

**BS5837:2012 Trees in Relation to Demolition,
Design and Construction.**

Tree Survey and Arboricultural Impact Assessment

at

West Dean Farm, West Dean, Salisbury, Wiltshire. SP5 1HP

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1: Introduction

- 1.1. I am instructed by Annabel Jessel of West Dean Farm, West Dean, Salisbury, Wiltshire, SP5 1HP to inspect trees at that address in relation to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction– Recommendations, and to provide recommendations to reduce the impact of a proposed development where feasible.

2: Tree Survey

- 2.1. The tree survey was carried out on 28th June 2026. The weather conditions were overcast with some sunshine.
- 2.2. The survey was of a preliminary nature undertaken from ground level. No invasive investigations or climbing inspections were undertaken to confirm visual or audible signs of defect or debility, and no tissue or soil samples were taken. All dimensions recorded were measured with a dbh tape or hypsometer as appropriate to the task.

3: Site Details

- 3.1. The site is in the southwest corner of the curtilage of West Dean Farm. The site is bounded by early mature native broadleaved hedging to the south and mixed yew (*Taxus baccata*) and broadleaved hedging to the west, beyond which is Grimstead Road. To the north is a large lawned area with gravel drive and mature broadleaved trees, and an area of contemporary design and planting. The main house is situated immediately to the east of the site.

4: Proposal

- 4.1. The proposed development is for a terraced area abutting the dwelling to the east, with pool, gazebo and pergola. A two metre high brick wall will enclose the development on the south and west sides, whilst new planting is proposed on the north side.

5: Drawings

- 5.1. The Tree Constraints Plan (Appendix 4) is overlaid on the topographical survey 23059-1,2,3 supplied by Richmond Bell Architects, and indicates tree positions and notional Root Protection Areas (RPAs). The proposed position of the various structures is not illustrated on the drawing to allow for repositioning if required.

6: Statutory Protection

- 6.1. The Wiltshire Council Planning Explorer Map indicates that none of the trees considered by this survey are protected by a Tree Preservation Order or Conservation Area.
- 6.2. This report aims to assess which trees are worthy of retention and how the proposed construction may affect them.

7: Summary

- 7.1. The arboricultural features in the immediate vicinity of the site are mature common beech trees (*Fagus sylvatica*), T1 to T5. Trees T1, T2 and T3 are considered to be Category B trees of moderate quality, offering significant visual amenity to the site. Trees T4 and T5 are considered to be Category C trees of low quality and value, which are currently in adequate condition to remain. Hedge H1 will have to be removed to facilitate the proposed development, but its loss should be mitigated by proposed planting to the north of the development.

There are many further arboricultural features within the curtilage of West Dean Farm, mainly mature common beech. Trees have been recorded where there is the potential for damage by construction activities. Amongst these trees, T8 (common beech) has fruiting bodies of the parasitic soft rot fungus *Kretzschmaria deusta* which is frequently responsible for tree failure. This tree is recommended for removal on the grounds of safety.

Tree T8, a horse chestnut (*Aesculus hippocastanum*), has a low canopy over the driveway. This may require pruning for access for construction machinery, subject to the machinery selected by the chosen contractor for the proposed development.

- 7.2. Provided the trees to be retained are protected throughout the development in accordance with this Arboricultural Impact Assessment and Appendix 1: Method Statement, the impact upon the retained trees is likely to be minimised. As the impact upon the trees is likely to be minimised there is unlikely to be any arboricultural impact upon the character of the local area as a result of the proposed development.

8: Findings

Please see Appendix 2: BS5837 Tree Survey for specific details.

- 8.1. Tree protection methods (fencing and ground) must be used to reduce the impact of the proposed development upon retained trees and positioned at the extent of the Root Protection Areas marked by a blue line on the Tree Constraints Plan.
- 8.2. If the final position of the brick wall encroaches into the RPAs of trees T1-T5, the use of the ground screws and manual installation will minimise impact to these trees. Should the terrace encroach into the RPAs of retained trees, a cellular confinement system must be used. Any encroachment by the upright structures for the pergola or gazebo into RPAs of retained trees will require hand digging or the use of Metposts.
- 8.3. Changes in grade are not specified.
- 8.4. The current services must be utilised where possible. Any new services must avoid the RPAs of retained trees. If this is not possible then the services must be designed by an Engineer in consultation with the Arboricultural Consultant and submitted to the LPA for their written approval prior to implementation.

