

BS 5837 Arboricultural Report

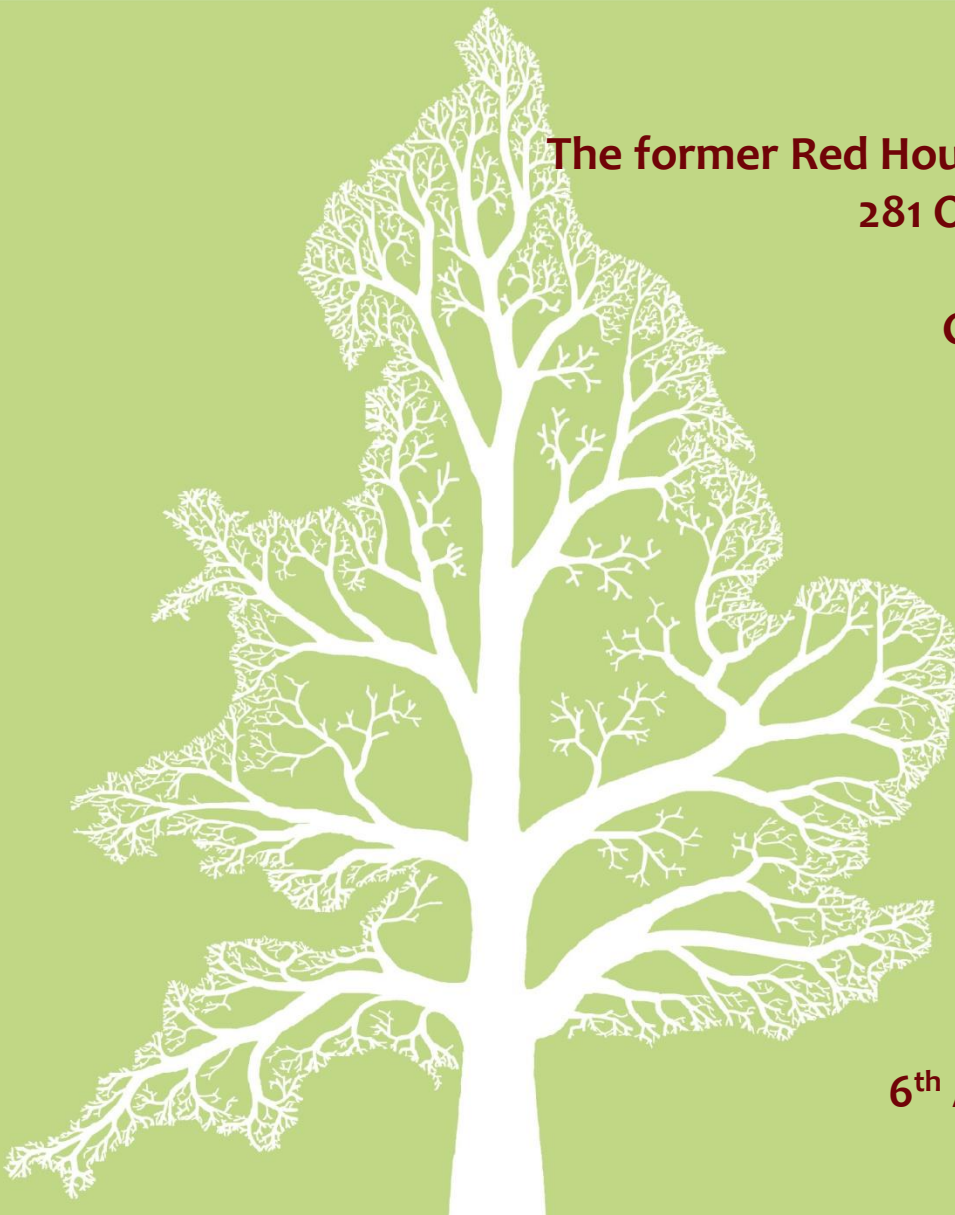
Impact Assessment & Method Statement



at

The former Red House Museum
281 Oxford Road
Gomersal
Cleckheaton
BD19 4JP

Dated
6th August 2021



CROWN
Tree Consultancy

Branching out through England and Wales



PDF readers select page-width for detail & page-view for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date: 6th August 2021

Contents

1.	Introduction	3
1.1.	Instruction	3
1.2.	Scope and Purpose of the Report	3
1.3.	References	3
1.4.	Survey Details and Findings	3
1.5.	Author	4
2.	Site Overview	5
2.1.	Brief Description	5
2.2.	Coordinates	5
2.3.	Survey Extent	5
3.	Vegetation Overview (independent of proposals)	6
3.1.	Preliminary Management Recommendations	6
3.2.	Work Priority and Future Inspections	6
3.3.	Tree Protection Status – Site Specific	7
3.4.	Tree Protection – General Notes	7
3.5.	Species Present – Additional Information	8
4.	Arboricultural Impact Assessment	10
4.1.	Overview	10
4.2.	Tree Removal	10
4.3.	Mitigation Planting	11
4.4.	Impact on Tree Canopies	11
4.5.	Impact on Tree Roots	11
4.6.	Demolition Activities	12
4.7.	Hazardous Materials	12
4.8.	Cabins and Site Facilities	13
4.9.	Boundary Treatments	13
4.10.	Impact of Retained Trees on the Development	13
4.11.	Summary	13
5.	Photographs	14
	Appendix 1: BS 5837: 2012 – Guidance Notes	20
	Appendix 2: Explanation of Tree Data & Glossary	22
	Appendix 3: Survey Methodology	25
	Appendix 4: Author's Qualifications	25
	Appendix 5: Further Information	26
	Appendix 6: Tree Data Schedule, Site Plans & Arboricultural Method Statement.	27



1. Introduction

1.1. Instruction

1.1.1. We are instructed Faithful & Gould to:

- Undertake an Arboricultural Survey at the former Red House Museum and assess all trees potentially within influencing distance of proposed development within the site.
- Plot the trees on a Tree Constraints Plan and record the data in a Tree Data Schedule.
- Provide an overview of the site and any management recommendations.
- Determine if any of the trees are growing within a conservation area or are protected by a tree preservation order.
- Provide guidance for architects or developers to enable them to understand and design within the existing tree constraints.
- Assess the potential impact of the development proposals and provide guidance as to appropriate mitigation measures.
- Produce an Arboricultural Impact Assessment for submission to the local authority once the design has been finalised.
- Produce a Tree Protection Plan and Arboricultural Method Statement specifying how the retained trees shall be protected from inadvertent damage by demolition or construction activity.

1.2. Scope and Purpose of the Report

1.2.1. This report is designed to accompany a planning application for development proposals at the above site. Its purpose is to assist and inform the planning process. It is produced according to the guidance and recommendations within BS 5837: 2012 - *Trees in Relation to Design, Demolition and Construction*.

1.2.2. The accompanying Arboricultural Method Statement specifies the principles to be adopted during construction and demolition that will minimise any impacts on trees. However, specific construction activities proposed within Root Protection Areas may need to be agreed in more detail if requested by the local authority at the reserved matters stage (for an outline planning applications) or via planning conditions.

1.3. References

1.3.1. We have liaised with our client to attain an adequate understanding of the project to enable us to carry out an accurate assessment of the proposals and to specify suitable tree protection measures.

1.4. Survey Details and Findings

1.4.1. A visual ground level inspection of all trees was undertaken on the 22nd July 2021 by Emma Hoyle. No climbed inspections or specialist decay detection were undertaken. Details of how the survey was undertaken can be found in Appendix 1.

1.4.2. The tree locations shown on the accompanying plans which are reproduced in Appendix 6 have been plotted according to measurements taken on site.



PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date: 6th August 2021

1.4.3. The findings of the survey are presented in The Tree Data Schedule which is provided as a separate document as well as being appended to the end of this document within Appendix 6. The vegetation is further discussed in Section [3](#).

1.4.4. A definition of the Retention Categories can be found in Appendix 1. All other terms used within the Tree Data Schedule are defined and explained in Appendix 2. A more detailed description of the survey method is detailed in Appendix 3.

1.5. Author

1.5.1. This report was compiled by Emma Hoyle FDS_c (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A. Details of the author's experience that qualify her to produce such a report are detailed in Appendix 4.



2. Site Overview

2.1. Brief Description

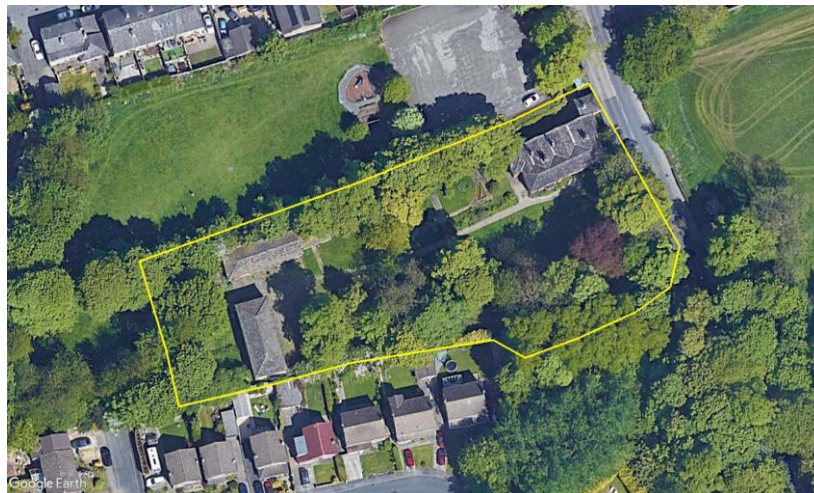
- 2.1.1. Red House Museum is a rectangular plot of land largely occupied by gardens. Four detached buildings are situated within the site. A public car park is located to the north of the site, and a disused, overgrown vehicular entrance leads into the site from Oxford Road in the south-eastern corner of the site.
- 2.1.2. Pedestrian footpaths lead through the site and a variety of Retention Category A, Retention Category B and Retention Category C trees of mixed maturities and species occupy the gardens. Mixed shrubs and Laurel species also grow within the site.
- 2.1.3. Tree species present predominantly include Ash, Beech, Holly, Lime and Sycamore with other occasional species scattered throughout the site including Cherry, Elm, Hornbeam, Norway Maple, Oak, Scots Pine and Walnut.
- 2.1.4. The Tree Constraints Plan and Tree Data Schedule (see Appendix 6) should be referred to for descriptions and locations of all trees.

