BS5837 Tree Survey and Arboricultural Impact Assessment

at

Proposed Simpsons Seeds site on land adjoining

185 Chapel Street, Horningsham

Author: Rick Gunning (MSc, BSc (Hons) PTI, QTRA). Checked: Steve Woollard (Cert. Ed, Cert Arb (RFS), PTI, QTRA).

WESSEX RURAL CRAFTS LTD
REGISTERED IN ENGLAND & WALES · COMPANY No. 600252. · VAT 159 0141 24 · REGISTERED OFFICE: 8A HOLLYBUSH · HORNINGSHAM · WILTSHIRE · BA12 7LE·
T: 01985 220457/01985 844594

Contents

1: Instruction
2: Tree Survey
3: Site Details
4: Proposals
5: Drawings
6: Statutory Protection
7: Summary
8: Findings
9: Conclusion
10: Recommendations

Appendices

Appendix 1: Arboricultural Method Statement

Appendix 2: BS5837 Tree Survey

Appendix 3: Tree Survey Explanatory Notes

Appendix 4: Tree Location Plan (separate)

1: Introduction

1.1. WRC Ltd have been commissioned by Matt Simpson to inspect trees at Proposed Simpsons Seeds site on land adjoining 185 Chapel Street, Horningsham 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 development where feasible.

1.2. This survey considers trees that may be affected by the position of the proposed development.

2: Tree Survey

2.1. The tree survey was carried out on 10th Oct 2023. The weather conditions were sunny.

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 distance tape, dbh tape or clinometer as appropriate to the task.

3: Site Details

3.1. The site is located on land adjoining 185 Chapel Street, Horningsham. The Eastern boundary are lined with mature Hazel hedging, the southern boundary has an established, maintained hedge with an Apple T3. The Northern boundary has a self-sown hedge consisting of Goat Willow and Buddleia that have formed a hedge and 2 Trees T1- a veteran Goat Willow that has been pollarded and T2- a Yew. Access to the site is via gates to the south within the hedgerow. The western boundary is the garden of 185 Chapel Street.

4: Proposals

4.1. The proposed development is for a horticultural seed nursery with Polytunnels greenhouses, outbuildings and parking.

5: Drawings

5.1. The drawing provided with the original planning application has been adapted to identify the trees surveyed and proposed planting (see Appendix 4: Proposed Site plan with tree and soft landscape location (1)).

6: Statutory Protection

6.1. Wiltshire Council Council Planning Map indicates that trees on the site are subject to statutory protection by the Horningsham 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 of the site and locality are the veteran Goat Willow T1, Yew T2 and hedgerow Apple T3. H1, H2 and H3 afford screening of the development from adjacent land. These trees and hedges are to be retained and industry standard construction methods and tree protection methods (ground protection, use of exisiting ground slab foundation, site monitoring) must be used to reduce the impact of future works upon them. The current plans offer very little impact on the trees by using existing concrete slabs for the location of sheds and buildings, except the digging of the foundation of Polytunnel poles. This can be done by hand within the root protection area (RPA) of T1 and T2 under supervision of an Arboricultural consultant / clerk of works with the ability to stop work as required.

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.

8: Findings

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

8.1. The proposed development encroaches into the notional root protection area (RPA) of T1, T2 and T3 as described in 7.1 and the RPA of each tree can be marked out before construction begins by the Arboricultural Consultant for clarity.

8.2. 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”.

8.3. BS5837:2012 Trees in relation to design, demolition and construction - Recommendations states in paragraph 6.3:

Wherever trees on or adjacent to a site have been identified within the tree protection plan for protective measures, there should be an auditable system of arboricultural site monitoring. This should extend to arboricultural supervision whenever construction and development activity is to take place within or adjacent to any RPA.

- Therefore, it is necessary for site monitoring by an Arboricultural Consultant to occur for the proposed works.

- Tree protection measures are necessary to aid the retention of the trees. The details of these tree protection measures are specified in Appendix 1: Method Statement.

8.4. In the event of shrinkable soils being found on the site, it will be for an engineer to design the foundations in accordance with the current industry guidance to reduce any potential risk of tree related subsidence to an acceptable level.

8.5. This report considers the trees that may not be 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, or are adequately protected by tree protection measures.

9: Conclusion

9.1. Arboricultural features of the site to be retained must have tree protection measures 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.

10: Recommendations

10.1. Following any permission from the Local Planning Authority, the principles and details of the Arboricultural Impact Assessment and Appendix 1: Method Statement and Appendix 4: Tree Location Plan are followed to reduce the potential for harm to the retained trees during development.