Further advice is available in Appendix 1: Method Statement and NJUG Volume 4 “Guidance for the planning, installation and maintenance of utility services in proximity of trees”.
- 8.5. In the event of shrinkable soils being found on the site, it will be for an engineer to design the structures in accordance with the current industry guidance to reduce any potential risk of tree related subsidence to an acceptable level.
- 8.6. This report considers the trees that may significantly be affected by the proposed development. Any trees not mentioned or not surveyed are sufficiently distant that the proposed works are unlikely to have an influence upon them, are adequately protected by tree protection measures, or their surrounds may be adequately delineated by orange barrier fencing mesh.

9: Conclusion

- 9.1. To retain the arboricultural features of the site tree protection measures must be utilised to minimise the impact of the proposals upon the trees. The principles and details of the Arboricultural Impact Assessment and Appendix 1: Method Statement must be followed to reduce the impact upon the retained trees.

Appendix 1: Method Statement

A pre-commencement meeting prior to the start of any works between the Local Planning Authority (LPA) Arboricultural Officer, appointed Arboricultural Consultant and Site Manager must take place to clarify any additional protection measures required.

To aid the construction phase for the development of the site an Arboricultural Consultant must be appointed to inspect and monitor the site at the start of the works and on an as required basis throughout the construction works to ensure that the protection procedures are adhered to and to assist with addressing further arboricultural issues that may arise.

The position of the protective measures described in 8.1 must be erected prior to any demolition or construction works. This should be under the supervision of the appointed Arboricultural Consultant. Once erected, barriers and ground protection must be considered sacrosanct, and must not be removed or altered without prior recommendation by the appointed Arboricultural Consultant and written approval by the LPA.

The protective barriers must be erected according to diagrams contained within this method statement and Appendix 2: BS5837 survey sheet which is based upon the guidelines in BS5837: 2012 'Trees in relation to construction'. Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. On all sites, special attention should be paid to ensure that the barriers remain rigid and complete. Barriers must consist of a 1.8m high scaffold framework comprising a vertical and horizontal framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3m. Onto this 1.8m high weldmesh panels should be securely fixed with wire or scaffold. Weldmesh panels on rubber or concrete feet are not resistant to impact and must not be used. If an alternative specification is preferred, then it must be agreed in writing with the Local Planning Authority prior to installation.

Orange barrier fencing mesh must be erected either side and at the edge of the gravel drive until it meets standard protective barriers. On the west side of the lawn, it should then run from the outer extent of the protective barriers of T6 to T1.

If adequate workspace to facilitate the construction can only be achieved by working in the RPA, the protective fencing may be erected closer to the tree stems and ground protection employed to the extent of the RPAs. For pedestrians and equipment up to a gross weight of 2 tons, proprietary inter-linked ground protection boards will be used, placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip) laid over a geotextile membrane.

Any encroachment within the RPA or breaches of the tree protection measures must be reported to the appointed Arboricultural Consultant to enable them to provide recommendations to mitigate the encroachment / breach and to allow the issue and mitigation to be reported to the Local Planning Authority for their written approval.

All site personnel must be briefed by the Site Manager or the Arboricultural Consultant on the importance of the trees to be retained and the protective measures implemented to aid their retention into the future. The Site Manager is responsible for the implementation of all tree protection measures.

Once the construction exclusion zone has been protected by barriers then construction work can commence. All weather notices should be erected on the barriers with words such as “Construction exclusion zone – keep out”.

Material which will contaminate the soil, e.g., concrete (dry or mixed), diesel, oil, vehicle washings, etc. must not be discharged within the root protection area. It is essential that an allowance should be made for any sloping ground so that damaging materials such as concrete washings, mortar, diesel or oil cannot run towards the trees.

Storage of materials, concrete mixing, etc. must take place in a designated area on the lawn to the north of the site, between the orange barrier fencing mesh and the gravel drive.

There must be no fires on the site.

Notice boards, telephone cables or other services must not be attached to any part of the tree.

Manual installation of ground screws only may occur in proximity of retained trees.

No wet concrete is to be poured inside an RPA unless the excavated area or mould has been lined with an impermeable liner.

Following completion of the construction and any hard landscaping works a site meeting between the Local Planning Authority Arboricultural Officer appointed Arboricultural Consultant and Site Manager must take place to assess whether the protective barriers and ground protection can be removed to allow soft landscaping works.

Screw Piles.

If constructed within an RPA, the brick wall will be built using screw piles to minimise soil disturbance and protect tree roots by ensuring that the screws are positioned to avoid major roots where practicable. The beams will be laid at or above ground level.

The specific materials used to sit on the screws will be determined by the project architect. From an arboricultural perspective, any methodology or material is acceptable, e.g., concrete slabs or steel beams, provided no wet concrete is poured into the ground, and the structure is at or above ground level with no excavations.

The screw pile location will be hand-excavated to a depth of 600 mm to check for the presence of significant roots (roots greater than 25 mm in diameter). Installation may only proceed once the locations of all ground screws have been agreed by both the Arboricultural Consultant and the engineer.

In the event that significant roots are found, the preferred mitigation measures will be for the screw pile to be repositioned slightly rather than severing or damaging roots.

If no suitable alternative location is found, the Arboricultural Consultant will consider the suitability of root pruning to allow for installation. Roots greater than 25 mm in diameter will not be cut without arboricultural approval.

If significant roots are uncovered that cannot be pruned without detrimental effect to the tree, works in this area should cease and a new design and method statement should be agreed with planning before works may continue in this area.

Any exposed roots must be covered and protected with damp hessian to prevent desiccation. Any roots smaller than 25mm in diameter, can be pruned, preferably to a side branch, with suitable sharp pruning tools.

The screw pile diameter shall be kept to the minimum necessary to achieve the required structural loading. This is still to be determined by the structural engineer.

Screw piles shall be installed to the minimum depth required to achieve structural load capacity.

Cut-off levels shall be set at or above the existing ground level to avoid excavation.

Cellular Confinement System.

If constructed within RPAs, the terrace will be above surface and involve no-dig methods. No scraping or reducing existing soft ground levels for this installation will be undertaken. A cellular confinement system will be used to spread the weight load and minimise the damage to the roots, while allowing for water and gaseous exchange in the soil. A suggested appropriate material is the Geotrax GC Cellular Confinement System.

The ground will first need to be prepared. The removal of the existing surface will need to be conducted first, carried out by hand within the RPA to avoid root damage. Filler aggregate, such as sharp sand, can be used to fill and smooth the surface as required.

A retaining edge structure shall be installed to ensure that the filled aggregate remains in place, held in place by pinning. These will be installed by hand within the RPA.

A permeable geotextile separation membrane shall then be laid directly onto the ground. An example of an acceptable membrane is GeoTrax TRP4000. The membrane shall be lapped in accordance with the manufacturer's guidance.

An even ground level will then be achieved by infill of permeable aggregate, comprising 4–20 mm non-calcareous, washed angular stone to maintain water and gaseous exchange within the soil. The changes in levels within the RPA is minimal and will not impact the rooting system.

The cellular confinement system will be laid on top of the permeable aggregate. The cellular confinement system will be 100 mm deep. The system shall be secured using the supplied steel bar pins driven by hand, according to the manufacturer's specifications, to ensure that each cell is fully extended and under tension.

The cells will be infilled with 4–20 mm non-calcareous, washed angular stone. Infill shall be placed from the edge working inwards to avoid trafficking over empty cells. No mechanical compaction shall be undertaken; light vibration or hand tamping only if required.

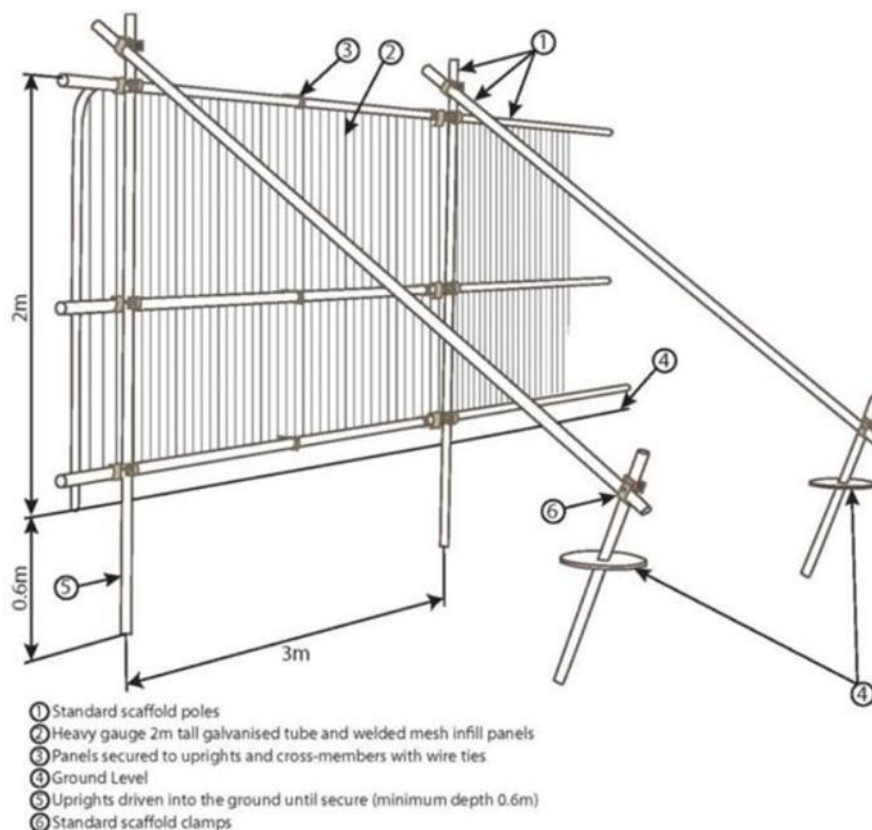
A separation geotextile will then be laid on top of the cellular confinement system.

The surfacing installed above the cellular confinement system should ideally comprise permeable or semi-permeable material. Slabs with joints or block paving, for example, are acceptable.

Protection Barriers

Protective fencing will be erected in line with BS 5837 (2012) as illustrated below to safeguard retained trees during the construction phase of the development.

The fencing consists of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum of 3m to add further stability. Onto this, weldmesh panels will be securely fixed with wire or scaffold clamps (see extract of BS 5837 below). Sensitive working methods will be required beyond the fence line, particularly when within RPA margins. Temporary tying back of branches may be required to facilitate implementation of temporary tree protective fencing in relation to lower lying canopies. The protective fencing will remain in position for the duration of the site-wide construction activities.



Appendix 2. BS5837 Tree Survey

Ref.	Species	Num. Stems	Height (m)	Stem diameter(s) (mm)	Life Stage	Rem. Contrib.	Survey Notes	Retention Category	Spread	Crown Clearance (m)	Lowest Branch	RPA	Physiological Condition	Structural Condition	Recommendations
H1	Mixed species	1	3.0	50	Semi-mature	NA		Not Recorded					NA	NA	Remove to facilitate development
T1	Common beech (<i>Fagus sylvatica</i>)	1	29.0	860	Mature	20+ Years	Multiple historic pruning works. Crown becoming, particularly upper crown. Minor dead wood	B1,3	N:9 E:15 S:5 W:3.5	4.0	4(N)	Radius: 10.3m. Area: 333 sq m.	Fair	Good	Protect trees with protective barriers
T2	Common beech (<i>Fagus sylvatica</i>)	1	26.0	520	Mature	20+ Years	Cavity at approximately three metres east side. Crown becoming, particularly upper crown. Minor dead wood	B1,3	N:2 E:9 S:3 W:2	10.0	10(W)	Radius: 6.2m. Area: 121 sq m.	Fair	Good	Protect trees with protective barriers
T3	Common beech (<i>Fagus sylvatica</i>)	1	27.0	680	Mature	20+ Years	Timbers fixed to trunk to approximately two metres. Minor dead wood throughout crown.	B1,3	N:4 E:7 S:5 W:3	2.0	5(N)	Radius: 8.2m. Area: 211 sq m.	Good	Good	Protect trees with protective barriers
T4	Common beech (<i>Fagus sylvatica</i>)	1	27.0	660	Mature	<10 years	Sparse crown. Major dead wood.	C1,3	N:4 E:1 S:3 W:12	4.0	6(W)	Radius: 7.9m. Area: 196 sq m.	Fair	Good	Protect trees with protective barriers
T5	Common beech (<i>Fagus sylvatica</i>)	1	27.0	710	Mature	<10 years	Sparse crown. Poor vitality. Dead wood throughout crown. Multiple historic pruning wounds.	C1,3	N:3 E:11 S:5 W:5	2.5	6(W)	Radius: 8.5m. Area: 227 sq m.	Poor	Good	Protect trees with protective barriers
T6	Common beech (<i>Fagus sylvatica</i>)	1	19.0	810	Mature	20+ Years	Multiple historic wounds from pruning and branc failures, including one very recent failure in upper crown on east side. Heavy crown asymmetry due to long removed adjacent tree.	B1,3	N:6 E:11 S:9 W:2.5	2.0	7(N)	Radius: 9.7m. Area: 296 sq m.	Fair	Good	Protect trees with protective barriers
T7	Common beech (<i>Fagus sylvatica</i>)	1	23.0	860	Mature	20+ Years	Ivy obscures base. Upper crown becoming sparse. Dead wood.	B1,3	N:8 E:5 S:8 W:2	1.0	6(E)	Radius: 10.3m. Area: 333 sq m.	Fair	Good	Protect trees with protective barriers
T8	Common beech (<i>Fagus sylvatica</i>)	1	20.0	1,070	Mature	20+ Years	Fruiting bodies of K deusta at base. Very sparse crown. Major dead wood.	U					Poor	Good	Remove tree.

Ref.	Species	Num. Stems	Height (m)	Stem diameter(s) (mm)	Life Stage	Rem. Contrib.	Survey Notes	Retention Category	Spread	Crown Clearance (m)	Lowest Branch	RPA	Physiological Condition	Structural Condition	Recommendations
T9	Horse chestnut (<i>Aesculus hippocastanum</i>)	4	15.0	40, 50, 60, 70	Mature	20+ Years	Multi-stemmed from approximately one metre. Extensive bark loss and wounding caused by bleeding canker.	B1	N:5 E:5 S:7 W:7	2.0	7(W)	Radius: 1.3m. Area: 5 sq m.	Fair	Fair	Crown lift over drive to approximately four metres above ground level if clearance for construction machinery is required.

Appendix 3: Tree Survey Explanatory Notes

Tree Numbers

'T' prefixes have been used to identify individual trees and commence with 'T1'. 'G' prefixes have been used to identify groups of trees.

Species

Species are listed by their common name, both in the schedule and in the report text.

Height and Stem Diameter

The stem diameter of trees is measured at 1.5m above ground level and given in millimetres (mm). Tree heights are measured or estimated in metres (m).

Crown Spread

Radial crown spread is measured in metres and is listed for each of the four cardinal points. The canopy shape for individually surveyed trees depicted on the accompanying plans accurately represents the canopy spread as measured on-site.

Age Class

The age of each tree is defined as follows:

Young - within the first third of life expectancy.

Semi-Mature - within the second third of life expectancy.

Mature - within the last third of life expectancy.

Over mature - Tree in decline; and

Veteran – tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. For the purpose of this report the term 'ancient tree' and 'veteran tree' are interchangeable.

Physiological and Structural Condition

The physiological or structural condition of each tree is defined as either; good, fair, poor or dead.

For each tree, where appropriate, notes on the structural integrity are provided on form, taper, forking habit, storm damage, decay, fungi, pests, etc.

An assessment of a tree's physiological condition is defined as:

Good – fully functioning biological system showing expectant vitality for the species i.e., normal bud growth, leaf size, crown density and wound closure.

Fair – fully functioning biological system showing below average vitality i.e., reduced bud growth, smaller leaf size, lower crown density and reduced wound closure.

Poor – a biological system with limited functionality showing clear physiological decline, disease or significantly below average vitality i.e., limited bud growth, small and chlorotic leaves, low crown density and limited wound closure.

An assessment of a tree's structural condition is defined as:

Good – no significant structural defects.

Fair – structural defects which could be alleviated through remedial tree surgery or Arboricultural management practices.

Poor – structural defects which cannot be alleviated through tree surgery or Arboricultural management practices.

Estimated Remaining Contribution (ERC) in Years

The Estimated Remaining Contribution (ERC) for each tree is based on species and existing and apparent physiological and structural condition of the tree. The ERC may affect the proposed development layout, since the longer the tree is likely to live the greater the contribution it will make and the greater the need for retention.

<10 - Unsuitable for retention

10 - 20 - Can be retained in the short term

20 – 40 - Will continue to offer benefits for the foreseeable future

40+ - Good longevity potential

Tree Categorisation

1.12. Categories A, B and C deal with trees that should be a material consideration in the development process and are divided into subcategories that reflect arboricultural, landscape and cultural values.

- **Category Grading A:** Trees of high quality and value, which are in such a condition as to be able to make a substantial contribution from an arboricultural, landscape or cultural perspective.

- **Category Grading B:** Trees of moderate quality and value, which are in such a condition as to make a significant contribution from an arboricultural, landscape or cultural perspective.
- **Category Grading C:** Trees of low quality and value, which are currently in adequate condition to remain until new planting could be established or young trees with a stem diameter below 150mm at 1.5 metres above ground level.
- **Category Grading U:** Trees which are in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

Root Protection Areas (RPA)

The RPAs are considered to contain sufficient rooting volume to ensure the survival of the tree and should be left undisturbed to avoid damage to the roots or rooting environment surrounding the tree unless special construction methods are employed. Any sudden and major alteration of the soil or surface conditions within RPAs will lead to progressive shoot and branch dieback until the roots have adapted to the altered conditions and have been able to source sufficient water and oxygen levels. If damage is progressive or so severe that the tree is unable to adapt, then it is likely that the tree will ultimately die. It should be noted that in general, with increased maturity of a specimen, the ability of that tree to adapt to dramatic alterations in relation to its root system is lessened.

The plan located to the rear of this report shows the approximate extent of Root Protection Areas (RPAs) marked in grey hatching. The RPAs have been calculated in accordance with the methodology set out within Appendices C and D of BS5837: 2012, using the stem diameter dimensions obtained during the site visit.

Limitations

The comments made are based on observable factors present at the time of inspection and are based on maximising the trees' safe life expectancy given their existing context. Although the health and stability of trees in their current context is an integral part of their suitability for retention, it must be stressed that this report is not a tree risk assessment and should not be construed as such. While every attempt has been made to provide a realistic and accurate assessment of the trees' condition at the time of inspection, it may have not been appropriate or possible to view all parts or all sides of every tree to fulfil the assessment criteria of a risk assessment.

No tree is entirely safe, given the possibility that exceptionally strong winds could damage or uproot even a mechanically 'perfect' specimen. It is therefore usually accepted that hazards are only recognisable from distinct defects or from other failure-prone characteristics of the tree or the site. Assessment of the potential influence of trees upon buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effects of incremental root or branch growth, are specifically excluded from this report.

Un-assessable Risks

Any alteration to the site boundary could change the current circumstances and may invalidate this report and any recommendations made. A lack of recommended work does not imply that a tree does not pose an unacceptable level of risk and likewise, it should not be implied that a tree will present an acceptable level of risk following the completion of any recommended work.

The Wildlife and Countryside Act (WACA) 1981 (as amended) makes it an offence to disturb nesting birds or recklessly endanger a bat or its roost. Bats are also a European protected species and are additionally protected under the Conservation (Habitats & c) Regulations 1994 and 2010 (as amended).



Retention Category

- Category A
- Category B
- Category C
- Category U
- RPA

- Category A
- Category B
- Category C
- Category U
- RPA