2.2. Coordinates

- 2.2.1. The site coordinates are 53°43'55.86"N 1°41'10.70"W and the altitude is approximately 146m above sea level¹.

2.3. Survey Extent

- 2.3.1. The area indicated below² shows the extent of the survey.



¹ To access satellite imagery and street views of the site these co-ordinates may be entered into: <http://maps.google.co.uk/>

² Image taken from Google Earth and may not be current



3. Vegetation Overview (independent of proposals)

This section summarises the recommendations within the Tree Data Schedule regardless of whether trees are to be retained, felled or pruned to facilitate the development. It does not specify works that may be required to facilitate the development proposals.

3.1. Preliminary Management Recommendations

- 3.1.1. The following recommendations are made in order to maintain the trees in an acceptable condition:
- 3.1.2. Trees T13, T14, T24, T50, T52 and T55 all have a covering of ivy which prevented a detailed inspection of their stems and branch junctions. We recommend the ivy is removed and the trees re-inspected to ascertain their structural condition.
- 3.1.3. T16 is an early mature Ash with a very sparse crown and significant dieback to its upper canopy. This tree is considered to have a limited Safe Useful Life Expectancy and we recommend its condition is closely monitored.
- 3.1.4. T33 is a mature Lime tree. Small cavities were observed to be developing at old pruning wounds, a scattering of small dead branches are present within its canopy and dense epicormic shoots within the canopy prevented a detailed inspection of the upper branch junctions. We recommend undertaking remedial pruning to remove any dead, dying or defective branches and clean the crown from epicormic shoots.
- 3.1.5. T35 is a mature Sycamore located in the south-west corner of the site. Dense, overgrown vegetation prevented a detailed inspection of this trees lower stem. We recommend the vegetation is cleared and the tree re-inspected.
- 3.1.6. All other trees were deemed to be in an acceptable condition.

3.2. Work Priority and Future Inspections

- 3.2.1. The table below suggests a schedule for completing the works recommended in the Tree Data Schedule based on the perceived risk:

Work Priority	Definition	Tree Number
Urgent	As soon as possible	None
Very High	Within 1 Month	None
High	Within 3 Months	T24
Moderate	Within 1 year	T13, T14, T16, T33, T35, T50, T52 and T55
Low	Within 3 years	None

- 3.2.2. The table below suggests a schedule of future inspections based on the condition and location of each tree:

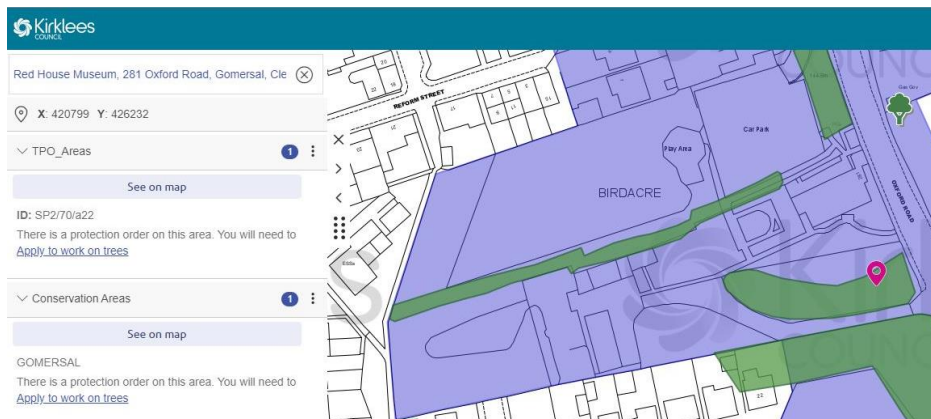
Inspection Frequency (years)	Tree Number
0.5	None
1	T16 and T24
1.5	T2, T5, T6, T11, T13, T14, T21, T23, T26, T33, T35, T36, T44, T45, T46, T47, T48, T49, T50, T52, T53, T54, T55, T56, T57 and G58
3	All other trees



- 3.2.3. The trees should be inspected sooner if there is a noticeable decline in their condition or following extreme weather events.

3.3. Tree Protection Status – Site Specific

- 3.3.1. On 12th July 2021, we accessed the local authority website. A screen shot is produced below:



- 3.3.2. We interpret this to mean that:

- The site lies within the **Gomersal Conservation Area**.
- There are tree preservation orders affecting trees within the site.
- There are tree preservation orders on trees immediately adjacent to the site.

3.4. Tree Protection – General Notes

- 3.4.1. Before undertaking works to trees protected by a tree preservation order, consent needs to be obtained from the local authority which will provide application forms and advice to potential applicants. The removal of dead wood is exempt.
- 3.4.2. Where the works are proposed for reasons of safety or ill health, a report from a suitably qualified arborist will usually be required. Trees that are dead or imminently dangerous are technically exempt from protection, as are dead branches. If the tree work is not urgently necessary however, at least five working days notice of intention should be given to the local authority. In any case it would be prudent to take photographs before undertaking works without prior consent being granted. Unauthorised works to protected trees may result in a criminal prosecution and a large fine (unlimited).
- 3.4.3. Where trees are located in a conservation area (but not protected by a TPO), works are not permitted without first giving the local authority 6 weeks' notice of intention. During this time the local authority may elect to create a tree preservation order or to inform the applicant that they have no objection to the proposed works. If the local authority does not respond within 6 weeks, then the intended work may be undertaken. Note: the local authority cannot refuse consent for works to trees within a conservation area; they may only create a tree preservation order if they wish to have further control over what works are undertaken.
- 3.4.4. Where planning permission is granted and tree works have been approved as part of the planning consent, no further application is required in respect of protected trees and no further notice is required in respect of trees within a conservation area.



3.5. Species Present – Additional Information

3.5.1. The table below contains general information about the tree *species* (rather than the actual tree *specimens*) included in the survey. Its purpose is to assist readers who are unfamiliar with the characteristics of the various species.

Species	Typical Height at Maturity (m)	Typical Canopy Spread at Maturity (m)	General Notes
Ash	25	18	Large deciduous tree with a straight bole and a high open domed crown. Native to Britain and commonly found in woodlands and adjacent roadsides. Not suitable for small gardens. Easily identified by its oppositely arranged pinnate leaves and black buds. Branches are relatively brittle resulting in a fairly high incidence of small branch failure in windy conditions. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Fraxinus+excelsior for more info.
Beech	25	18	Deciduous tree native to W and S Europe. Does not have resilient heartwood, therefore typically lives for 100 - 150 years before decay may cause structural failure if unmanaged. Can be an extremely attractive tree at maturity due to its size and majesty. Young branches may retain their foliage through winter as is evidenced in beech hedges. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Fagus+sylvatica for more info.
Cherry	8	10	Many cultivars available, bred for their abundance of spring flowers, edible cherries or ornamental bark (e.g. Tibetan Cherry). Usually white or pink flowering, often in very early spring. Usually with a single bole to around 2.5m and multi-stemmed thereafter. Most varieties have excellent autumn colour.
Elm	25	14	Several species of elm may be found in the UK. The most common being Wych Elm, English Elm and the Narrow-Leafed Elm. Many specimens are likely to be a cross as they freely hybridise. Attractive golden varieties are occasionally seen. The English Elm was once a common feature of the British landscape but has been decimated by Dutch Elm Disease. Visit http://en.wikipedia.org/wiki/Elm for more info.
Holly	16	12	Evergreen tree native across Western Europe. Many cultivars available, often with variegated leaves. Females produce bright red berries. Good wildlife value. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Ilex+aquifolium for more info.
Hornbeam	25	14	Deciduous tree native to Southeast England and across Europe. Bark is smooth and grey on a stem which is often twisted and sinewy. Leaves sharply toothed and deeply veined. Tolerant of heavy clay soils. Formerly coppiced and prized for its durable timber which was used in wheel hubs, piano hammers, mill wheels and chopping blocks. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Carpinus+betulus for more info.
Judas Tree	7	6	Deciduous, slow growing tree native to Eastern Mediterranean. Attractive, colourful flowers flourish in May. Following the flowers, the bright green, almost heart shaped leaves are developed, later accompanied by dark purple tinted seed pods in July. Visit https://www.barcham.co.uk/products/cercis-siliquastrum/ for more info.
Lime	25	12	Very common street tree. Several species exist; the one most often found in woods is 'common lime' which produces a mass of suckers at the stem base, making it very cheap to propagate. Limes have non-symmetrical heart shaped leaves which are much loved by aphids (hence the sticky honeydew on cars parked beneath). Limes are tolerant of heavy pruning and are often managed as pollards. Old limes tend to support a lot of small dead branches. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Tilia+x+europaea
Norway Maple	25	16	Deciduous tree native to S. Norway, S. Sweden and across Europe. Red buds and light brown grooved bark distinguish it from sycamore in winter. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Acer+platanoides for more info.
Oak	22	18	Deciduous, long lived tree native and common throughout Europe with very durable timber. Excellent habitat tree - provides food and shelter for thousands of native species. Can be very attractive as a mature open grown specimen though not particularly ornamental, having no autumn colour or showy flowers. Responds well to pruning. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Quercus+robur for more info.
Portuguese Laurel	6	6	Evergreen tree/shrub native to Portugal and Spain. Good hedging species.
Purple Beech	27	20	Purple variety of the common beech, also called Copper Beech. A majestic tree with grey bark and purple leaves. The best forms are grafted though this species does occasionally appear in the wild. Visit http://en.wikipedia.org/wiki/Fagus_sylvatica for more info.



PDF readers select page-width for detail & page-view for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date: 6th August 2021

Species	Typical Height at Maturity (m)	Typical Canopy Spread at Maturity (m)	General Notes
Scots Pine	35	16	Evergreen tree native to Scotland Spain and Norway. Distinguished from other pines by an orange tinge to the bark of the upper stem. One of Britain's few native conifers. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Pinus+sylvestris for more info.
Sycamore	25	16	Deciduous tree native to S. Europe, widely naturalised in the UK. Often regarded as a weed species due to its invasive nature and ability to tolerate most conditions. Responds well to pruning. Not a good tree to park beneath in summer due to the sticky sap secreted by aphids. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Acer+pseudoplatanus for more info
Walnut	25	18	Deciduous tree native to S. E. Europe and Central Asia. Long cultivated in the UK though rarely naturalised. Valuable timber tree with the best timber close to the stem base. Pinnate leaf with the largest leaflets towards the front. Visit http://www.pfaf.org/user/Plant.aspx?LatinName=Juglans+regia for more info.

