

Treestyle CONSULTANCY

BS 5837:2012
Arboricultural Impact Assessment
Arboricultural Method Statement
and
Tree Protection Plan

Date of Report

30th September 2019

Site

Hougher Fall House

Old Clitheroe Road
Dutton
Preston
PR3 2YU

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Contents

[Executive Summary](#)

[1.0 - Introduction](#)

[2.0 - Site and Surrounding](#)

[3.0 - Statutory Protection and Guidance](#)

[4.0 - Tree and Hedge Population](#)

[5.0 - Impacts with the Proposed Development](#)

[6.0 - Tree Protection Requirements](#)

[7.0 - Recommendations](#)

[8.0 - Tree Protection Plan](#)

[9.0 - Tree Constraints](#)

[10.0 - Arboricultural Method Statement](#)

[11.0 - Caveats and Limitations](#)

[Drawing 1 - Tree Numbering and Categorisation](#)

[Drawing 2 - Tree Removal, RPA and Protective Fencing](#)

[Drawing 3 - Tree Numbering & Categorisation in relation to the Proposed Developments](#)

[Appendix A - Tree Schedule](#)

[Appendix B - njug v4 trees issue2.pdf](#)

[Appendix C - Glossary](#)

[Appendix D - BS 5837:2012 Cascade Chart for Tree Quality Assessment](#)

[Appendix E - Tree Fencing](#)

Executive Summary

Treestyle Consultancy was commissioned to complete a survey to specifications set out in British Standard 5837:2012 *Trees in relation to design, demolition & construction - Recommendations*. This document is an Arboricultural Impact Assessment (AIA) which explains the Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP).

The land highlighted for the proposed development is located within the grounds of the Hougher Fall House, Old Clitheroe Road, Dutton. The area of land surrounding the buildings and its grounds could be considered as rural with only a few residential properties surrounding the immediate area, beyond are predominately fields and countryside.

Access is gained via the entrance off Old Clitheroe Road which descends down to a parking area, the existing garage to the left with the residential property to the right. The topography of the land is relevant with the northern boundaries being on a higher elevation, this is mainly sloped all along the boundary. The main buildings are on a level surface at the bottom of the driveway and parking area.

All the trees surveyed line the northern boundaries which divide the road from the property. These trees are growing in raised soil profile which ascends upward to the Old Clitheroe Road, these provide essential screening for passing vehicles along the road. The area houses many groups of Rhododendron and cherry laurel which provide low level screening, the upper canopy trees overhang all areas. The mature green infrastructure makes up the highest retention value and comprises of many high quality and value maple, beech and yew. This is in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

A total of nine trees, four groups of trees and shrubs and one tree stump were recorded for the purpose of this report. Six trees are of high quality and value, two trees and several groups of shrubs fall under medium value, however, no trees are recommended for removal.

The proposed development is for a two story outbuilding to replace an existing garage on hardstanding area of tarmac. This is to rest on a raft foundation with minimal ground disturbance. The proposed development would rest upon the existing garage footprint with a 1 m wide extension on the two sides opposite the green infrastructure.

The arboricultural impact would see no trees being removed. However, there are currently trees and shrubs in close proximity to the existing building, these overhang the driveway entrance and could be a problem if access is required by vehicles with high loads. A Tree Protection Plan (TPP) would see the protection of the remaining trees and shrubs that line the boundaries. The trees of high quality are located in a raised profile which provides partial protection, however they are in close proximity to the proposed development and would need to be protected from indirect damage from building materials such as cement. It should be noted they could still be protected with Heras fencing. The prevention of contamination through the spillage of building materials into water courses into this and other areas is also discussed within this report.

It is important that the caveats and limitations of this report are understood, these can be read in Section 11.0 of this document.