Appendix 1: Method Statement

1. To aid the site clearance and construction phase for the development of the site an Arboricultural Consultant may need to 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.

2. Ground protection must be used on the extent of the RPA of T1, T2 and T3 encroached on by the proposed development if invasive digging is required during construction. Ground protection must be maintained for the duration of any demolition or construction works and considered sacrosanct and must not be removed or altered without prior recommendation by the appointed Arboricultural Consultant and written approval by the LPA.

   Ground protection for pedestrian movements within the root protection area (RPA) will not be required due to the presence of hard standing.

   Ground protection for wheeled or tracked construction traffic movements within the root protection area (RPA) will not be required for light vehicles due to the presence of hard standing. For any heavy goods vehicles ground protection for traffic movements within the root protection area (RPA)must be designed by an engineer and Arboricultural Consultant to accommodate the likely loading and may involve the use of proprietary systems (for instance www.evetrakway.co.uk) or reinforced concrete slabs or a series of railway sleepers pined together or other suitable system to ensure that the bulk density of the soil remains lower than 1.5g/cm3. If an alternative specification is preferred, then it must be agreed in writing with the Local Planning Authority prior to installation.

   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.

3. All site personnel must be briefed by the Site Manager or the Arboriculturalist 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.

4. Care should be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to the equipment and retained trees and might make the safe retention of the retained trees impossible. Consequently, any transit or transverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus requiring tree works to clear the necessary access.

5. 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.

6. There must be no fires on the site.

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

8. Any excavations in proximity of retained trees will require certain precautions to avoid unnecessary damage to trees to be retained, and should be undertaken as follows:

- All excavations should be lined with an appropriate non-permeable membrane prior to pouring concrete to avoid leaching of chemicals into and contamination of the soil.

- All excavations should avoid damage to the protective bark covering larger roots. Roots, whilst exposed, should be wrapped in dry, clean hessian sacking to prevent desiccation (drying) and to protect from temperature changes.

- Roots smaller than 25mm diameter may be pruned back, preferably to a side branch, using a proprietary clean cutting tool such as secateurs or handsaw.

- Roots larger than 25mm diameter should only be severed following consultation with the appointed Arboricultural Consultant, as the roots may be essential to the tree's health and stability.

- Prior to backfilling, any hessian wrapping should be removed and retained roots should be surrounded by sharp sand (builder's sand should not be used because of its high salt content which is toxic to tree roots), or other loose granular fill, before soil or other material is replaced This material, e.g., general purpose grade topsoil to BS3882, should be free of contaminants and other foreign objects potentially injurious to tree roots.

Appendix 2: BS5837 Tree Survey

Tree No.	Species	BS:5837 Cat.	Ht. (m)	Diam (mm)	Crown Spread (m)	Crown Ht. (m)	Age Class	Phys. Condition	Struc. Condition	Estimated Remaining Contribution (years)	Comments	Recommendations	RPA Area (m2)
T1	Goat Willow	B	6	600	3 r	Not measured	Veteran	Fair	Fair	20-40	Pollarded at approximately 1.5 metre.	Protect tree with protective barriers during construction. Repollard regularly.	163
T2	Yew	B	8	500/200	4	Not measured	Semi-mature	Good	Fair	40+	side pruned in past on southern side	Protect tree with protective barriers during construction.	55
T3	Apple	C	6	350/200	5	Not measured	Mature	poor	fair	10-20	hedgerow tree within southern hedgerow	Consider pruning away from utilities	34
H1	Goat Willow and buddleia scrub hedge	C	2	Not measured	Not measured	Not measured	Young	Fair	Fair	10-20	self-sown scrub hedge on northern boundary	Suitable screen for the development that has established from self-sown seeds. Maintain as a hedge once at desired height. Fill gaps with suitable native species.	N/A
H2	Hazel	B	10	Not measured	Not measured	Not measured	Mature	Fair	Good	20-40	Mature Hazel on Eastern boundary	Suitable screen for the development. Consider pruning away from utilities	N/A.
H3	Mixed species	C	2.5	Not measured	Not measured	Not measured	Semi-mature	Fair	Good	20-40	Maintained farm hedge on southern boundary	Suitable screen for the development that has been maintained by flail	N/A

Appendix 3: Tree Survey Explanatory Notes

Tree Numbers

'T' prefixes have been used to identify individual trees.
'G' prefixes have been used to identify groups of trees.
'H' prefixes have been used to identify hedges.

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 estimated in metres (m).

Crown Spread

Radial crown spread is measured in metres and is averaged for each of the four cardinal points. The canopy shape for individually surveyed trees depicted on the accompanying plans is indicative and does not accurately represent 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 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).