- 3.5.2. The figures quoted regarding typical height and canopy spread should be treated as approximate. Actual heights and spreads vary according to several environmental factors such as soil conditions, climate and presence of competing vegetation. The figures quoted are not the maximum dimensions that the species may attain.



4. Arboricultural Impact Assessment

4.1. Overview

4.1.1. It is proposed to change the use of the former Red House Museum into a holiday let. The existing vehicular access from Oxford Road shall be maintained and a new surface laid which will lead to a new car parking area as indicated on the plans in Appendix 6. The existing layout is indicated in black, and footprint of the proposed layout is indicated in pale green.

4.1.1. The table below summarises the potential impact on trees due to various activities.

Activity	Trees Potentially Affected
Tree Removal: Retention Category A	None
Tree Removal: Retention Category B	None
Tree Removal: Retention Category C	T1, T29 and a cluster of Elder and Cherry saplings
Tree Removal: Retention Category U	None
Tree Pruning	T54 and T55
RPA: New Building Foundations	None
RPA: New Surface	T2, T10, T11, T13, T14, T16, T21, T23, T24, T25, T26, T28, T31, T40, T41, T43, T44, T45, T46 and G58
RPA: Replace Existing Hard Surface	None
RPA: Underground Services	None Anticipated
RPA: Change of Ground Levels	None
RPA: Soil Compaction	Trees adjacent the construction area (Preventable by installing tree protection measures)

4.1.2. Other potentially damaging activities often associated with construction sites include demolition or the careless use of plant machinery, hazardous materials, or fires. All of the above potential impacts are considered in detail throughout this section.

4.1.3. The accompanying Arboricultural Method Statement (duplicated in Appendix 6) specifies the measures proposed to minimise all possible potential risks of damage to the retained trees.

4.2. Tree Removal

4.2.1. All trees to be removed are indicated on the Impact Assessment Plan and listed below:

- **Retention Category A:** It is proposed to retain all Retention Category A trees.
- **Retention Category B:** It is proposed to retain all Retention Category B trees.
- **Retention Category C:** It is proposed to remove the following Retention Category C trees: T1, T29 and a cluster of Elder and Cherry saplings. These trees are located within the footprint of new surfaces, so their retention is not possible.

They are all relatively small trees (maximum height 8m), are considered to have a low amenity value and their removal shall have little impact on the visual amenity of the locality.
- **Retention Category U:** Our survey did not identify any Retention Category U trees.

4.2.2. Details specific to each tree can also be found in the Tree Data Schedule.



4.3. Mitigation Planting

- 4.3.1. The trees/shrubs to be removed are of such low amenity value that no mitigation planting is considered necessary.

4.4. Impact on Tree Canopies

- 4.4.1. It is proposed to prune back the branches of T54 and T55 to create a clearance distance of 1.5m to enable scaffolding to be installed around the adjacent building. This shall require the removal of relatively small secondary and tertiary branches which should be pruned back to a suitable growth point. Additional pruning may be required to balance the canopy of T54. All pruning works should be undertaken sympathetically (working to BS 3998: 2010 guidelines).
- 4.4.2. The tree canopies which overhang the driveway and proposed car parking area begin at approximately 3m above ground level and it is understood that this is suitable clearance for vehicles accessing the site. Consequently, no crown lifting is required to facilitate the proposed works. However, the trimming back of lower foliage/epicormic growth to the trees adjacent the driveway is recommended to increase clearance for construction activity. Such trimming shall have no impact on local visual amenity, and it is not considered to be a material planning consideration.
- 4.4.3. All other tree canopies shall be unaffected by the proposals.

4.5. Impact on Tree Roots

4.5.1. Rooting Habits:

- 4.5.2. A boundary wall separates T44-T55 from the site. The foundations of this wall shall influence the pattern of root proliferation such that roots are likely to be less prolific at shallow depths within the site.

4.5.3. Foundations:

- 4.5.4. No new building foundations are proposed within the Root Protection Area of any tree.

4.5.5. New Surfaces:

- 4.5.6. The Impact Assessment Plan indicates where it is proposed to install a new surface (driveway and car parking area) over the Root Protection Areas of several trees. In order to minimise the impact on roots, the following mitigation is proposed:

- A suitable load spreading surface shall be in place at all times during demolition and construction activities.
- The new surface shall be installed entirely above ground. Any existing turf or vegetation may be removed along with very loose topsoil. However, no further excavation shall occur, and the new surface shall be built up from the existing ground level.
- A gravel sub-base containing no fine particles shall be incorporated into the design. This shall be contained within a 3D cellular confinement system to ensure that the weight of vehicles will be evenly spread over a wide area. This shall prevent excessive soil compaction and reduce the depth of sub-base required.
- A porous surface and sub-base are proposed which will enable passage of oxygen and water to the soils beneath.
- Excavation shall be undertaken using a small mechanical excavator fitted with an untoothed bucket and carefully marshalled by the project arborist or local authority tree officer.



- No retaining edge or structure should be used that shall requires any additional excavation.
- The new surface shall be located in excess of 0.5m from any buttress roots as recommended in BS 5837 (7.4.2.7).

4.5.7. Where a new pedestrian surface is to be installed over the outer portion of the RPA of T2, excavation should be undertaken using hand tools only and excavation should not exceed the depth of the existing surface and its sub-base to ensure minimal impact.

4.5.8. **Underground Services:**

4.5.9. No underground services are to be installed through any Root Protection Areas.

4.5.10. **Changes in Ground Levels:**

4.5.11. Except where it is proposed to install a new surface above the level of the existing ground, no further changes of ground levels in excess of 100mm within Root Protection Areas shall be made without consulting the arborist and if necessary, gaining approval from the local authority.

4.5.12. **Soil Compaction:**

4.5.13. Geological maps (<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>) indicate that the underlying geology of the area is sandstone (Lepton Edge Rock) with no recorded superficial deposits. This means that soils throughout the site are unlikely to be particularly susceptible to compaction and that the trees are likely to root relatively deeply.

4.5.14. The majority of tree roots lie within the upper soil horizons. This is because the availability of oxygen decreases with depth and roots need to breathe to stay alive. In addition, nutrients are more readily available in the form of organic matter close to the soil surface.

4.5.15. Healthy soils contain about 25% air space between solid particles. Increased loading of the soils caused by construction activity causes air to be squeezed out as the soil becomes compacted preventing roots from breathing. Even an increase in pedestrian activity may cause some soil compaction.



4.5.16. It is important therefore that ground compaction and soil disturbance over Root Protection Areas should be avoided during the construction phase. This may be done by installing protective fencing and ground protection measures as recommended within the accompanying Arboricultural Method Statement.

4.6. **Demolition Activities**

4.6.1. Tree protection measures specified within the accompanying Arboricultural Method Statement should be installed prior to the commencement of all construction activities (including soil stripping) to prevent any detrimental impact on tree health.

4.7. **Hazardous Materials**

4.7.1. All hazardous materials (including cement and petrochemical products) will need to be controlled according to COSHH regulations in order to ensure there is no detrimental impact on tree health. Provision shall need to be made to ensure that hazardous materials are stored outside of Root Protection Areas.



4.8. Cabins and Site Facilities

- 4.8.1. Consideration should be given to the location of any site welfare facilities in terms of potential impact on trees. Where it is proposed to install cabins or site facilities in Root Protection Areas, the project arborist should be consulted, and approval obtained from the local authority.
- 4.8.2. There is limited room for the siting of cabins and storage of materials / spoil during the construction phase so the logistics of the development shall need to be well organised to ensure that there is adequate space outside of the Tree Protection Zones for construction activity.

4.9. Boundary Treatments

- 4.9.1. We are not aware of any changes are proposed to the existing boundary features that might impact on trees.

4.10. Impact of Retained Trees on the Development

- 4.10.1. The proposal does not alter the current juxtaposition between buildings and the retained trees, so the proposal shall not result in an increase in the perceived nuisance afforded by the trees.
- 4.10.2. All new surfaces should be designed to accommodate all potential impacts due to future tree rooting activity.

4.11. Summary

- 4.11.1. Two small Retention Category C trees are to be removed to enable the proposed works.
- 4.11.2. Two trees require pruning to enable scaffolding to be installed around the existing nearby building. These tree canopies already overhang existing building so some pruning would be required in the future regardless of the development proposals.
- 4.11.3. A new hard surface is proposed within the RPAs of several trees. A permeable surface is proposed using the No-Dig Method as per BS 5837 recommendations to ensure impact is kept to the minimum amount possible.
- 4.11.4. No building foundations are proposed within Root Protection Areas.
- 4.11.5. Suitable protection measures are specified in the accompanying Arboricultural Method Statement ref CCL/10877. The Method Statement is thorough and enforceable so may be conditioned upon the granting of planning consent.



PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for:

Faithful & Gould

Crown Ref: 10877

Site:

The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date:

6th August 2021

5. Photographs

Photo 1.



Photo 2.



Photo 3.



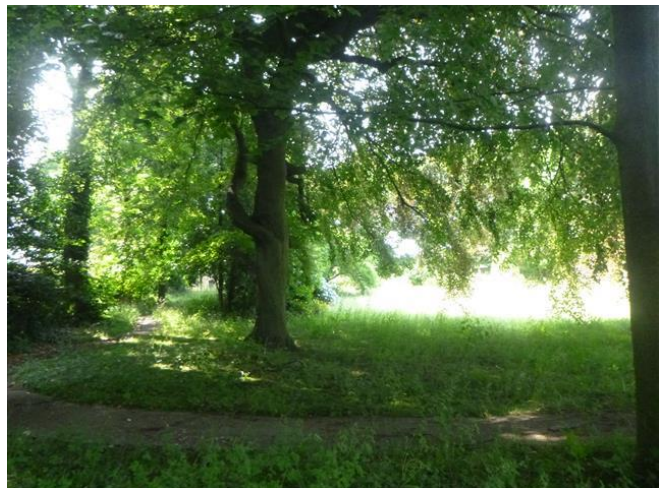
Photo 4.



Photo 5.



Photo 6.





PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for:

Faithful & Gould

Crown Ref: 10877

Site:

The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date:

6th August 2021

Photo 7.



Photo 8.



Photo 9.



Photo 10.



Photo 11.



Photo 12.





PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for:

Faithful & Gould

Crown Ref: 10877

Site:

The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date:

6th August 2021

Photo 13.



Photo 14.



Photo 15.



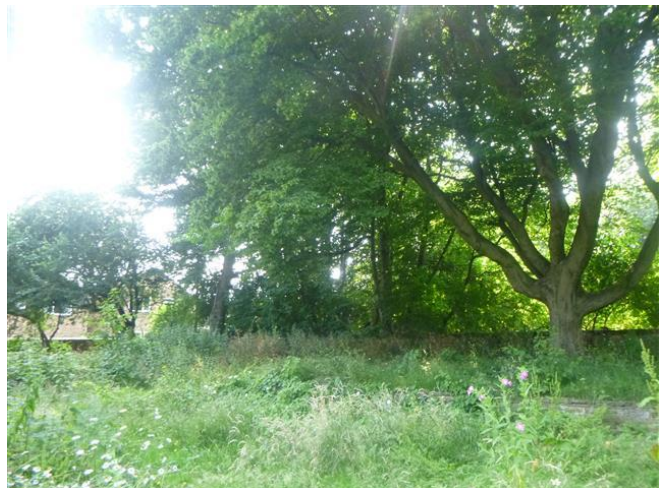
Photo 16.



Photo 17.



Photo 18.





PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for:

Faithful & Gould

Crown Ref: 10877

Site:

The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date:

6th August 2021

Photo 19.



Photo 20.



Photo 21.



Photo 22.



Photo 23.



Photo 24.





PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for:

Faithful & Gould

Crown Ref: 10877

Site:

The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date:

6th August 2021

Photo 25.



Photo 26.



Photo 27.



Photo 28.



Photo 29.



Photo 30.





PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

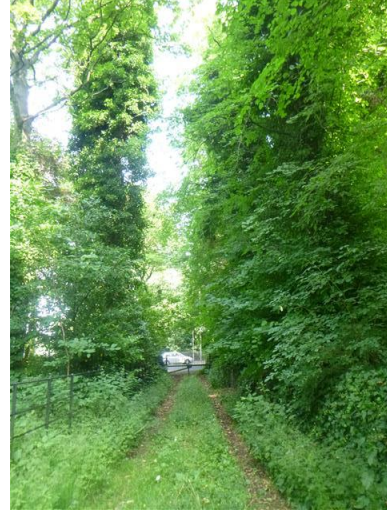
Author: Emma Hoyle

Date: 6th August 2021

Photo 31.



Photo 32.





Appendix 1: BS 5837: 2012 – Guidance Notes

This Standard prescribes the principles to be applied to achieve a satisfactory juxtaposition of trees and structures. It sets out to assist those concerned with trees in relation to design, demolition and construction to form balanced judgements.

It acknowledges the positive contribution trees may offer to a site, as well as the negative aspects of retaining inappropriate trees. It addresses the negative impacts that construction activity may have upon trees and offers mitigation strategies to minimise these impacts.

The Standard suggests a three stage approach to ensure best practice is followed when developing close to trees:

A1.1 Stage 1: Survey Details and Notes

A ground level visual survey was undertaken. No climbed inspections or specialist decay detection were undertaken. Only trees with a stem diameter over 75mm, which lie within the site boundary or relatively close to it, were included.

Where applicable, trees with significant defects have been highlighted and appropriate remedial works have been recommended. However, this report should not be seen as a substitute for a full *Safety Survey* or *Management Plan* which are specifically designed to minimise risk and liability associated with responsibility for trees.

Wherever practicable dimensions were obtained using diameter tapes, logger's tapes, distometers and clinometers. Where obstacles prevent accurate measurement, dimensions are estimated. Trees on privately owned third party are surveyed from the best available vantage point and observations relating to the condition of these trees should be treated accordingly. All height measurements should be regarded as approximate.

Data is recorded for each tree and is presented in a Tree Data Schedule. Each tree is allocated a **Retention Category** according to its size, amenity value, condition and safe useful life expectancy. The categories are allocated independently of development proposals. Our interpretation of the Retention Categories is explained below:

A1.1.1 Retention Categories

A Category: Trees of high quality and amenity value. Usually, mature trees with a significant life expectancy which would enhance any development. Retention of these trees is strongly encouraged.

B Category: Trees of moderate quality and amenity value. Usually these are maturing trees or younger trees with exceptional form. Retention of these trees is desirable though the removal of occasional specimens may be acceptable.

C Category: Trees of low quality or small specimens with a relatively low amenity value. These trees are not considered to be a material planning constraint and their removal will generally be seen as acceptable in order to facilitate development.

U Category: Trees of such low quality that their removal is recommended regardless of development proposals.

Occasionally trees are borderline and do not fall neatly into one of the categories A, B or C. In such cases we apply a superscript (+/-) such that:

C* Indicates borderline C/B, though Category C is deemed to be most appropriate.

B* Indicates borderline C/B, though Category B is deemed to be most appropriate.



The British Standard suggests that each of the A, B and C categories may be further subdivided (A1, A2, A3, B1, B2, B3 etc) such that subcategory 1 denotes mainly arboricultural values, subcategory 2 denotes mainly landscape values and subcategory 3 denotes mainly cultural values (including conservation). Multiple subcategories may be used.

Our experience suggests that these subdivisions lack clarity and can be confusing. Within this report subcategories are **not** denoted. Where appropriate, the use of phrases such as 'Part of a formal group', or 'Has a high ecological value', or 'Offers good screening to the site' are incorporated into the observation section of the Tree Data Schedule. We believe this conveys all relevant landscape and cultural information without any confusion.

Tree Constraints Plan (TCP). This indicates the position, crown spread, Retention Category and Root Protection Area of each tree. It is used to inform where development may proceed without causing damage to trees.

Root Protection Area (RPA). This is the area around each tree likely to contain the majority of roots. It should ideally remain undisturbed to avoid a detrimental impact on tree health. For single stemmed trees it is calculated according to the formula "radius of RPA" = "12 x stem diameter". Where a tree has more than one stem, the equivalent-single-stem diameter is usually recorded. This is calculated by adding the squares of the stems and then finding the square root of this total. The radius of the Root Protection Area is then calculated by multiplying the equivalent-stem-diameter by 12.

Shade Constraints. The previous Standard (BS 5837 2005) suggested that shade constraints should be indicated on the TCP. These are denoted as a circle-segment drawn northwest to due east with a radius equal to the height of the tree. These do not represent the actual shade pattern which varies through the seasons. Rather, they indicate the area most shaded by the tree throughout the course of the year. Ideally habitable room windows should be located outside of these shade constraints. Where we consider it appropriate, we will include shade constraints information on our Impact Assessment Plan or Proposed Layout Plan.

A1.2 Stage 2: Arboricultural Impact Assessment

After the initial survey and the production of the Tree Constraints Plan, arborists and designers are encouraged to work together to establish a design proposal with minimal impact on the high quality trees. An assessment should be made of all possible impacts including the impact that the trees may have upon the proposal. The arborist may recommend mitigation strategies to minimise these impacts and help achieve a more harmonious juxtaposition between buildings and trees.

A1.3 Stage 3: Arboricultural Method Statement

This type of report specifies the measures necessary to protect trees against damage from construction activity. The Method Statement should be written in a manner that it may be conditioned and enforced by the local authority upon granting of planning permission. The site manager should be familiar with all aspects of the Method Statement and should ensure that all persons working on the site are aware of those aspects which appertain to their work. This includes service installation engineers and operators of plant machinery.



Appendix 2: Explanation of Tree Data & Glossary

This section explains the terms used in the **Tree Data Schedule** (see Section 3 and Appendix 6).

A2.1 General Observations

Numbering System:	Each item of vegetation has its own unique number prefixed by a letter such that T1=Tree 1, G2=Group 2, H3=Hedge 3 and W4=Woodland 4, S5=Shrub 5.
Age Categories:	
Young	Usually less than 10 years old.
Semi-Mature	Significant future growth to be expected, both in height and crown spread (typically below 30% of life expectancy).
Early-Mature	Full height almost attained. Significant growth may be expected in terms of crown spread (typically 30-60% of life expectancy).
Mature	Full height attained. Crown spread will increase but growth increments will be slight (typically 60% or more of life expectancy).
Veteran	A level of maturity whereby significant management may be required in order to keep the tree in a safe condition.
Over Mature	As for veteran except management is not considered worthwhile.
Species:	Common names and Latin names are given.
Height:	Measured from ground level to the top of the crown.
Stem Diameter:	Taken at 1.5m above ground level where possible. On multi-stemmed trees this measurement may be taken at ground level, though usually an indication of the number of stems and average diameter is given, e.g. 3 x 30cm.
Crown Height:	Measured from ground level to the height at which the main crown begins. Where the crown is unbalanced it is measured on the side deemed to be most relevant. This is usually the side facing the area of anticipated development.
Tree Diagram:	This scaled drawing is computer generated based on measurements taken for stem diameter, crown height and spread, and overall height. It is designed to help the reader rapidly assess the data. It is not an accurate representation of the form of the tree.
Crown Spread:	Measured N, E, S & W, taken from the centre of the stem and usually rounded up to the nearest metre.
Observations:	If a tree's position is considered to be relevant it will be commented upon (e.g. overhanging a children's play area). Tree form and pruning history are also recorded along with an account of any significant defects. Defects and descriptive terms are dealt with in more detail at the end of this section.
Recommendations:	Usually based on any defects observed and intended to ensure that the tree is in an acceptable condition.
Priority Scale:	Depending upon the threat posed by the tree, and the likelihood of failure, recommendations should be carried out according to the following priority scale:
Urgent	To be carried out as soon as possible.
Very High	To be carried out within 1 month.
High	To be carried out within 3 months.
Moderate	To be carried out within 1 year.
Low	To be carried out within 3 years.
Inspection Frequency:	An interval of 6 months, 1 year, 1.5 years or 3 years is allocated before the next inspection is due. Wherever practical, consideration should be given to seasonal changes so that deciduous trees are not always surveyed in winter when they have no leaves, or in summer when leaves may obscure branches within the upper crown.
Vigour:	An indication of growth rate and the tree's ability to cope with stresses:
High	Having above average vigour.
Moderate	Having average vigour.
Low	Having below average vigour.
Very Low	Tree is struggling to survive and may be dying.
Physiological Condition:	
Good	Healthy and with no symptoms of significant disease.
Fair	Disease present or vigour is impaired.
Poor	Significant disease present or vigour is extremely low.
Very Poor	Tree is dying.
Structural Condition:	
Good	Having no significant structural defects.
Fair	Some defects observed though no high priority works are required.
Poor	Significant defects found. Tree requires monitoring or remedial works.
Very Poor	Major defects which will usually require significant remedial works or tree removal.
Amenity Value:	
Very High	Exceptional specimen, observable by a large number of people.
High	Attractive specimen, observable by a significant number of people.
Moderate	One of the above factors is not applicable.
Low	Unattractive specimen or largely hidden from view.
Life Expectancy:	The estimated number of years before the tree may require removal. Classified as (<10), (10 – 20), (20 – 40), or (40+).
Retention Category:	These are explained in detail in Appendix 1.

A2.2 Evaluation of Defects

Cavities, wounds, deadwood etc are all evaluated as follows:

Major	Such that structural integrity is, or will become, compromised and the tree is, or will inevitably become, hazardous.
Significant	A defect that may over time become a major defect, though not necessarily so. This will depend on the vigour of the tree and its ability to deal with decay etc.
Minor	A defect that is not likely to compromise the tree's structural integrity.



General Glossary

Aerobic	Conditions in which oxygen is freely available, or to biomechanical processes that depend on the presence of oxygen.
Anaerobic	A condition marked by the absence of oxygen; Generally such areas are unsuitable for normal life and growth of plant tissues. These sites tend to be populated by bacteria capable of surviving low oxygen conditions often associated with Slime Flux.
Arboriculture	The culture and management of trees as groups and individuals primarily for amenity and other non-forestry purposes.
Arborist	A person possessing the technical competence through experience and related training to provide management of trees or other woody plants in a landscape setting. Generally involved with the development or management of trees for visual amenity or land management rather than the growth of trees for product or profit.
Barrier zone	A layer within an annual increment of wood which contains abnormal xylem cells, laid down by the cambium in response to wounding or other trauma.
Bracket	A type of fruiting body produced by various fungal species, plate like to hoof like in shape and often a one sided attachment to the wood or bark.
Branch bark ridge	A ridged area located at the union of a branch to a trunk or stem.
Branch Collar	Trunk tissue that forms around the base of a branch between the main stem and the branch, or between a main branch and a lateral branch. As a branch decreases in vigour or begins to die, the collar usually becomes more pronounced and completely encircles the branch.
Brown Rot	Form of decay where cellulose is degraded, while lignin is only modified.
Buttress Root	Roots that emerge from the base of the tree stem, normally large and well developed that rapidly reduce in diameter to create the Root Plate this offers structural support for the tree. Buttress roots divide rapidly forming the connection between the stem and the transport roots.
Cabling Bracing	Installing cables within the crown of a tree to prevent collapse.
Cambium	A thin layer of actively growing and dividing cells, located between the xylem (sapwood) and bark of a plant; the part responsible for radial growth of a tree stem or branch.
Canopy	The topmost layer of twigs and foliage in a woodland, tree or group of trees.
Canker	A localised area of dead bark and cambium on a stem or branch, caused by fungal or bacterial organisms, characterised by woundwood development on the periphery. This may be annual or perennial.
Cavity	An open and exposed area of wood, where the bark is missing and internal wood has been decayed and dissolved.
Chlorotic	Also Chlorosis. A condition of the plant marked by yellowing of normally green foliage, often indicating nutrient deficiency or plant dysfunction.
Co-dominant stems/trunk	Are forked branches or trunks of nearly the same size in diameter and lacking a normal branch union.
Compacted soils	Soils in which the air-space (oxygen space) has been reduced or eliminated, reducing water infiltration and percolation, reducing root presence and inhibiting new root development.
Compartmentalisation	The physiological process that creates the chemical and mechanical boundaries that act to limit the spread of disease and decay organisms.
Compression Wood	Abnormal wood formed on the lower side of branches and curved stems, with physical properties different from normal wood.
Conservation Area	In Great Britain, designated areas of architectural or historical interest, in which there are special procedures for planning applications. Additionally tree works cannot generally be undertaken without prior notification (Currently 6 weeks) to the relevant local planning authority. See also Tree Preservation Orders.
Core Sample	A sample of wood extracted from a trunk or branch, using an increment borer tool. The resulting core can be analysed for characteristics of growth, wood strength, structure, decay, and for species identification.
Crotch	The union of two or more branches; the auxiliary zone between branches.
Crown	The upper canopy of a tree, including upper trunk, scaffold branches, secondary branches, stems and leaves.
Crown lifting / raising	Crown Lift The removal of the lowest branches, usually to a given height. It allows more residual light and greater clearance underneath for vehicles etc.
Crown reduction	The reduction of a tree's height or spread while preserving its natural shape.
Crown thinning	The removal of some of the density of a tree's crown, usually 5-25% allowing more light through its canopy and reducing wind resistance.
Deadwood (noun)	Deadwood is often present within the crown or on the stems of trees. It may be an indication of ill health, however, it may also indicate natural growth processes. If a target is present beneath the tree, deadwood may fall and cause injury or damage and should be removed, otherwise deadwood can remain intact for conservation purposes (insects, fungi, birds etc.).
Deadwood (verb)	The removal of dead branches from a tree's canopy, usually of a specified size (in diameter).
Decay	Progressive deterioration of organic tissues, usually caused by fungal or bacterial organisms, resulting in loss of cell structure, strength, and function. In wood, the loss of structural strength.
Decay Detection	The assessment of decay within a tree has been traditionally difficult, but recent advances have made it possible to achieve accurate representations of the internal section of a tree in both 2D and 3D, removing doubt over the condition of the tree and allowing accurate management decisions.
Defoliation	The losing of plants foliage.
Dieback	Progressive death of buds, twigs and branch tissues, on individual limbs resulting in Deadwood, or throughout the canopy, extreme cases can result in Stag Heading.
Epicormic shoots	Fast growing, weakly attached shoots/branches that often grow as a response to stress factors upon a tree or branch removal.
Failure	In connection with tree hazards, a partial or total fracture within the wood tissue or loss of cohesion between roots and soil. (In total failure affected parts will snap or tear away completely, Partial failure there is a crack or deformation, which results in an altered distribution of mechanical stress.
Feeder Roots	Fine fibrous Water and nutrient absorbing roots located in the outer root system.
Flush-Cut	In trees and shrubs, a pruning cut close to the parent stem, which removes the branch bark ridge.
Foliage	The live leaves or needles of the tree; the plant part primarily responsible for photosynthesis.
Formative pruning	The trimming of a tree to remove weaknesses and irregularities which may lead to problems. The formative pruning operation is aimed at reducing the potential for future weaknesses or problems within the tree's crown.
Girdling Root	In woody plants, a root that grows across the buttress, or across other roots, eventually causing constriction of the radial growth.



Growth Increment	The incremental growth added as new annual ring develops each season over existing wood. This is seen as (growth) rings in cross-sections of wood.
Hazard beam	An upwardly curved branch in which strong internal stresses may occur without the compensatory formation of extra wood (longitudinal splitting may occur in some cases).
Heartwood	Inner non functioning tissues that provide structural support to trunk.
Heave	In relation to shrinkable clay soils, expansion due to rewetting of a volume of soil previously subjected to the removal or water by plant / trees following felling or root severance. Also in relation to root growth, the lifting of pavements and other structures by radial expansion. Also in relation to tree stability, the lifting of one side of a wind rocked root plate.
Included Bark	Bark that becomes embedded in a crotch between branch and trunk or between co-dominant stems, usually found in narrow or tight crotches, and causes a weak structure.
Increment Borer	A tool that cuts and extracts a narrow cylinder of wood from a tree for analysis of the wood tissue and growth increments.
Limb	A large lateral branch growing from the main trunk or from another larger branch.
Lopping	In trees, a general term that related to the removal of branches from a tree.
Mycelium	A mass of growing filaments (hyphae) formed by fungi.
Mycorrhizae	The symbiotic relationship between roots and certain beneficial fungi. Mycorrhizae are the combined root / fungal growth.
Occluding tissue	The general term of wood, cambium and bark that develop around the site of a wound on a woody plant
Pathogen	A microorganism that causes diseases within another organism.
Phloem	The principle conductive tissue that the products of Photosynthesis are transported around the plant
Pollard	A term for a pollarded tree.
Pollard head	The swollen section of branch / stem that forms behind the pollarding cut.
Pollarding	The complete or partial removal of the crown of a young tree so as to encourage the development of numerous branches either for amenity or historically as fodder, repeated management is required cyclically to maintain the feature
Reaction Wood	Wood with distinctive anatomical characteristics, formed in parts of leaning or crooked stems and in branches to provide additional strength / support. In hardwoods, tension wood usually forms. In conifers, compression wood is usually found.
Reaction Zone	A zone normally darker than surrounding wood that denoted the boundary often a defensive one between functional sapwood and dysfunctional or decaying wood.
Remedial pruning	The removal of old stubs, deadwood, epicormic growth, rubbing or crossing branches and other unwanted items from the tree's crown.
Resistograph	Invasive decay detection technique whereby the resistance offered by the timber to a spinning probe is measured and plotted.
Root Barriers	Both Buildings and services can benefit from the installation of root barriers to protect a soil volume from the ingress of roots.
Root Collar	The basal area of the tree; transition zone from trunk to root. Also sometimes called trunk flare.
Root Plate	The primary support area for the tree; an area of the root system close to the base that structurally anchors the tree to the soil.
Root Zone	The area and volume of soil around the tree in which roots are expected. May extend to three or more times the branch spread of the tree, or several times the height of the tree.
Sail Area	That area or the tree subjected to wind load.
Sapwood	Xylem wood tissue, usually light in colour, representing the outer growth rings of the wood. Usually living, reactive wood tissue, in a healthy tree. See heartwood
Scaffold limbs / scaffold Branches	The branches that from the main network framework of the crown of a tree.
Soft Rot	A kind of wood decay, were a fungi degrades cellulose within the cell wall, without causing overall degradation.
Soil Compaction	The compression of soil, causing a reduction of pore space and an increase in the density of the soil. Air is squeezed out and nutrients become locked. Tree roots cannot grow in compacted soil.
Sonic Decay Detection	Non invasive method whereby sound waves are passed through the tree and the speed is measured. Slow speeds indicate decay and a tomography picture representing the inner stem is produced.
Stag Heading	In a tree, a state of dieback were dead branches protrude beyond the current living crown.
Stump Grinding	The removal of a tree stump using a specialist grinding machine.
Subsidence	In relation to vegetation, the removal of water by plant growth resulting in localised shrinkage in the soil volume.
Suppressed	Trees which are dominated by surrounding vegetation and whose crown development is restricted from above.
Target	Any person or object within reach of a falling tree or part of a tree that may be injured or damaged.
Target Pruning	The pruning of a branch were the wound affects only branch material, often result in a target shaped wound.
Tension Wood	Reaction wood typically formed on the upper side of limbs or curved stems; characterized by lack of cell wall lignifications (higher ratios of cellulose to lignin).
Tight Union / Tight Crotch	Also, narrow crotch. A crotch with a narrow angle between branches, often having included bark.
Tomography	The comparison of sound or stress waves through the tree allows the creation of a 2D or 3D representation of the internal structure of a stem or branch section and highlights areas of damage. Virtually non-injurious.
Topping	Cutting large limbs back severely, without regard to form or habit of the tree. Cuts are usually made between lateral branch nodes. This practice is extremely injurious to trees, and promotes decay and structural weakness within the crown.
Tree Preservation Order	In Great Britain, an order made by the local planning authority, where consent must be gained before undertaking all but exempt works to a tree.
Veteran Tree	Veteran trees are often found in large parks or estates and commonly affected by extensive decay or have been subject to extensive works. These trees are retained for historical importance and often pose greater risk than normal, which is generally justified. They need careful management and often propping or bracing to support them, some require fencing to limit access.
Vigour	Active, healthy growth of plants: ability to respond to stress factors.
Visual Tree Assessment (VTA)	An assessment of the mechanical condition of trees based upon their 'body language'. Trees are dynamic and respond to faults / decay / environmental factors in various ways, these responses can be indicative of structural integrity.
Wetwood	An infection caused by bacteria living inside the plant tissues. The bacteria ferment the plant fluids, resulting in death of nearby cells, and often causing exudations of fluid from the bark, often referred to as a Slime Flux.
White Rot	A kind if wood decay were a fungi attacks the lignin within the wood matrix
Witches Broom	A deformed or unusual growth of twigs from adventitious buds, caused by insects, disease, or dieback of twigs and buds.
Wood	Secondary Xylem; the main structural support and water conducting tissue of trees and shrubs.
Wound Wood	Wood with atypical features, formed in the vicinity of a wound and a term to describe the occluding tissues around a wound
Xylem	Plant tissues with special function of translocation of water and dissolved nutrients.



Appendix 3: Survey Methodology

Ground level visual surveys are carried out using the *Visual Tree Assessment* technique described by Mattheck and Broeler (1994) and endorsed by the Arboricultural Association (LANTRA Professional Tree Inspection course, 2007).

Structural condition is assessed by inspecting the stem and scaffold branches from all angles looking for weak branch junctions or symptoms of decay. Particular attention is paid to the stem-base. Cavities are explored using a metal probe in order to assess the extent of any decay. If this is not possible further inspection is recommended in the form of a climbed inspection or using specialist decay detection equipment.

The physiological condition is assessed by inspecting the stem, branches and foliage for symptoms of disease. The overall vigour of the tree is also taken into account.

Where significant defects are observed, recommendations are made according to a scale of priority in order to reduce the likelihood of structural failure. The position of the tree and its potential targets are taken into account.

Measurements are obtained using a diameter tape, clinometer, distometer and loggers tape. Where this is not practical measurements are estimated.

Some trees are surveyed as groups, though this is usually avoided close to areas likely to be developed.

Finally, a *Retention Category* is allocated as described in Appendix 1.1.1.

Appendix 4: Author's Qualifications

This report was written by arboricultural consultant Emma Hoyle who has the following resume:

Qualifications & Experience of Emma Hoyle FDS^c (Arboriculture), ED (Forestry & Arboriculture), M. Arbor. A.

Emma is a qualified Arboricultural Consultant educated to Level 5 in Arboriculture at Askham Bryan College, is a professional member of the Arboricultural Association and is a LANTRA accredited *Professional Tree Inspector*. She has worked for Crown Consultants since 2015 and has since written numerous reports relating to all aspects of arboriculture including; planning and development, vegetation related subsidence, tree preservation orders and tree risk assessment. Emma regularly attends seminars and events in order to keep abreast with current knowledge and best practise in Arboriculture.

Prior to becoming an arboricultural consultant, Emma worked for two reputable tree surgery firms from 2008 and became an NPTC Qualified tree surgeon after completing a Level 3 Extended Diploma in Forestry and Arboriculture at Askham Bryan College. Emma also has experience in other areas of arboriculture such as forest clearance, tree planting, tree maintenance and landscaping.



PDF readers select page-width for detail & page-view for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

Author: Emma Hoyle

Date: 6th August 2021

Appendix 5: Further Information

Building Near Trees – General

National Joint Utilities Group publication # 10 (1995), *Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*. Downloadable at www.njug.demon.co.uk/pdf/NJUG%20Publication10.pdf

NHBC Standards Chapter 4.2., *Trees and Buildings*.

Horticulture LINK project 212. (University of Cambridge, 2004), *Controlling Water Use of Trees to Alleviate Subsidence Risk*.

Tree Planting and aftercare

See www.trees.org.uk/leaflets.php# for downloadable leaflets on selecting a garden tree, planting, aftercare and veteran tree management.

British Standards

BS 5837: 2012. Trees in Relation to Design, Demolition and Construction – Recommendations.

Bs 3998: 2010. Recommendations for Tree Work.

BS 3936: 1992. Nursery Stock. Part 1: Specification for Trees and Shrubs.

BS 3936: 1992. Nursery Stock. Part 10: Specification for Groundcover Plants.

BS 4043: 1989. Transplanting Root-balled Trees.

BS 8004: 1986. Foundations.

BS 8103: 1995. Structural design of Low-Rise Buildings.

BS 8206: 1992. Lighting for Buildings.

BS 8545:2014. Trees: From nursery to independence in the landscape – Recommendations

BS 3882: 2007. Topsoil.

BS 4428: 1989. General Landscaping Operations (excluding hard surfaces).

Permission to do Works to Protected Trees / Tree Law

Forestry Commission (Edinburgh, 2003), *Tree Felling – Getting Permission*. Country Services Division - Forestry Commission. Downloadable at [www.forestry.gov.uk/website/pdf.nsf/pdf/wgsfell.pdf/\\$FILE/wgsfell.pdf](http://www.forestry.gov.uk/website/pdf.nsf/pdf/wgsfell.pdf/$FILE/wgsfell.pdf)

Transport and the Regions (Department of the Environment, 2000), *Tree Preservation Orders, A Guide to the Law and Good Practice*. Downloadable at www.communities.gov.uk/publications/planningandbuilding/tposguide

C. Mynors, *The Law of Trees, Forests and Hedgerows* (Sweet and Maxwell, London, 2002)

Communities and Local Government website with numerous downloadable documents, from:

<http://www.communities.gov.uk/planningandbuilding/planning/treeshighhedges/>

Lighting Levels

P.J. Littlefair, B.R.E. 209: *Site layout planning for daylight and sunlight A guide to good practice*. B.R.E. Bookshop, London.

British Standards Institution. Code of practice for day lighting. *British Standard BS 8206: Part 2* (1992).

Chartered Institution of Building Services Engineers. *Applications manual: Window Design* (London, 1987).

NBA Tectonics. A study of passive solar housing estate layout. *ETSU Report S-1126*. Harwell, Energy Technology Support Unit (1988).

I.P. Duncan; D. Hawkes, Passive solar design in non-domestic buildings. *ETSU Report S-1110*. Harwell, Energy Technology.

P. J. Littlefair, Measuring Daylight, *BRE Information Paper 23/93 f3.50*. (Advises on measuring daylight under the real sky or an artificial sky, allowing for the changing nature of sky light).

High Hedges

Communities and Local Government website with numerous downloadable documents, from:

<http://www.communities.gov.uk/planningandbuilding/planning/treeshighhedges/>

Tree Specific Websites

www.crowntrees.co.uk

Crown Consultants site containing useful information

www.trees.org.uk

Arboricultural Association

www.rfs.co.uk

Royal Forestry Society of England, Wales and N. Ireland

www.treehelp.info

The Tree Advice Trust

www.woodland-trust.org.uk

The Woodland Trust

www.treecouncil.org.uk

The Tree Council



PDF readers select *page-width* for detail & *page-view* for scrolling

Arboricultural Report to BS 5837: 2012 for: Faithful & Gould

Crown Ref: 10877

Site: The former Red House Museum, 281 Oxford Road

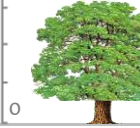
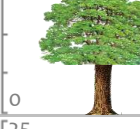
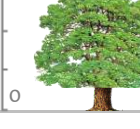
Author: Emma Hoyle

Date: 6th August 2021

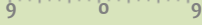
Appendix 6: Tree Data Schedule, Site Plans & Arboricultural Method Statement.

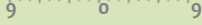
The Tree Data Schedule and any drawings accompanying this report follow this page.
They are also provided as separate documents for ease of printing and screen viewing.

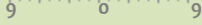
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
T1	Semi-Mature Portuguese Laurel Prunus lusitanica.	6.5	2	20	2 2 2		Position: Adjacent east boundary. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 10-20 C
								n/a	3		
T2	Semi-Mature Holly Ilex aquifolium.	7	2.5	32	2.5 3 2.5		Position: Adjacent east boundary. Form: Multi-stemmed at ground level with a balanced crown. History: Historically topped. Defects: Minor tight unions and included bark between stems. Significant cavities developing at old pruning wounds (acceptable condition at present). Other: Recorded stem diameter is equivalent for 6 stems.	No action required.		Moderate Good Fair	Low 10-20 C
								n/a	1.5		
T3	Early-Mature Sycamore Acer pseudoplatanus.	12	4	56	6.5 6.5 3		Position: Adjacent east boundary. Form: Twin-stemmed at 3.5m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Scattered dead twigs.	No action required.		Moderate Good Good	High 40+ B
								n/a	3		
T4	Semi-Mature Lime Tilia sp.	7	2	26	4 5 4		Position: Adjacent east boundary. Form: Twin-stemmed at 3m with a co-dominant stem at 2.5m. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Vegetation prevented detailed inspection of stem base. Good potential.	No action required.		Moderate Good Fair	Moderate 40+ B
								n/a	3		
T5	Mature Sycamore Acer pseudoplatanus.	15	3	71	8.5 9 5		Position: Adjacent east boundary. Form: Twin-stemmed at 3m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Small scattered dead branches.	No action required.		Moderate Fair Good	High 40+ B +
								n/a	1.5		
T6	Early-Mature Sycamore Acer pseudoplatanus.	15	5.5	60	4 7 6.5		Position: Adjacent east boundary. Form: Twin-stemmed at 5m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Small scattered dead branches to lower crown.	No action required.		Moderate Good Good	High 40+ B
								n/a	1.5		
T7	Semi-Mature Sycamore Acer pseudoplatanus.	12	5	43	4 6.5 3.5		Position: Adjacent east boundary. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor deadwood to western canopy.	No action required.		Moderate Good Good	Moderate 40+ B
								n/a	3		

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W S E	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Structural Condition	Life Expectancy (yrs) Retention Category
T8	Young Norway Maple Acer platanoides.	5.5	0.5	10	4.5 1 3		Form: Single stemmed and vertical with an unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Suppressed.	No action required.		Moderate Fair Good	Low 10-20 C
								n/a	3		
T9	Semi-Mature Beech Fagus sylvatica.	14	2.5	31	4 3 5		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Good potential.	No action required.		Moderate Good Good	Moderate 40+ B
								n/a	3		
T10	Early-Mature Sycamore Acer pseudoplatanus.	16	3	57	6 6.5 5.5		Position: South-east corner. Form: Single stemmed with a slight lean. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	High 40+ B +
								n/a	3		
T11	Semi-Mature Sycamore Acer pseudoplatanus.	12	4	31	4 7 3.5		Position: South-east corner. Form: Twin-stemmed at 3.5m with an unbalanced crown. History: No evidence of significant pruning. Defects: Scattered dead branches, sparse canopy.	No action required.		Low Fair Fair	Low 10-20 C
								n/a	1.5		
T12	Mature Purple Beech Fagus sylvatica 'purpurea'.	10	4	73	10 5 5.5		Form: Twin-stemmed at 4m with a co-dominant stem and a weeping lower canopy. History: No evidence of significant pruning. Defects: Minor scattered dead branches. Other: Northern canopy touching ground.	No action required.		Moderate Good Good	Very High 40+ A
								n/a	3		
T13	Early-Mature Sycamore Acer pseudoplatanus.	16	7	55	5.5 5 5		Position: Adjacent south boundary. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: Ivy smothered from 3m above ground level. Other: Ivy prevented detailed inspection.	Remove ivy and inspect stem for defects.		Moderate Fair Fair	Moderate 20-40 B
								Moderate	1.5		
T14	Early-Mature Sycamore Acer pseudoplatanus.	16	3	58	5.5 5.5 5.5		Position: Adjacent south boundary. Form: Multi-stemmed at 9m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Epicormic shoots and ivy prevented detailed inspection of stem to 5m above ground level.	Remove ivy and inspect stem for defects.		Moderate Good Fair	Moderate 40+ B
								Moderate	1.5		

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
G15	Semi-Mature Holly Ilex aquifolium.	av 7.5	av 1.5	av 19	2.5 2 3 each		Form: Two close growing specimens. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Minor included bark to one specimen (acceptable condition at present).	No action required.		Moderate Good Fair	Low 20-40 C
		n/a	3								
T16	Early-Mature Ash Fraxinus excelsior.	13	7	54	8.5 7 5 4		Position: Adjacent south boundary. Form: Single, kinked stem with an unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Significant die back to upper crown, very sparse crown.	Monitor.		Low Poor Fair	Low 10-20 C
		Moderate	1								
T17	Young Scots Pine Pinus sylvestris.	6	3.5	11	1 0.5 0.5 0.5		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Low vigour, sparse canopy, deadwood to lower crown.	No action required.		Low Poor Fair	Low 10-20 C
		n/a	3								
T18	Semi-Mature Judas Tree Cercis siliquastrum.	3	0.5	15	3 2.5 3 1		Form: Twin-stemmed at leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 20-40 C
		n/a	3								
G19	Semi-Mature Walnut Juglans regia.	av 4.5	av 0.5	av 22	av 6 3.5 5 0.5 each		Form: Two single stemmed, leaning specimens. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Suppressed.	No action required.		Moderate Good Fair	Low 20-40 C
		n/a	3								
T20	Semi-Mature Beech Fagus sylvatica.	11	3	38	5 4.5 4.5 4.5		Form: Single stemmed and vertical with a balanced crown. History: Occasional pruning wounds due to crown lifting. Defects: No significant defects observed. Other: Good potential.	No action required.		Moderate Good Good	Moderate 40+ B +
		n/a	3								
T21	Mature Cherry Prunus sp.	12	6	48	5 4 5 4.5		Form: Single stemmed and vertical to a height of 4.5m. History: No evidence of significant pruning. Defects: History tear wound at 4.5m above ground level (good wound wood). Scattered dead twigs.	No action required.		Moderate Good Fair	Low 20-40 C +
		n/a	1.5								

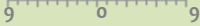
Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
								Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
										Structural Condition	Retention Category
T22	Semi-Mature Holly Ilex aquifolium.	6	1.5	23	3 3 3		Form: Multi-stemmed at 0.5m with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Recorded stem diameter is equivalent for 4 stems (16cm, 12cm, 9cm, 7cm).	No action required.		Moderate Good Good	Low 20-40 C
T23	Early-Mature Sycamore Acer pseudoplatanus.	13	6	53	7 6 5.5		Form: Twin-stemmed at 5m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Two fused limbs at 6m above ground level (acceptable condition at present).	No action required.		Moderate Good Fair	Moderate 40+ B
T24	Mature Sycamore Acer pseudoplatanus.	15	6	70	5.5 5.5 5		Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Ivy smothered. Scattered dead twigs to upper crown. Other: Ivy prevented detailed inspection, some dimensions estimated.	Remove ivy and inspect stem for defects.		Moderate Good Fair	Moderate 20-40 B
T25	Semi-Mature Beech Fagus sylvatica.	8	2	27	4 5		Form: Twin-stemmed at 1.5m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting. Defects: Two fused limbs (acceptable condition at present).	No action required.		Moderate Good Fair	Low 20-40 C
T26	Mature Sycamore Acer pseudoplatanus.	15	7	82	6 6 6.5		Form: Twin-stemmed at 6m with a well-formed crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Small scattered dead branches and twigs. Other: Good specimen.	No action required.		Moderate Good Good	High 40+ A -
T27	Early-Mature Sycamore Acer pseudoplatanus.	12	5	57	5 6 4		Position: Adjacent south boundary. Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: No significant defects observed.	No action required.		Moderate Good Good	Moderate 40+ B
T28	Mature Ash Fraxinus excelsior.	14	4	93	6.5 6 5		Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting and previously crown reduced. Defects: Cavities developing at old pruning wounds.	No action required.		Moderate Fair Good	High 20-40 A -

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
										Physiological Condition	Life Expectancy (yrs)
								Priority	Inspect Freq (yrs)	Structural Condition	Retention Category
T29	Semi-Mature Lime Tilia sp.	8	3	22	3 3 3.5 3.5		Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 40+ C
								n/a	3		
T30	Semi-Mature Beech Fagus sylvatica.	10	2	42	5.5 5 5 4.5		Form: Twin-stemmed at 2.5m with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Moderate 40+ C +
								n/a	3		
T31	Semi-Mature Sycamore Acer pseudoplatanus.	8	3	28	4 4 4		Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 40+ C
								n/a	3		
T32	Semi-Mature Walnut Juglans regia.	5	2	15	3 3 3		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 20-40 C
								n/a	3		
T33	Mature Lime Tilia sp.	18	2.5	75	8.5 5.5 7		Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: Historically reduced. Defects: Minor cavities developing at old pruning wounds. Small scattered dead branches. Other: Epicormic shoots prevented detailed inspection.	Remedial prune.		Moderate Good Fair	High 40+ B +
								Moderate	1.5		
T34	Semi-Mature Beech Fagus sylvatica.	10	2.5	33	5 5 5		Form: Twin-stemmed at 3m with a slight lean. History: Occasional pruning wounds due to crown lifting. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 20-40 C
								n/a	3		
T35	Mature Sycamore Acer pseudoplatanus.	16	4.5	70	8 5 5		Position: South-west corner. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Vegetation prevented detailed inspection, dimensions estimated.	Clear vegetation at re-inspect.		Moderate Good Fair	High 40+ B +
								Moderate	1.5		

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
										Physiological Condition	Life Expectancy (yrs)
								Priority	Inspect Freq (yrs)	Structural Condition	Retention Category
T36	Mature Hornbeam Carpinus betulus.	15	3.5	81	7 8 9		Form: Multi-stemmed at 2m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting. Defects: Minor cavities developing and old pruning wounds. Minor dead branches to inner canopy.	No action required.		Moderate Good Fair	High 20-40 A -
								n/a	1.5		
G37	Semi-Mature Cherry & Norway Maple Prunus & acer.	av 10	av 3.5	av 30	av 5 4 each		Position: Situated on third party land. Form: Group of close growing specimens. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	Low 20-40 C
								n/a	3		
T38	Semi-Mature Sycamore Acer pseudoplatanus.	10	3	33	4 3.5 3		Position: In north-west corner. Form: Twin-stemmed at 3m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor dead twigs.	No action required.		Moderate Good Good	Moderate 40+ C
								n/a	3		
T39	Semi-Mature Sycamore Acer pseudoplatanus.	10	3.5	33	4 4 6		Position: In north-west corner. Form: Twin-stemmed at 3m with a slight lean. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Dead Elder hung up in canopy.	No action required.		Moderate Good Good	Low 20-40 C
								n/a	3		
T40	Semi-Mature Oak Quercus robur.	10	3	32	3.5 6.5 5.5		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Moderate 40+ C +
								n/a	3		
T41	Semi-Mature Ash Fraxinus excelsior.	12	4	29	2 3 2.5		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Minor dead twigs.	No action required.		Moderate Good Good	Moderate 10-20 C
								n/a	3		
T42	Semi-Mature Norway Maple Acer platanoides.	10	3	27	5 5 3		Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.		Moderate Good Good	Low 40+ C
								n/a	3		

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
										Physiological Condition	Life Expectancy (yrs)
								Priority	Inspect Freq (yrs)	Structural Condition	Retention Category
T43	Sycamore Acer pseudoplatanus.	13	6	47	5 4 6.5 5		Form: Twin-stemmed at 5m with a slight lean. History: No evidence of significant pruning. Defects: Scattered dead twigs to lower crown.	No action required.		Moderate Good Good	Moderate 40+ B -
								n/a	3		
T44	Early-Mature Lime Tilia sp.	14	4	65	6 4 3.5 4.5		Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	High 40+ B +
								n/a	1.5		
T45	Early-Mature Sycamore Acer pseudoplatanus.	14	5	65	5 4 4 6		Position: Situated on third party land. Form: Twin-stemmed at 4.5m with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting. Defects: Cavities developing at old pruning wounds. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	High 40+ A
								n/a	1.5		
T46	Early-Mature Lime Tilia sp.	15	4	65	6.5 4 7 4.5		Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	High 40+ A -
								n/a	1.5		
T47	Early-Mature Sycamore Acer pseudoplatanus.	13	4	50	6 5 4 6		Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	Moderate 20-40 B
								n/a	1.5		
T48	Early-Mature Sycamore Acer pseudoplatanus.	14	5	60	7 4.5 4.5 6.5		Position: Situated on third party land. Form: Twin-stemmed at 3m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	Moderate 40+ B
								n/a	1.5		
T49	Early-Mature Sycamore Acer pseudoplatanus.	12	5	50	5 3 5 6.5		Position: Situated on third party land. Form: Twin-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Small scattered dead branches to inner canopy. Other: Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	Moderate 40+ B
								n/a	1.5		

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m)	Notes		Recommendations (Independent of any development proposals)		Vigour	Amenity Value
									Priority	Inspect Freq (yrs)	Physiological Condition	Life Expectancy (yrs)
											Structural Condition	Retention Category
T50	Early-Mature Sycamore Acer pseudoplatanus.	14	5	65	5 5 5.5		Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Ivy smothered from 3m above ground level. Other: Limited inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	Moderate Good Fair	Moderate 20-40 B		
	Moderate	1.5										
G51	Semi-Mature Portuguese Laurel Prunus lusitanica.	av 5	av 2	av 16	av 2.5 5 each		Form: Multi-stemmed specimens. History: Occasional pruning wounds due to crown lifting (now healed). Defects: No significant defects observed.	No action required.	Moderate Good Good	Low 20-40 C		
	n/a	3										
T52	Early-Mature Sycamore Acer pseudoplatanus.	13	5	55	4.5 3.5 4 4		Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Ivy smothered. Other: Limited inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	Moderate Good Fair	Moderate 20-40 B		
	Moderate	1.5										
T53	Semi-Mature Elm Ulmus sp.	9	3	33	4 5 7 7.5		Form: Twin-stemmed at ground level with an unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: On edge of retained planter. Recorded stem diameter is equivalent for 2 stems (22cm, 24cm).	No action required.	Moderate Good Fair	Low 10-20 C		
	n/a	1.5										
T54	Semi-Mature Holly Ilex aquifolium.	6	1.5	25	2 1.5 3 1.5		Form: Multi-stemmed at ground level with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: On edge of retained planter. Recorded stem diameter is equivalent for 3 stems (15cm, 18cm, 10cm).	No action required.	Moderate Good Fair	Low 10-20 C		
	n/a	1.5										
T55	Early-Mature Sycamore Acer pseudoplatanus.	12	4	60	5 4.5 4.5 5		Position: Situated on third party land. Form: Multi-stemmed at 4m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: Ivy smothered. Other: Limited inspection, dimensions estimated.	Remove ivy and inspect stem for defects.	Moderate Good Fair	Moderate 20-40 B		
	Moderate	1.5										
T56	Early-Mature Sycamore Acer pseudoplatanus.	12	3	61	3 6 3.5 4.5		Form: Single stemmed with a slight lean and a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: Scattered small dead branches and die back to upper crown.	No action required.	Moderate Fair Good	Moderate 10-20 C +		
	n/a	1.5										

Reference G = Group H = Hedge	Age & Species	Height (m)	Crown Ht (m)	Diameter (cm)	Crown Spread (m) N W E S	Scaled Tree Diagram (m) 	Notes	Recommendations (Independent of any development proposals)		Vigour	Amenity Value
										Physiological Condition	Life Expectancy (yrs)
								Priority	Inspect Freq (yrs)	Structural Condition	Retention Category
T57	Early-Mature Sycamore Acer pseudoplatanus.	14	3	56	4 7 4		Form: Single stemmed and vertical with a slightly unbalanced crown. History: Occasional pruning wounds due to crown lifting (now healed). Defects: No significant defects observed.	No action required.		Moderate Good Good	High 40+ B
								n/a	1.5		
G58	Early-Mature Sycamore & Lime Acer & tilia.	av 16	av 3	av 60	av 5 5 5 each		Position: Situated on third party land. Form: Several large specimens growing adjacent boundary. History: No evidence of significant pruning. Defects: Some specimens heavily ivy smothered with dense epicormic shoots. Other: Epicormic shoots overhanging boundary. Vegetation prevented detailed inspection. Limited inspection, dimensions estimated.	No action required.		Moderate Good Fair	High 40+ B +
								n/a	1.5		



Tree Constraints Plan
(Existing Layout)



Photo 1



Photo 2



Photo 13



Photo 20

See the accompanying report
for more photographs

Tree Ref.	Species	Height (m)	Radius (m)	BS 5837 Root Protection Area (radius = 1x stem diameter)	BS 5837 Root Protection Area (radius = 1x stem diameter)	BS 5837 Root Protection Area (radius = 1x stem diameter)
T1	Portuguese Laurel	6.5	2.4	15	4.2	
T2	Holly	7	3.8	46	6.8	
T3	Sycamore	12	6.7	142	11.9	
T4	Lime	7	3.1	31	5.5	
T5	Sycamore	15	8.5	228	15.1	
T6	Sycamore	15	7.2	163	12.8	
T7	Sycamore	12	6.2	84	9.1	
T8	Norway Maple	5.5	1.2	5	2.1	
T9	Beech	14	3.7	43	6.6	
T10	Sycamore	16	6.8	147	12.1	
T11	Sycamore	12	3.7	43	6.6	
T12	Purple Beech	10	8.8	241	15.5	
T13	Sycamore	16	6.6	137	11.7	
T14	Sycamore	16	7.0	152	12.3	
G15	Holly	7.5	2.3	16	4.0	
T16	Ash	13	6.5	132	11.5	
T17	Scots Pine	6	1.3	5	2.3	
T18	Judas Tree	3	1.8	10	3.2	
G19	Walnut	4.5	2.6	22	4.7	
T20	Beech	11	4.6	65	8.1	
T21	Cherry	12	5.8	104	10.2	
T22	Holly	6	2.8	24	4.9	
T23	Sycamore	13	6.4	127	11.3	
T24	Sycamore	15	8.4	222	14.9	
T25	Beech	8	3.2	33	5.7	
T26	Sycamore	15	9.8	304	17.4	
T27	Sycamore	12	6.9	147	12.1	
T28	Ash	14	11.2	391	19.8	
T29	Lime	8	2.6	22	4.7	
T30	Beech	10	5.0	60	8.9	
T31	Sycamore	8	3.4	35	6.0	
T32	Walnut	5	1.8	10	3.2	
T33	Lime	18	9.0	254	16.0	
T34	Beech	10	4.0	49	7.0	
T35	Sycamore	16	8.4	222	14.9	
T36	Hornbeam	15	9.7	297	17.2	
G37	Cherry And Norway Maple	10	3.6	41	6.4	
T38	Sycamore	10	4.0	49	7.0	
T39	Sycamore	10	4.0	49	7.0	
T40	Oak	10	3.8	46	6.8	
T41	Ash	12	3.5	38	6.2	
T42	Norway Maple	10	3.2	33	5.7	
T43	Sycamore	13	5.6	100	10.0	
T44	Lime	14	7.8	191	13.8	
T45	Sycamore	14	7.8	191	13.8	
T46	Lime	15	7.8	191	13.8	
T47	Sycamore	13	6.0	113	10.6	
T48	Sycamore	14	7.2	163	12.8	
T49	Sycamore	12	6.0	113	10.6	
T50	Sycamore	14	7.8	191	13.8	
G51	Portuguese Laurel	5	1.9	12	3.4	
T52	Sycamore	13	6.6	137	11.7	
T53	Elm	9	4.0	49	7.0	
T54	Holly	6	3.0	28	5.3	
T55	Sycamore	12	7.2	163	12.8	
T56	Sycamore	12	7.3	168	13.0	
T57	Sycamore	14	6.7	142	11.9	
G58	Sycamore And Lime	16	7.2	163	12.8	

MN = Measured North:
Canopy spreads are sometimes
measured to an approximate N
defined by site features.
Often more accurate, especially
where rows of trees are not
aligned N-S or E-W.

Photo 1

BS 5837 Root Protection Area (radius = 1x stem diameter)
Root Protection Area needing amendment due to site conditions, e.g. presence of existing road or building.
Root Protection Area having been amended to account for site conditions
T1 = Tree No 1 G2 = Group No 2 H3 = Hedge No 3

Tree Constraints Plan

Drawing No: CCL 10877 / TCP Rev: 1
Title: Tree Constraints Plan (Existing Layout)
Site: Red House, 281 Oxford Road BD9 4JP
Scale: 1:300 Paper Size: A1



Tree Retention Categories
Stems & canopies shown
Category A tree
Category B tree
Category C tree
Category U tree

Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with excellent form. Retention of these trees is highly desirable.
Trees of moderate quality with a life expectancy of 20+ years. Usually maturing trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees.
Unremarkable trees of low quality and merit. Individual specimens are not considered to be a material planning consideration.
Trees unsuitable for retention due to their very poor condition.