1.0 Introductions

- 1.1 Under instruction from Jane Paton an arboricultural report has been prepared to accompany a planning application for the development of a two story outbuilding on the existing footprint of the garage. This report details the arboricultural impact on the site, subsequent mitigation recommendations and protective measures. The latter part of the report explains how the construction of a new surface will take place with regards to the protection of the trees to be retained.
- 1.2 The assessment was carried out on the 30th September 2019 by Andrew Mcloughlin of Treestyle Consultancy. Trees were assessed from the ground in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The categorisation method identifies the quality and value of the existing green infrastructure.
- 1.3 Only drawings have been supplied of the proposed design. Measurements on site were taken then applied to CAD drawing, this has been overlaid with the existing tree population. An appropriate Tree Protection Plan (TPP) has been drafted and revised as necessary from this Arboricultural Impact Assessment.
- 1.4 It should be noted that neither soil samples or soil maps have been used to make decisions on this report. Therefore there is the possibility of minor soil movement due to tree root activity. Prior to the undertaking of foundation depths calculations of any estimated tree locations should be resolved. If there are any discrepancies with trees locations or queries relating to their location or species within the group, then Treestyle Consultancy should be contacted prior to planning submission.
- 1.5 A total of nine trees, four groups of trees and shrubs and one tree stump were recorded for the purpose of this report. These trees have been listed in [Appendix A – Tree Schedule](#) and [Drawings 1, Tree Numbering & Categorisation, Drawing 2 - The Proposed Development, Tree Removal, Root Protection Areas and Protective Fencing](#)
- 1.6 This report provides the results of the survey and includes the following;
- A schedule of all tree and hedges located on or within influencing distance of the proposed development site ([Appendix A – Tree Schedule](#)).
 - An assessment based on BS 5837:2012 of trees in terms of their potential value within any future development. On the basis of this assessment trees have been categorised into one of four categories: High, medium, low or not worthy of retention (A, B, C or U). See Appendix D - BS 5837:2012 Cascade Chart for Tree Quality Assessment.
 - Advice on removal, retention and management of these trees and hedges can be read in Sections 5 & 7 of this report.
 - A Tree Constraints Plan detailing tree quality categories, canopy spread (N, E, S & W), Root Protection Areas (RPA's), life span, Diameter at Breast Height (DBH), RPA m2, tree height, condition for all of the trees surveyed.
 - A Tree Removal and Protection Plan detailing the development proposals alongside trees to be retained and removed and any temporary protection measures.

2.0 Site and Surroundings

- 2.1 The area of land highlighted for the proposed development is located within an existing area of tarmac. Old Clitheroe Road runs parallel to existing area of trees which screens the residential property from the road. Passing through the entrance leads down towards hard standing parking areas next to the existing garage. Beyond this is a neighbouring protected building and the residential property.
- 2.2 The area of land surrounding the grounds should be considered as rural with predominately farmed fields surrounding a few residential properties located to the south of the grounds.
- 2.3 The topography of the land is relevant being located on the top of a hill which then descends in a southerly direction to the parking, buildings and gardens. All of the trees and hedges are located on higher tiers around the northern boundaries.

3.0 Statutory Protection and Guidance

National Planning Policy Framework (NPPF)

- 3.1 The NPPF assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need for, or benefits of, development outweigh the loss. In this respect ancient woodland is defined as an area which has been wooded continuously since at least 1600 AD and a veteran as a tree of exceptional value for wildlife, in the landscape, or culturally because of its great age, size or condition.
- 3.2 On this site there are no ancient woodland or veteran trees.

Tree Preservation Orders & Conservation Area Designations

- 3.3 Local authorities reserve the right to create Tree Preservation Orders (TPO) to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in place the lopping, topping, felling, uprooting or wilful damage is prohibited. Failure to comply may lead to prosecution or large fines. Work on a TPO'd tree requires permission from the local authority.
- 3.4 Section 211 of The Town and Country Planning Act 1990 (TCPA) relates to the preservation of trees in Conservation Areas. Under Section 211 anyone proposing to remove, uproot or destroy any tree within a Conservation Area is required to give the local planning authority six weeks' prior notice (a "section 211 notice"). During this period the Council may consider serving a Tree Preservation Order to prevent the proposed work from being undertaken
- 3.5 Exceptions from the requirement to give a Section 211 notice are set out in The Town and Country Planning (Tree Preservation) (England) Regulations 2012. A person does not have to give the local planning authority six weeks' prior notice for, amongst other reasons, work to trees so far as such work is necessary to implement a planning permission (other than an outline planning permission).

Bats as a Protected Species

- 3.5 It is not uncommon for a mature tree with cavities or hollows to be a habitat for roosting bats. Bats are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Species and Habitats Regulations 2010 and it is therefore an offence to cause damage to a bat roost.

- 3.6 A preliminary ground level appraisal of the wildlife habitat value of each tree was undertaken as part of the arboricultural survey and no trees were observed as having feature to support roosting bats.
- 3.7 Should the presence of a bat roost be suspected whilst undertaking works on site then all operations must cease until a licensed bat handler or ecologist can provide advice.

Birds as a Protected Species

- 3.8 Nesting birds frequently use trees for nesting. They are protected under the Wildlife and Countryside act 1981 (as amended). This makes it an offence to intentionally or recklessly damage or destroy an active birds nest.
- 3.9 It is recommended that all tree work is carried out outside the bird nesting season which is March to August. If this is not possible then a detailed inspection of each tree should be undertaken by a suitably qualified ecologist prior to any tree work. Should an active nest be found then any work likely to affect the nest must be halted until the nest becomes inactive.

National House Building Council

- 3.10 This report has been written in accordance with BS 5837:2012
- 3.11 The soils on site were not recorded or assessed for the purpose of this survey. There could be however a possibility of movement due to trees being present on site.
- 3.12 It is quite common that not all trees are recorded on the original topographical survey. Therefore Treestyle Consultancy will estimate the approximate location of some trees for mapping purposes. Any discrepancies in a trees location or a missing tree will require further discussion with a suitably qualified Arboricultural Consultant.

4.0 Tree Population

- 4.1 The tree and hedge population varies in this category recognition under BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*. The below charts does not allow for a true representation of the tree population. This is because much of this data has been collected from groups of shrubs and a hedge.

Figure 1. Breakdown of BS5837 categorisation of all trees surveyed.



- 4.2 A total of nine trees, four groups of trees and shrubs and one tree stump were recorded for the purpose of this report. The breakdown of quantities for each retention category are also shown below in **Figure 1**. A cascade chart explaining the process used to reach these categorisations can be found in **Appendix D – Tree Categorisation Chart**. Effort and resources to accommodate the trees into the design proposal should be allocated proportionately based on their retention category.
- 4.3 The existing tree population is of high quality and value. As a group they provide essential visual amenity value.
- 4.4 It can be seen in Figure 1 there is variety in the quality of the tree population, it should be noted that a high percentage of the low quality tree species are located in the area for the proposed development.
- 4.5 A summary of the trees in each of the four categories is given below in **Table 1**, for ease of reference.

Tree Category	Tree Number
A	T1, T6, T8, T10, T11, T12
B	G2, T3, G4, T5, T7, G13, G14
C	-
U	-

5.0 Impacts of the Proposed Development

5.1 This section normally describes the number and quality of trees that would need to be removed in order to facilitate the development proposal, including any that could be retained. This is the result of an assessment based on the proposed site plan and discussions with the client regarding their strategy.

5.2 Table 1 shows the effects of the proposal on the trees of the BS 5837 quality categorisation.

Table 1. Summary of trees to be retained and removed.

Tree Category	Trees to be retained	Trees & Hedges to be removed
A	T1, T6, T8, T10, T11, T12	-
B	G2, T3, G4, T5, T7, G13, G14	-
C	-	-
U	-	-

5.3 No trees are to be removed, however, trees overhanging the driveway maybe required for a light crown raise with several rhododendron also being pruned back.

6.0 Tree Protection Requirements

- 6.1 The following information sets out the primary consideration for determining the requirement for tree protective measures and with the assessment impact of the development. With the exception of trees centrally and along the eastern side of the proposed development, all other remaining trees and hedges will be protected by Heras fencing.

Root Protection Areas

- 6.2 The BS5837:2012 RPA is calculated using the trees Diameter at Breast Height (DBH) at 1.5 m and represents the minimum area around each tree that must be left undisturbed to ensure its longevity. Tree roots can be found twice the width of the crown and beyond depending on the tree species and its environment. Most tree roots are found in the top 600mm of soil and most fine roots that absorb water and nutrients are located at the top horizon of soil profile. These near surface tree roots allow the tree to breath and oxygenate. The tree roots can extend well beyond the recommend distances within BS5837:2012 and they may not follow the typical circular area centred from the trees stem.

