed as per the specification drawing in Appendix G (taken from BS5837:2012) and be fit for purpose of excluding all construction activity.

12.3. The barriers will consist of a vertical and horizontal scaffold framework, well-braced to resist impacts. The vertical tubes should be spaced at a maximum of 3 metres and driven securely

into the ground. Onto this framework, welded mesh panels should be securely fixed. Care should be exercised when locating the vertical poles to avoid underground services.

12.4. If the presence of underground services, the gradient of the ground or the presence of other physical obstacles (and in ONLY these circumstances) precludes the use of driven poles, an alternative specification should be prepared in conjunction with the project arboriculturalist that provides and equal level of protection. Alternatives might include the use of rubber fence panel feet or a flexible barrier material, but use of an alternative MUST be approved by the Arboricultural Consultant. The use of alternative barrier specification will afford the trees a reduced degree of physical protection, and so they must be checked daily by the a site Manager, not be allowed to drift and be maintained in a state which is fit for purpose of excluding all construction activity.

12.5. Protective barrier site notices (of a form similar to those shown in Appendix I, and laminated) must be attached to the exterior of the protective fencing where they can be easily read by site personnel. The signs must state that the area is a Construction Exclusion Zone and that NO WORKS are permitted within the fence line.

12.6. The temporary ground protection will be installed over the minimum area shown on Tree Protection Plan in Appendix E. It will consist of proprietary inter-linked ground protection boards laid over 200mm well-rotted woodchip over permeable geotextile membrane.

12.7. The barriers and ground protection must not be moved, altered or allowed to drift during construction activity. These protective measures will be maintained until all excavation, building and construction activity including snagging has been completed.

13. Scaffolding

13.1. Where it is necessary to erect scaffolding within the Root Protection Area of any tree, weight of the structure will be adequately distributed above ground using pads. Temporary ground protection in the form of wooden boards over impermeable membrane shall be installed to prevent contamination of the ground beneath, and to facilitate removal of any debris on completion.

14. Supervision and Monitoring

14.1. Subject to the barriers being installed to the correct specification and in the correct positions there should be no need for further arboricultural supervision of the site. However, the Consultant is on hand at any time should questions or problems arise. In particular, the advice of the Consultant should be sought in the planning and installation of the new access driveway and turning surface once the supplier has specified the system.

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15. Contingency Plans

15.1. In the event of unforeseen incidents occurring that may adversely affect or threaten the welfare or security of the trees, the resident Site Manager shall inform the Arboricultural Consultant at the earliest opportunity and not more than one working day following the incident.

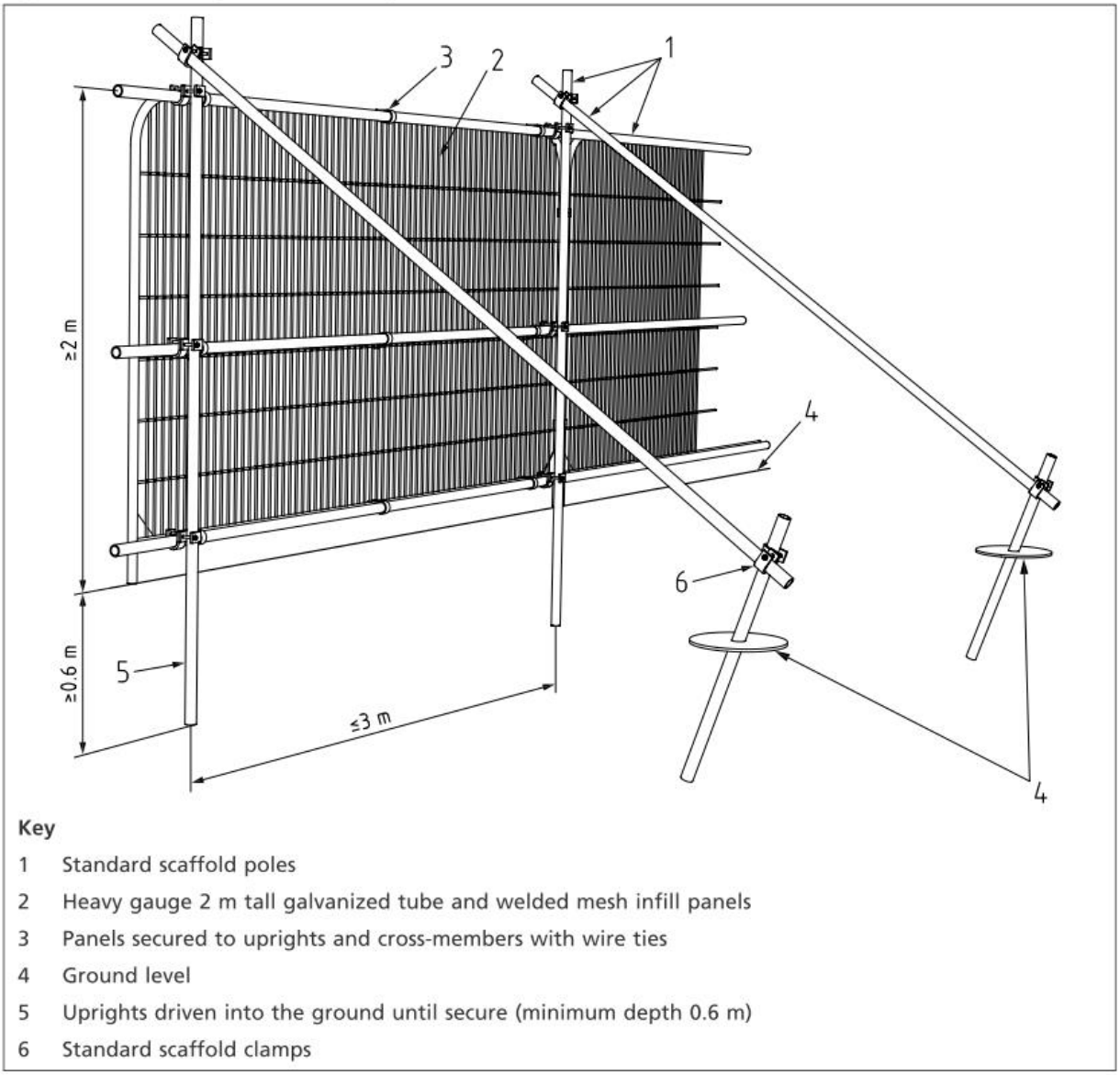
15.2. The Arboricultural Consultant will visit the site to inspect and assess the circumstances and make appropriate recommendations. The Local Planning Authority Tree Officer will be informed by the Arboricultural Consultant of such incidents, and recommendations will be submitted for approval by the Local Planning Authority; initially verbally, and then in writing. A record of any emergency incidents and works shall be maintained by the Arboricultural Consultant.

15.3. Incidents which may merit such contingency plans include:

- Accidental/unauthorised damage to the branches, roots or trunk of trees
- The spillage of chemicals within or adjacent to a Root Protection Area
- The discharge of toxins/waste within or adjacent to a Root Protection Area
- The unscheduled breaching of a tree protective barrier or Construction Exclusion Zones.

Appendix G: Tree Protection Fencing specification

Figure 2 **Default specification for protective barrier**



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

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PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.

TREE PROTECTION AREA

KEEP OUT !

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY