WHLandscape
landscape architecture & arboriculture

MANOR FIELD, HIGH STREET, SEEND, WILTSHIRE SN12 6NU

TREE SURVEY, ARBORICULTURAL IMPACT ASSESSMENT AND TREE CONSTRAINTS PLAN

FOR

AMENDMENT TO GARAGE EXTENSION PERMITTED UNDER APP NO. PL/2023/09944

On behalf of

MR & MRS GRIMES

January 2024

REF: 23.1656

REV: A

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APPOINTMENT

WH Landscape Consultancy Ltd (**WH**Landscape) has been appointed by Mr & Mrs Grimes to provide a report to support an amendment to the consented garage extension under application to Wiltshire Council (ref: PL/2023/09944) at Manor Field, High Street, Seend, Wiltshire, SN12 6NU. This document is an amendment to the Tree Survey, Arboricultural Impact Assessment (AIA) and Tree Constraints Plan (TCP) provided by WHLandscape (ref: 23.1656 dated May 2023) but removes reference to the permitted car port on the eastern side of the site as this aspect of the scheme is not affected.

WHLandscape has an established track record of carrying out Tree Surveys for development proposals using British Standard (BS) 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*.

This report has been undertaken by: Seb Macleod NC Hort/Arb. L6 Dip Arb. (Lantra Professional Tree Inspection)

Checked by: Will Harley BSc (Hons) CMLI

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1. INTRODUCTION

1.1 WH Landscape were instructed by Mr & Mrs Grimes to conduct a Tree Condition Survey and provide an AIA and TCP. This was to support the design proposal to construct a car port and detached garage at Manor Field, Seend which was consented to by Wiltshire Council under application Ref: PL/2023/09944. The initial report and this amendment report conforms to the guidance set out in BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. This amendment is to address the proposal to move the position of the garage to be constructed at the western side of the house northwards by approximately 1-2m.

1.2 This arboricultural report includes the survey of the significant trees (those with stem diameter 150mm, measured at 1.50m above ground level), hedges or groups of trees currently found on the site (outlined by the plan provided), as well as those on adjacent land that could impact on the proposed development. The quality and condition of these trees has been assessed and categorised. Any management recommendations deemed necessary were put forward in the original report.

1.3 The trees surveyed were categorised A, B or C, for those to be considered for retention, or U for those unsuitable for retention. Further sub-categories of 1, 2 or 3 were given for those to be considered for retention. (See Cascade chart for tree quality assessment in Appendix 3). Categorisation will be made in accordance with BS 5837:2012.

1.4 A TCP guided by the above and the below ground constraints that the surveyed trees on site, or adjacent land, may pose to the amendment development proposal is provided in Illustrative material at plan ARB-1656-03. This drawing does not include those trees on the eastern side of the site (T1-T3 & G1) which were included in the original report. The constraints to be considered will include the Root Protection Areas (RPA) and Construction Exclusion Zones (CEZ) that trees will require during and post construction if they are to be retained, as well as the current ground clearance and spread, that may affect the design proposal and construction access.

1.5 The report includes an AIA to outline and mitigate the potentially adverse tree related impacts that the amended design poses and to suggest any changes that may benefit the scheme.

1.6 Following the granting of an amendment to the planning consent obtained and prior to the commencement of any construction activity, an Arboricultural Method Statement may need to be

provided in order to guide the application of any special measures required to ensure the protection of retained trees during and post construction.

1.7 Manor Field is a residential property which stands centrally within the village to the south of the main road. There are adjacent residential properties and their gardens to the east and west and a public footpath (Love Lane) running along the garden's eastern boundary. The rear garden opens out onto fields to the south. The front garden area of the property contains multiple orchard species trees on the eastern side of the driveway, a large mature sycamore near the house and a large horse chestnut on the fenced boundary along with a row of conifers marking the boundary to the east of the house. The western side of the front garden is more open and contains a young deodar cedar centrally on the lawn area, several other ornamental species at its edges which was dominated by a large mature ash on the western boundary, now removed due to ash dieback infection. The rear garden is composed predominantly of open lawn with several large ornamental specimen trees including a large aging horse chestnut to the south-west of the house.

1.8 The original proposal which received planning consent is to construct a car port to the front of the house on the eastern side of the existing gravel parking area and a detached garage to the west of the house between its western elevations and the western boundary. The existing driveway area is also consented to be extended on the western side to access the new garage. The amendment proposes to move the position of the garage northwards so that the northern elevations of the new structure are in line with the northern elevations of the dwelling at Manor Fields Plans of the amended design proposal for the garage structure have been provided by Dolman Building Surveyors, drawing no. 3853-14 Rev A. A TCP with these designs overlaid has been provided at plan ARB-1656-03 (Design Overlaid).

1.9 An ash tree (T5) on the western boundary of the site which was identified as suffering from ash dieback and has been removed since the initial site assessment. The removal of this tree and another ash felled before the initial site assessment did not follow a six-week notification to Wiltshire Council for works to trees in a Conservation Area. Wiltshire Council have asked for the applicant to plant two new trees in the garden to compensate for the loss of the two ash on the western boundary. This report is to include the specification and proposed location for the replacement trees.

1.10 The site is within the Seend village Conservation Area. No trees in proximity to the area proposed to be developed are subject to Tree Preservation Order (TPO), however a Group TPO (Ref E/229) exists

on the site at the southern end of the garden area. The TPO covers a group of four beech and a holly tree which stand beyond the footpath at the end of the garden and are far removed from any potential impacts of the proposed scheme.

1.11 The soil type for the site is described as 'Freely draining slightly acid but base-rich soils'. Therefore, the site does not appear to be on a shrinkable clay with the potential for subsidence damage to be caused, by trees, to new structures.

1.12 The initial site visit was undertaken on the 26th of April 2023 by Seb Macleod in fair weather conditions.

2. CONSTRAINTS TO PROPOSED DEVELOPMENT

2.1 GENERAL

2.1.1 The trees surveyed represent above and below ground constraints to the proposed development. Above ground constraints include the size and nature of the branching canopy that can influence where structures/utilities can be placed, or that present barriers to access during or after construction. Shade cast by individual trees can be beneficial or a nuisance and needs to be considered. In addition, the potential ultimate height and spread of any younger trees on site, and the future impacts they may have, must also be a consideration.

2.1.2 Below ground constraints are principally concerned with the RPA, or the rooting area, of an individual tree that must be maintained in its current condition (i.e. not excavated, compacted or re-graded) to ensure the continuing health of the tree during and after development. Roots that are 25mm or over must not be damaged, in order to ensure the future structural and physiological function of the tree.

2.1.3 New buildings should not be positioned within the RPA of a tree to be retained. No ground should be disturbed, materials stored, or vehicle/pedestrian traffic undertaken within the RPA of a retained tree. It is also the default position that construction access must be outside the RPA of any tree to be retained on site. Above and below ground constraints can be mitigated by felling, or pruning, if justified in the impact assessment. Incursion of works into the RPA of a tree to be retained can be facilitated by special construction techniques, if justified in the impact assessment.

2.1.4 The RPAs are calculated as per Section 4.6 of BS 5837:2012 and, where applicable, are recorded as an area of a nominal circle or a radius of that circle. The British Standard states the following:

- For single-stem trees, the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter.
- For trees with more than one stem, one of two calculation methods is to be used:
- For trees with two to five stems:

$$\sqrt{(stem\ diameter\ 1)^2 + (stem\ diameter\ 2)^2} \ldots\ldots + (stem\ diameter\ 5)^2$$

- For trees with more than five stems:

$$\sqrt{(mean\ stem\ diameter\ 1)^2 x\ number\ of\ stems}$$

2.1.5 In all cases, the stem diameters are measured in accordance with Annex C of BS 5837:2012, and the RPA is determined from Annex D. The RPA is capped at 707 metres (m) squared or a 15m radius.

2.1.6 Where trees are positioned close to adjacent areas of hardstanding, which are impervious to air and water, and where tree roots are unlikely to ingress, the RPA may be off set from the centre of the tree to reflect the areas where the roots are more likely to have established.

2.1.7 RPAs for hedges will normally be set at a distance from the central base of the hedge calculated as half its average height.

2.2 OTHER CONSTRAINTS

2.2.1 Potential constraints to the development of the site include the above ground area occupied by the crowns of the trees, potential shade and debris cast by the trees, working space during development and, if applicable, allowances for future growth of the trees. The extent of these constraints is determined by considering the suitability of the species and its characteristics within the context of the proposed development, plus the existing and future crown spread of the tree. A further consideration is that the crown could be modified by appropriate tree surgery. Site planning and development design must therefore give consideration to these issues in order to prevent future problems arising.

2.2.2 Any remedial works on trees to improve safety or to facilitate construction must be undertaken in accordance with BS 3998:2010 British Standard *Tree Work - Recommendations*. Work must be undertaken by qualified and experienced professionals.

2.2.3 All services should be directed outside the retained trees' RPAs. However, where it is agreed that services can be located within a RPA, they must be hand-dug in accordance with the principles contained within National Joint Utilities Group Guidelines Vol. 4, in a position no closer than four times the stem circumference of the tree and dug down to the required level. Small diameter roots should be neatly cut with clean secateurs, whilst roots over 25mm in diameter, and/or large root masses, must be retained undamaged. Alternatively, if underground services are to run through the RPAs of trees to be retained, specialist construction techniques, such as impact moling, could be employed to install any pipework at a depth greater than 600mm from ground level, where tree roots are unlikely to be found.

2.2.4 No unplanned construction activity whatsoever must be allowed within the RPAs of trees to be retained. This includes storage of materials, unplanned routing of underground services or incursions by vehicles or site operatives unless specified and accompanied by specialist protection measures.

2.2.5 Mixing of cement or concrete, or the storage of fuels must not take place within 10m of the retained trees, nor in any location where a slope in the ground could lead to contamination of the RPA of any tree to be retained.

2.2.6 Fires must not be lit in a position where flames could extend to within 15m of the foliage, branch framework or trunk of any tree to be retained.

2.2.7 Landscape works undertaken within the RPAs must be done so as not to damage shallow roots and are to be agreed by the arboricultural consultant. Heavy mechanical cultivation of the soil must not be undertaken within the RPAs of trees to be retained.

2.2.8 Changes in soil level should not be undertaken within the RPAs of retained trees, unless otherwise agreed in writing with the Local Planning Authority (LPA). This is in order to ensure that the rooting systems, including the delicate non-woody roots, are not inadvertently severed or the roots and rooting zones are not compromised by compaction.

2.3 TREE PROTECTION MEASURES

2.3.1 Tree protection fencing will be required to form a CEZ, to prevent construction activity within the RPAs of trees to be retained, or to protect the crowns of retained trees. This must be constructed from weldmesh panels of at least 2m height and securely fixed with wire or scaffold clamps fixed to a rigid framework. This framework must be constructed from horizontal and vertical scaffold tubes during the construction period, in accordance with the requirements of BS 5837:2012. Examples of the design specification are shown in Appendices 1 & 2.

2.3.2 Where tree protection fencing falls outside the RPAs of the retained trees, robust high visibility plastic mesh barrier is recommended in place of the above-mentioned fencing. This will create a visual deterrent and signify the extent of the CEZ.

2.3.3 The location of CEZ fencing will be determined when the final site layout is agreed. This will provide the minimum protection of the retained trees. Any surfacing within the RPA, be it temporary or permanent, must be of a no-dig design in accordance with the principles of BS 5837:2012**.**

2.3.4 After the erection of the CEZ fencing a minimum of two days' notice must be given to the LPA before any construction, including any groundwork, starts on site. The CEZ fencing must be maintained and retained for the duration of the works or until such time as agreed in writing with the LPA.

2.3.5 Services and drain runs must be kept outside the fenced RPA of the retained trees unless agreed in advance of construction.

2.4 ARBORICULTURAL SUPERVISION

2.4.1 A suitably qualified arboriculturist must be retained during the development period to carry out the following:

- To inspect tree protection fencing once erected prior to construction or ground works starting on site.
- To advise of any issues at the request of the LPA, the property owner or contractor as necessary.

2.4.2 The details of each visit are to be recorded in a site visit pro-forma, with copies circulated to the contractor, developer and the LPA Tree Officer.

3. TREE SURVEY

3.1 TREE SURVEY CRITERIA

3.1.1 This tree survey has been undertaken in accordance with BS 5837:2012 in order to establish and record:

- The principal attributes of those trees on site of stem diameter over 150mm measured at 1.50m from ground level (such as height, stem diameter, height of first branch break, crown spread, crown clearance).
- The Condition, Quality and Value of the trees on site.
- The retention value of those trees as categorised by BS 5837:2012.
- The outline and area of RPA required for those trees to be retained on site, and any other remedial works necessary to ensure a reasonable level of safety; or to facilitate the development in accordance with conditions set out in BS 5837:2012.

3.1.2 The findings of the survey highlight which trees are of particular merit and should be marked as a material constraint in the planning process.

3.1.3 The suitability of trees for inclusion in the proposed development is considered, with particular regard given to their safe, useful life expectancy, and suitability in the site after development is completed.

3.1.4 The Tree Survey was undertaken in accordance with Section 4 of BS 5837:2012, which grades trees into the following categories (See Appendix 3: Cascade chart for Tree Quality assessment):

- A – Trees of high quality with an estimated remaining life expectancy of at least 40 years.
- B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
- 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.
- U – Trees in such a condition that they cannot be realistically retained due to poor condition.

Further subcategories are given as follows:

- Mainly arboricultural qualities (1).
- Mainly landscape qualities (2).
- Mainly cultural values, including conservation (3).

3.2 SURVEY LIMITATIONS

3.2.1 This survey was undertaken from ground level using visual assessment techniques only. Physical assessment of suspected decay has been limited to probing with metal rods or sounding with a hammer. No specialist decay equipment or internal investigation tools have been employed during the assessment. No soil samples have been taken in the course of this assessment.

3.2.2 The observations and recommendations presented are based on the knowledge, qualifications and experience of the surveyor only.

3.2.3 All dimensions are measured as far as reasonably practicable, with the plotting of tree locations dependent on the topographical survey provided, or the available satellite coverage at the time of inspection. Stem diameter may have been estimated where trees are on third party land or where stems are inaccessible due to obstructions by undergrowth. Stem diameter may also have been estimated from best measurements available if the tree is ivy clad. The survey methodology follows that prescribed in BS 5837:2012.

3.2.4 Trees are dynamic evolving organisms subject to a range of external influencing factors (particularly the weather) the consequences of which may not always be foreseeable under the scope of this survey.

3.2.5 This survey will be valid for twelve months from the date of inspection and may become invalid within this period if any works are undertaken on or near to trees assessed in the survey. Such works include un-prescribed tree surgery, soil level changes, trenching etc.

3.2.6 Under the terms of the Wildlife and Countryside Act 1981 (as amended), the Countryside Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010, it is an offence to disturb any protected species, including their habitat or resting place. It may, therefore, be necessary to obtain expert advice in this area prior to the commencement of any works. This is particularly relevant to nesting birds, bats and their roosts. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

3.2.7 The nesting season for most birds runs from 1st March to 31st July. However, this can vary depending on the species and location. During these months, careful inspection must be made before any work commences and works must be postponed if active nests are found.

3.2.8 Trees with a Tree Preservation Order or those sited in a conservation area are protected under section 198 and 211 (1) of the Town and Country Planning Act 1990. Consent from the LPA must be sought before any works are to be undertaken on such trees, unless the proposed works to protected trees are a necessary consequence of granted full planning consent.

4. TREE SURVEY FINDINGS

4.1 Altogether 9 trees, 3 groups of trees and 3 hedgerows were assessed and appeared in the original survey schedule (Table 2). Trees T1- T3 and the group G1 have been removed from the Table 2 which appears in this document as they stand on eastern side of the site and are not implicated in the amendment to the permitted scheme. A Monterey cypress (T6) and row of cypresses (G3) are within the garden area of the property to the west but were included in the survey schedule as they could potentially be affected by the development proposals. Other trees/shrubs or hedges within or adjacent to the property have not been individually assessed as they were either considered too small or insubstantial to pose an arboricultural constraint to the scheme or were beyond 15m from the area proposed to be developed.

4.2 With the exception of the three beech hedgerows (H1-H3) all of the features assessed and included in the schedule are protected by virtue of their location within the Conservation Area.

4.3 Two trees, an early-mature (in the first third of its life cycle) deodar cedar (T4) on the western side of the front lawn and Monterey cypress (T6) beyond the front gardens western boundary are considered to be good-quality arboricultural features in the B grade retention category. With the exception of two ash trees (T5 and T8) the remaining trees and three beech hedgerows (H1-H3) are considered as lower-quality C grade retention category features due to insignificant stature, young age class or species type. The ash T5 has been removed since the submission of the original Tree Survey, AIA & TCP.

4.4 The ash T8 is assessed as suffering from ash dieback infection (*Hymenoscyphus fraxineus*). Ash dieback is a chronic fungal disease, currently affecting ash trees in the UK and Europe, that causes a vascular wilt characterised by leaf loss and crown dieback in infected trees of all age classes. The presence of dieback in the ash trees assessed is concluded due to sparse bud cover and frequent dead branch tips spaced throughout the outer crowns. As T8 is considered to have a very limited life expectancy it is assessed as U grade retention category. Ash infected with ash dieback will most likely rapidly deteriorate in physiological condition in the coming seasons and will ultimately die from the vascular wilt caused by this disease, becoming structurally unstable as they decline. T8 is a relatively small tree within a cluster of neighbouring trees and whose structural decline is unlikely to pose any significant hazard but will become an incongruous feature as a dead tree within the context of the garden site.

4.5 The large, over-mature horse chestnut (T9) is a heavy-set widely spreading tree of advanced age and stature. The central upper crown of the trees has been subject to significant storm damage in recent seasons with a large section of the upper leafing/branching structure missing which emerged from the central upper stem sections. These sections now show a large tear wound and associated exposed and decayed deadwood at the point of failure. Additional historic branch failure points throughout the primary structure of the tree also show exposed deadwood and decay pockets within open cavities, these are features that are expected to be found within a tree of its species and advanced age. The remaining branching structure, particularly on the extended southern side of the crown is however considered to be vulnerable to further failure under wind loading. This is due to the extended form of the limbs and the likely presence of internal decay within areas of the supporting structure on this side of the crown. The effect that the loss of the upper crown may have had by altering or increasing the effect that wind loading now has on the remaining branching features must also be taken into consideration.

4.6 The location of the new garage in both the current and previous positions proposed conflict with two sections of beech hedgerow (H1 and H2) which are shown to be removed on the plans provided.

4.7 The amendment to the proposed position of the garage does not raise any new conflicts between it and the adjacent trees on or within the garden of the property to the west.

5. TREE SURVEY CONCLUSIONS/RECOMMENDATIONS

5.1 The majority of the trees assessed within the area of the site proposed to be developed are in good or acceptable physiological and structural condition and offer amenity and conservation value that forms important aspects of the arboricultural identity of the site and the wider area.

5.2 The U grade ash (T8) standing on the western boundary of the site is recommended to be removed to eradicate the future hazard it will pose to the occupants of Manor Field and the adjacent property to the west as it deteriorates from ash dieback. As the tree is protected, Wiltshire Council would require six weeks notification of works to trees in a conservation area before this work could be undertaken.

5.3 The raised potential for failure of limbs on the southern side of the crown under wind loading that has been identified in the aging horse chestnut (T9) could be lessened by reducing the extended portions of the crown on the southern side of the tree by approximately 1.5m. As the tree is protected, Wiltshire Council this recommended work would require six weeks notification of works to trees in a conservation area before it could be undertaken.

5.4 Hedgerow H1 & H2 would still require removal under the amended scheme as already consented to under the consented application.

5.5 The amendment to the consented position of the garage raises no new conflicts between it and those adjacent trees.

5.6 2x field maple (*Acer campestre*) trees as bare-root standards (nursery stock size specification) are proposed to be planted in the approximate positions as shown on the TCP at plan (ARB-1656-03) to compensate for the two felled recently removed without notification to Wiltshire Council for works to tree in a conservation area. Bare-root trees are only supplied and can be planted during the dormant season.

5.7 An Arboricultural Method Statement may be required to guide specific aspects of the construction of the scheme to ensure that potential damage to the root systems of adjacent trees is minimalised during the development process.

5.8 In order to protect the trees to be retained adjacent to the areas proposed to be developed during the construction process, CEZs are proposed to be established, protected by CEZ fencing as exampled in Appendices 1 & 2, to exclude all construction activity from the sensitive areas of those trees during works. The proposed position of CEZ fencing is shown as a blue dashed line in the TCP provided at plan ARB-1656-03 (Design Overlaid).

6. ARBORICULTURAL IMPACT ASSESSMENT

6.1 The calculated RPAs of trees that are marked for retention are highly sensitive. The ground within the RPAs can be easily damaged by construction activity, with potentially negative impacts for those trees concerned. The severance of roots within the RPA of a tree has the impact of reducing its physiological function in terms of its ability to store energy, as well as draw water and nutrients from the soil to the effect that severe dysfunction or death of the tree can result. The removal of larger roots within the RPA can have the impact of reducing the structural integrity of the tree, leaving it exposed to failure during adverse weather conditions. The wounding resulting from the severance of roots can offer tree pathogens entry points for infection, which can cause dysfunction, loss of structural integrity or death.

6.2 Roots require access to oxygen and water in order to respire, as well as providing the rest of the tree with water and nutrients. Compaction of the soil will reduce this function to the effect that severe dysfunction or premature death of the tree can result. Installation of a non-porous hard-standing area within the RPA of a tree will have the same impact as compaction of the soil. Contamination of the soil from substances such as cement, fuel or chemicals, can have severe negative impacts on the physiological function of the root system in terms of its ability to store energy. It can also affect the drawing of water and nutrients from the soil, which can lead to physiological dysfunction, loss of structural integrity or premature death of the tree.

6.3 The stems and branching structure of trees are important to their physiological and structural function. The pruning of trees has the impact of reducing their ability to store energy, maintain their physiological system, and photosynthesise, which requires energy from the sun. This can lead to a loss of physiological function, expose the tree to pathogens and potentially lead to decline or premature death. The wounding resulting from the removal of branches can offer tree pathogens entry points of infection. A tree can be unbalanced by excessive pruning on one side, which can leave it exposed to new stresses and lead to failure during adverse weather (the removal of adjacent trees can have the same effect). The inadvertent damage of the stem and branching structure that may be a consequence of construction activity, has similar potentially negative impacts to pruning.

6.4 The proposed removal of the two sections of beech hedgerow (H1 and H2) is not considered to have any significant negative impact of the arboricultural identity of the site or its wildlife habitat and amenity value as they are essentially ornamental features of relatively low stature.

6.5 No trees are proposed to be removed as a direct consequence of the development proposals which minimises the actual or potential negative arboricultural impacts of the proposed scheme. The recommended removal the ash (T8) is a consequence of its limited life expectancy due to disease and the potential future hazard it will pose, not the proposed scheme. Therefore, its recommended removal should not be weighed against the proposed amended scheme.

6.6 The proposed pruning to mitigate the potential failure of the extended crown on the southern side of the horse chestnut T9 is not a consequence of any aspect of the proposed scheme. Such pruning could have a negative impact on the tree in terms of a loss of photosynthetic capacity to produce energy, as well as offering potential points of entry for pathogens through pruning wounds. However, the proposed pruning work is to reduce the potential for the large limb failure under wind loading which is likely to bring more significant negative impacts for the ongoing function of the tree than the proposed pruning is likely to.

6.7 There is no change or raising of the negative arboricultural impacts of the scheme resulting from the amended position of the garage. The negative arboricultural impacts were considered to be low in the permitted scheme which included the car port on the eastern side of the site. The amended scheme will also bring the future benefit of introducing two new native specimen trees into the site.

7. REFERENCES

British Standards Institute, 2012. *BS 5837:2012 – Trees in relation to design, demolition and construction. Recommendations*. Online: BSI.

British Standards Institute, 2010. *BS 3998:2010 – Trees work. Recommendations*. Online: BSI.

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National Joint Utilities Group, 2007. NJUG vol.4 *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to* trees. Available at: <http://streetworks.org.uk/wp-content/uploads/V4-Trees-Issue-2-16-11-2007.pdf>

Soilscapes, 2024. *Soilscapes Map*. Available at: <http://www.landis.org.uk/soilscapes/>

TABLES

Table 1 Tree Survey Key and Schedule

Tree/Tag No: Individual trees will be denoted as T1, T2 etc. on plans or diagrams. Groups of trees too numerous to individually survey or groups comprising of mainly trees of a stem diameter less than 150mm will denoted as G1, G2 or W1, W2, etc. Hedgerows will also be shown as groups denoted as H1, H2, etc. Tree stumps denoted by S. Individual trees located in a group or hedgerow can still be assessed individually.

Species: using common and scientific name.

Measurement Conventions:

1. Height, crown spread, and crown clearance is recorded to the nearest half metre (crown spread is rounded up) for measurements up to 10m and to the nearest whole metre if over 10m.
2. Stem diameter is recorded in millimetres rounded to the nearest 10mm.
3. Any estimated dimensions (e.g. for inaccessible tress or those located on adjacent land) are suffixed by "#".

Tree height measured using an electronic clinometer. Site conditions may render this technique unpractical in which case an estimated height will be suffixed by"#".

Stem Diameter: normally measured at 1.5m from ground level or using techniques as stated in Annex C of BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. If estimated denoted by #.

Ivy clad trees will be noted as without removing the ivy a stem diameter will have to be estimated from best measurement available.

Age Class: Y - a young tree in first third of life cycle.
EM - an early mature tree in second third of life cycle.
M - a mature tree in the last third of its life cycle.
OM - an over-mature tree in decline due to age.

Physiological Condition:
Good (G) - tree appears to be in a satisfactory physiological condition showing no signs of poor health.
Fair (F) - may be showing some minor signs of stress.
Poor (P) - slightly compromised showing significant signs of stress i.e. crown retrenchment.
V. Poor (VP) - significantly compromised e.g. advanced retrenchment.
D - dead.

Structural Condition: (Crown, stem and base of tree each given a value)
Good (G) - tree appears to be in a satisfactory structural condition with no significant defects found.
Fair (F) - some defects, but of low significance.
Poor (P) - slightly compromised e.g. poor branch unions found or evidence of decay.
V. Poor (VP) - profoundly compromised and imminent failure likely.
- cannot be assessed due to ivy/vegetation cover.
D/W -deadwood.

Estimated Remaining Contribution: Measured in years: <10 (under 10 years), >10 (over 10 years), >20, >40.

Retention Category: Denoted as U, A, B, C with sub-categories 1, 2, 3. as defined in Table 1 of BS5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

Root Protection Area (RPA): Radius given in **m.** Area given in **m^2.**

Table 2 BS5837 Survey Schedule

Site: Manor Field, Seend

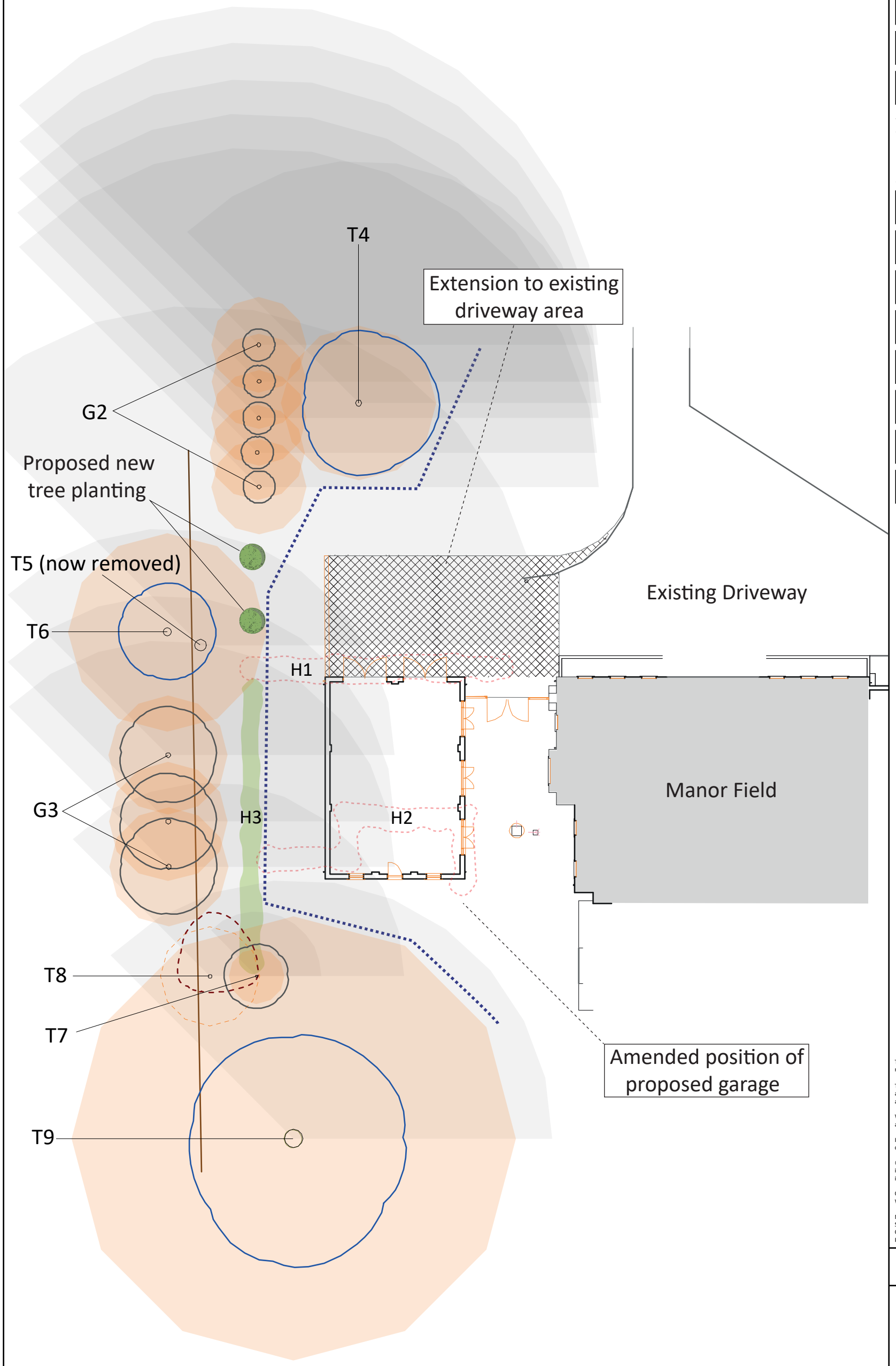
Client: Mr & Mrs S Grimes

Date: 26th April 2023

Tree/Tag. No	Species	Tree Height (m)	Stem Diameter (mm)	Crown spread (m)				Height & Direction of 1st Branch	Min. Crown Clearance (m)				Life Stage	Physiological Condition	Structural Condition: CROWN/STEM/BASE General Observations: Preliminary Management Recommendations	Estimated Remaining Contribution	Retention Category	RPA R (m)	RPA A (m^2)
				N	E	S	W		N	E	S	W							
T4	Deodar cedar *Cedrus deodara*	15	390	4.5	5	4.5	3.5	2.5e	2	2	1.5	3	**EM**	**G**	**G/G/G**	>40	B1	4.8	72
G2	Lombardy poplar *Populus nigra* 'Italica'	21	240	1	1	1	1	-	-	-	-	-	**EM**	**G**	**G/G/G** 5x Lombardy poplar Average dimensions given	>20	C1	3.0	28
T5	Ash *Fraxinus excelsior*	21	710	7.5	3.5	7	6	3.5n	15	18	10	18	**M**	**VP**	**F/F/F** Showing ash dieback symptoms >25% loss of bud cover **REMOVED SINCE SITE ASSESSMENT**	<10	U	-	-
T6	Monterey cypress *Cupressus macrocarpa*	15	500	3	3	3	3	-	2	2	2	2	**EM**	**G**	**G/F/#** On adjacent land	>20	B1	6.0	113
H1	Beech hedge *Fagus sylvatica*	2	-	-	-	-	-	-	-	-	-	-	**M**	**G**	**G/G/G**	>40	C1	-	-
H2	Beech hedge *Fagus sylvatica*	2	-	-	-	-	-	-	-	-	-	-	**M**	**G**	**G/G/G**	>40	C1	-	-
H3	Beech hedge *Fagus sylvatica*	2	-	-	-	-	-	-	-	-	-	-	**M**	**G**	**G/G/G**	>40	C1	-	-