Ground Contamination

- 6.3 Storage areas for liquids such as fuels, oil or paint should not be located within 10m of any tree due to the risk of soil contamination caused by accidental spillage. Particular care must be taken when working on or close sloping ground to avoid unintentional runoff into the RPA of trees to be retained.

Underground Utilities

- 6.4 No detailed drawing have been provided and therefore no assessment has been made of the position of tree roots and the likely location of new services. Where the installation of services within the RPA of retained trees is unavoidable, appropriate methods will be required to ensure the safe long term longevity of the trees. This process will require additional consultation with a suitably qualified and experienced Arboricultural Consultant

Ground Level Changes

- 6.5 A rise or reduction in soil level can have major implications on the longevity and health of the trees. Minor changes (up to 100mm) can be tolerated in some cases but is heavily dependent on tree species, condition and growing environment.
- 6.6 Existing ground levels within the Root Protection Area should be maintained. The advice of a qualified Arboricultural Consultant should be sought if level changes are required.

Drainage & Storm Water Run-off Issues

- 6.7 Drainage and storm water run-off requires due consideration to prevent excessive and/or polluted run-off into the rooting area of trees to be retained.

Soil Compaction

- 6.8 It is imperative the surface of the soil be protected from compaction from plant machinery and/or machinery. This can create a capping effect on the surface which can stop the tree root from oxygenating and preventing any precipitation.

7.0 Recommendations

- 7.1 The utilisation of existing space where the old garage stands has minimised the impact on the trees. Attention to the angle of the proposed development has been taken into account with regards to the crowns of the trees. This would mean that no trees are in direct conflict with the proposed development. The footprint will also rest on the existing garage with an overlap of 1 m, this extends away from the trees in the direction of the neighbouring building. The proposed development will have a raft foundation laid upon the existing tarmac which will be resurfaced.
- 7.2 All tree work must adhere to BS3998 2010 Tree Work - Recommendations. This must be carried out by qualified, experienced and insured Arborists.

8.0 Tree Protection Plan

- 8.1 Firstly the tree work as recommended in [Appendix A – Tree Schedule](#) which would see the pruning of trees overhanging the driveway entrance. The protection of the remaining trees and hedges would see the installation of Heras fencing prior to any demolition or construction. This can be seen in [Drawing - Tree Numbering and Categorisation](#) and [Drawing 2 - The Proposed Development, Tree Removal, Root Protection Areas and Protective Fencing](#). The RPA's (Root Protection Areas) of trees, hedging and neighbouring trees that are to be retained qualify as no dig areas. The Heras fencing will prevent any part of the construction entering the permeable surfaces of the trees that are to be retained.
- 8.2 Additional protection would be from building materials, specifically cement. This leaches through the soil profile potentially contaminating the growing medium for existing, future plantings and pollution the waterways. The trees and hedges to be retain will require protection, this will require the storage of cement and other such pollutants off site and away from the water courses. If pesticides are to be used in the clearing of vegetation from the soil profile, then these must be species specific as not to damage the trees and hedges to be retained. This may help to highlight the RPA's of the trees (Drip line) so that they maybe marked out prior to work the commencement of construction and machinery.
- 8.3 If pesticides are to be used in the clearing of vegetation from the soil profile, then these must be species specific as not to damage the trees and hedges to be retained. This may help to highlight the RPA's of the trees (Drip line) so that they maybe marked out prior to work the commencement of construction and machinery.

9.0 Tree Constraints

- 9.1 The below ground constraints of the trees are currently protected by the existing tarmac surface and the raised soil profile in which they are growing. The crowns of the trees will not be of influencing distance of the proposed structure.
- 9.2 The current site may possibly house construction materials and could be used for storage of building materials. This is the greatest threat to the remaining trees and hedges through the leaching of building material such as cement. Therefore all storage should be a minimum of 10 ms away from tree Root Protection Areas (RPA).
- 9.3 No underground services can pass through the RPA of any of the trees or hedges that are to be retained.

Useful web links

Ash Dieback <https://www.treecouncil.org.uk/Portals/0/Chalara%20docs/The%20Tree%20Council%20Ash%20Dieback%20Action%20Plan%20Toolkit%20FINAL.pdf?ver=2019-02-11-124648-123×tamp=1549889719913>

Tree Species Disease <https://www.gov.uk/guidance/identify-a-tree-pest-or-disease-overview#identify-by-tree-species>

Grey squirrels <https://www.woodlandtrust.org.uk/mediafile/100263520/ps-wt-2014-grey-squirrel-management-ps.pdf?cb=3819311e674241c0924fedcb48a432f9>

Ancient Tree Forum Resources <http://www.ancienttreeforum.co.uk/resources/>

Ancient Tree Mapping <https://ati.woodlandtrust.org.uk>

Tree Species Selection http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag_species_seminar_13th_march_2018_programme_for_the_day.pdf

Tree Planting Manual <https://www.forestresearch.gov.uk/tools-and-resources/urban-tree-manual/>

10.0 Arboricultural Method Statement (AMS)

- 10.1 The AMS has been written as guidance on how the construction has to be carried out with regards to the protection of the green infrastructure. It is imperative that this is carried out correctly.
- 10.2 Carryout all tree work as advised in *Appendix A – Tree Schedule*. Below lists the sequence of the work procedure that is required to be carried out with regards the protection of the trees. This should be read in conjunction with the Arboricultural Implications Assessment (AIS) and the Tree Protection Plan (TPP).
- 10.3 For this section the following methodology is to be applied:
- 1) *All Local Planning Authority fulfilment's have been passed.*
 - 2) *Carry out schedule of tree works confirming to BS3998 *Appendix A – Tree Schedule* or any other agreed work.*
 - 3) *RPA's and the proposed construction is to be measured out and marked up highlighting construction exclusion zones and the clearly defined protected work areas. *Drawing 1 - Tree Mapping and Categorisation* with distances listed in *Appendix A - Tree Schedule*.*
 - 4) *No entrance by construction staff or building materials are allowed to enter the raised soil profile where the trees exist.*
 - 5) *The protection barriers as detailed in *Appendix E* can be positioned as detailed in *Drawing 2 - The Proposed Development, Tree Removal, Root Protection Areas and Protective Fencing* This must be signed signed off by planning. Once installed then the construction can commence.*
 - 6) *It should be noted that the RPA of the retained trees and shrubs are no dig areas, this covers nearly all the boundaries of the proposed land development. Compaction of the existing surface is to be avoided.*
 - 7) *The appointed Arborist will fully explain how this AMS is to be executed and answer any questions.*
 - 8) *Care with the storage of building materials throughout the operation.*
 - 9) *Once this has been completed a qualified Arborist must inspect the site, only then can machinery enter the site and construction begin.*
 - 10) *Carryout landscaping and tree/shrub planting scheme.*

Please refer to this link for guidance on any of the above;

<https://www.barrelltreecare.co.uk/resources/technical-guidance/>

11.0 Caveats and Limitations

- 11.1 This survey was carried out from ground level. No aerial inspection was undertaken and, as such, this report can only identify defects clearly visible from the ground. A VTA (Visual Tree Assessment) is a level two arboricultural tree survey. This normally involves a full 360 degree visual of the buttress, stem and crown of the tree. 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.
- 11.2 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.
- 11.3 Underground services were not confirmed around any of the trees surveyed. The potential influences of trees upon building or other structures resulting from the effects of trees upon shrinkable load-bearing soils or the effect of incremental root growth are specifically excluded from this report.
- 11.4 The report reflects the tree stock as found on the day surveyed. Change of ground levels, soil conditions, surrounding tree cover or land use, or any ground works within the root zone of any tree may invalidate the content of this report. No root zone excavation was undertaken.
- 11.5 Change of circumstance as a result of unusual weather conditions may invalidate the content of this report. It is recommended that trees should be reassessed after strong gale, 39 – 46 mph wind Beaufort scale 8.
- 11.6 The content of this report is valid for 12 months from the cover date. Any works recommended for beyond this time period are based on expectations rather than in response to currently identified defects. Trees should have their condition re-inspected by a qualified arboricultural consultant within three years of this report being written.