G3	Monterey cypress *Cupressus macrocarpa*	14	300	3	3	3	3	-	-	-	-	-	**EM**	**G**	**G/G/G** 3x Monterey cypress On adjacent land	>20	C1	3.6	41
T7	Holly 'Silver Queen' *Ilex aquifolium* 'Silver Queen'	4	140	2	2	2	2	-	1	1	1	1	**EM**	**G**	**G/G/G** Variegated holly	>10	C1	1.8	10

T8	Ash *Fraxinus excelsior*	12	250	4	3	1	2	2s	5	4	7	7		**VP**	**F/F/F** Showing ash dieback symptoms	<10	U	3.0	28
T9	Horse chestnut *Aesculus hippocastanum*	16	1120	6.5	7	8	6.5	2n	2	1.5	2	2	**OM**	**G**	**F/F/G** Heavy set stem structure Central upper crown missing from historic storm damage with large branch wounds in central stem Southern crown vulnerable to further failure under wind loading Reduce upper crown by 1.5m to reduce risk of failure under wind loading	>10	B1	13.5	573

ILLUSTRATIVE MATERIAL



KEY:

Crown Spread in Tree Retention Categories

- 'A' Category
- 'B' Category
- 'C' Category
- 'U' Category

The Tree Retention Categories symbols shown in the key are for reference and may not always be present on the plan.

Other Plan Features

- Shading Arc
- Root Protection Area (RPA)
- RPA of U Grade Tree
- Hedge
- Hedge Proposed to be Removed
- Extension to Existing Driveway
- Proposed Position of CEZ Fencing
- Proposed New Tree Planting

The Tree Retention Categories symbols shown in the key are for reference and may not always be present on the plan.

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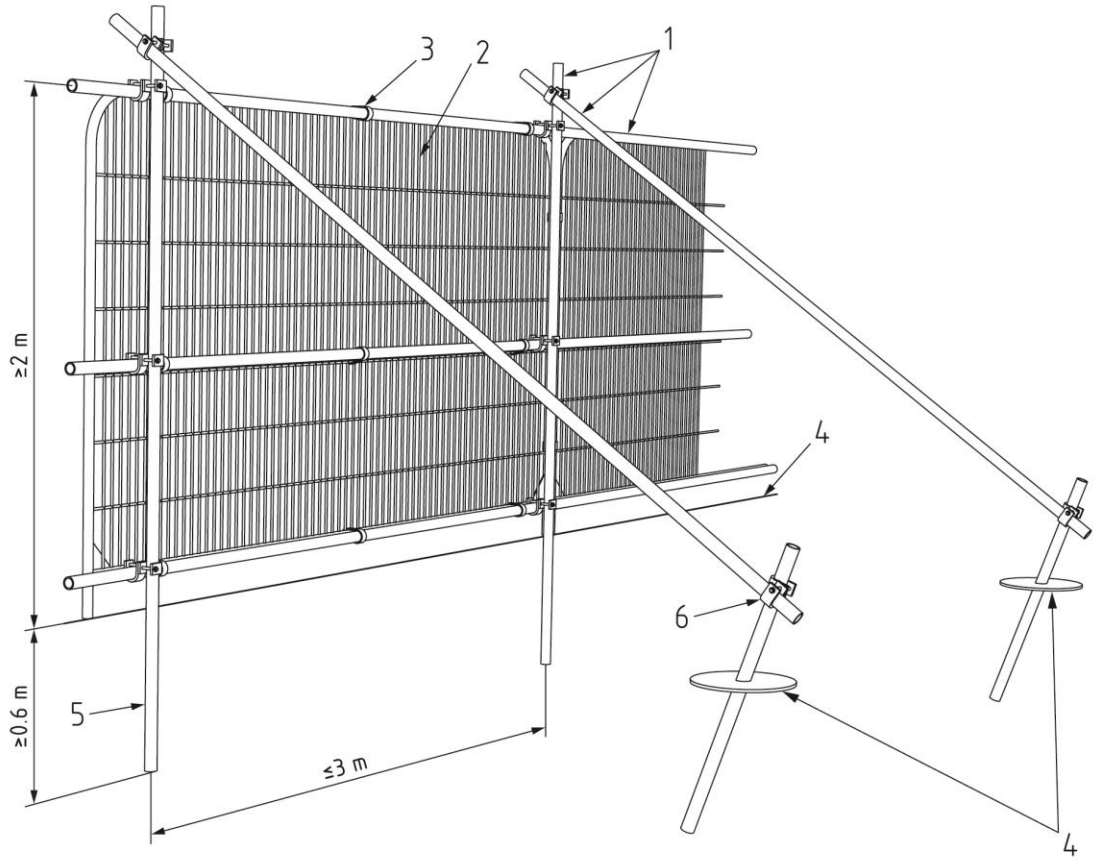
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Project: Manor Field, Seend		
On behalf of: Mr & Mrs Grimes		
Drawing title: Tree Constraints Plan (Design Overlaid)		
Drawing number: ARB-1656-03	Rev:	Date: Jan 24
Scale: 1:250 @ A3	DB: SM	CB: WH

APPENDICES

APPENDIX 1: BS5837:2012 DEFAULT SPECIFICATION FOR PROTECTIVE BARRIER



Key

1 Standard scaffold poles

2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels

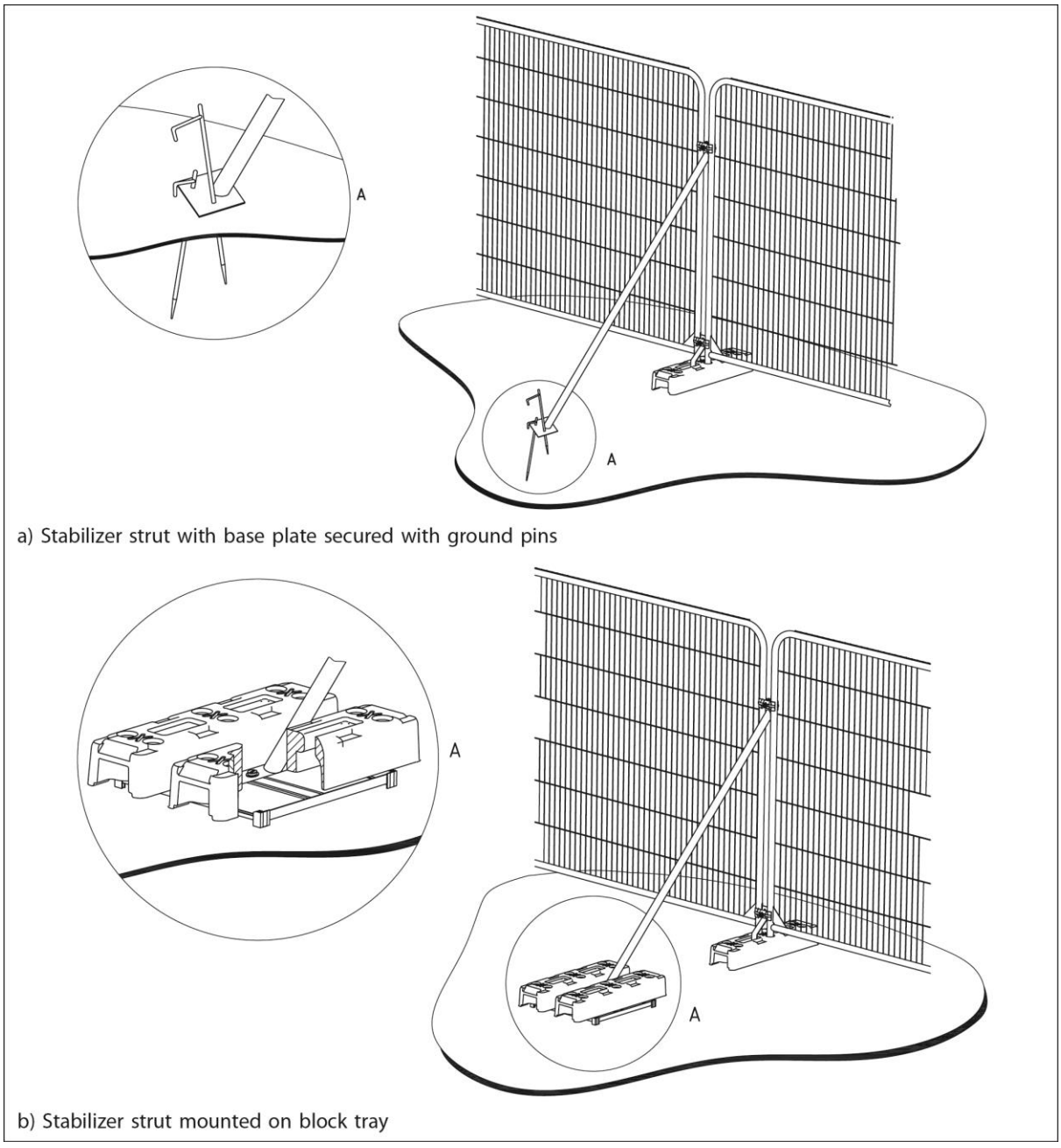
3 Panels secured to uprights and cross-members with wire ties

4 Ground level

5 Uprights driven into the ground until secure (minimum depth 0.6 m)

6 Standard scaffold clamps

APPENDIX 2: BS5837:2012 ABOVE GROUND STABILISING SYSTEMS



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

APPENDIX 3: CASCADE CHART FOR TREE QUALITY ASSESSMENT

Category and definition	**Criteria (including subcategories where appropriate)**		
Trees unsuitable for retention			
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.*		
Trees to be considered for retention			
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**
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.