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Client:
Alan Pearson
c/o Mid West Planning

BS5837:2012 Arboricultural Report
(Trees in relation to design, demolition & construction)

LOWER HAM MEAD
SELHAM
WEST SUSSEX

Consultant: Jon Harper

Position: Arboricultural Consultant

Report Ref: 21-ARB-5346

Date: 29th June 2021

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1. INTRODUCTION

1.1. BS5837:2012

The current British Standard for trees in relation to design, demolition, and construction is BS5837:2012. This became current in May 2012, and supersedes the old 2005 standard.

1.2. Terms and Definitions

1.2.1 Access Facilitation Pruning

One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.

1.2.2 Arboricultural Method Statement (AMS)

Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in the loss of, or damage to a tree to be retained.

1.2.3 Arboriculturist

Person who has through relevant education training and experience, gained expertise in the field of trees in relation to design, demolition, and construction.

1.2.4 Competent Person

Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task which is being approached.

1.2.5 Construction

Site-based operations with the potential to affect existing trees.

1.2.6 Construction Exclusion Zone (CEZ)

Area based on the root protection area (2.7) from which access is prohibited for the duration of the project.

1.2.7 Root Protection Area (RPA)

Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain a tree's viability, and where the protection of roots and soil structure is treated as a priority.

1.2.8 Services

Any above or below-ground structure or apparatus required for utility provision.

1.2.9 Stem

Principal above-ground structural component(s) of a tree that supports its branches.

1.2.10 Structure

Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.

1.2.11 Tree Protection Plan

Scale drawing, informed by descriptive text where necessary, based on the finalised proposals, showing trees for retention, and illustrating the tree and landscape protection measures.

1.2.12 Veteran Tree

Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

1.3. The Proposal/Relevant History

The proposal, in this instance, is to construct two new garages as shown using the purple colour on the tree constraints plan (Figure 1) in this report.

1.4. Brief and Purpose

This report has been commissioned by Alan Pearson to;

- Survey the trees on site in accordance with BS5837:2012.
- Detail the arboricultural implications of the proposed project.
- Present an effective tree protection strategy for the duration of the development.
- Provide the necessary arboricultural information to accompany a planning application to the South Downs National Park Authority.

1.5. Scope

The trees have been surveyed in accordance with the BS. Trees on and immediately adjacent to the site with a stem diameter over 75mm have been included.

A full hazard assessment of the trees (including the assessment of decay or defects and their implications), has not been undertaken as this is considered beyond the scope of this report. Any obvious hazards and defects have, however, been identified in the Tree Survey Schedule and appropriate works recommended for action.

1.6. Documents Supplied/Used

Document	Supplied by	Format/Reference
Pearson.dwg	Self	DWG

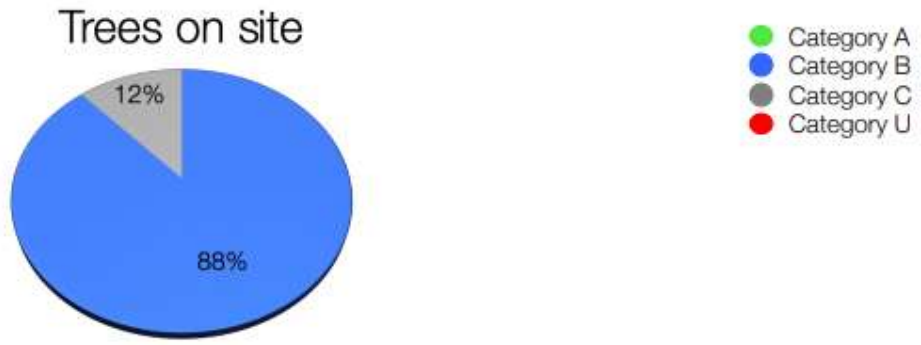
1.7. Site Details

Lower Ham Mead (Mead House) is a large residential site set back from the road with access via a driveway that runs along the side of the dwellings on that road. There is a detached dwelling near to the northern end of the site with a separate garage. Behind the dwelling there is a semi-formal area that is mainly laid to lawn with a wooded area beyond. The western side of the application site is bounded by a river that is at the bottom of a steep bank. This site is in the South Downs National Park.

2. TREE SURVEY

2.1. Survey Summary

Total number of trees	12 + G12
Category A	0
Category B	10 + G12
Category C	2
Category U	0



2.2. Survey Method

The trees were surveyed on June 01st 2021.
Locations of the trees were plotted using the site plan provided.
All trees were inspected from ground level only using widely accepted Visual Tree Assessment techniques, and no trees were climbed during the survey.
No trees were internally investigated. Should a more detailed inspection be required then this will be pointed out in the recommendations on the survey schedule.

2.3. Tree Details

With regard to their desirability for retention, the trees surveyed have been graded with their trunks colour coded on the tree constraints plan, and tree protection plan using the criteria contained in BS5837:2012. A summary of this grading is as follows.

A= Light Green. Trees of high quality and value, in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested in the British

Standard). Usually worthy of consideration as a material constraint to any proposed development.

B= Mid Blue. Trees of moderate quality and value in such a condition as to make a significant contribution (a minimum period of 20 years is suggested in the British Standard). Usually worthy of consideration as a material constraint to any proposed development.

C= Grey. Trees of low quality and value, in adequate condition condition to remain until new planting could be established (a minimum of 10 years is recommended in the British Standard), or trees with a stem diameter below 150mm. Not usually worthy of consideration as a material constraint to any proposed development.

U= Red. Trees in such a condition that they cannot be realistically be retained as living specimens in the context of the current land use for longer than 10 years.

In our survey schedule, the RPA for each tree is indicated as the radius of a circle as well as in M^2. This is also plotted on the tree constraints plan and tree protection plan denoted by a heavy black line which merges the individual RPAs together where there is more than one tree.

Section 4.6 of BS5837:2012 provides for the shape of the RPA to be modified from the starting point of a circle to account for site features such as hard surface treatments where root growth may be restricted, as long as the total remains the same. In this case, no RPAs were modified.

Please Note: The facility for offsetting an RPA by 20% for open grown trees was withdrawn on May 01st 2012.

2.4. Legal Protection Status of Trees.

Type of Protection	Details/Reference
Conservation Area	No
Tree Preservation Order	No
Planning conditions requiring tree retention	This site is within the South Downs National Park

3. ARBORICULTURAL IMPACT ASSESSMENT

3.1. Summary of Impact Assessment

Total number of trees surveyed	12 + G12
Number of trees to be removed	0
Number of trees to be pruned	0
Number of trees with RPA incursions	4

3.2. Removal of trees

Category A Trees (High Grade)	Category B Trees (Moderate Grade)	Category C Trees (Low Grade)	Category U Trees (Unretainable)
N/A	N/A	N/A	N/A

No trees need to be felled for the current proposal to be completed.

Trees to be removed	Impact on the character of the local area.	Mitigation (if any)
N/A	N/A	N/A

3.3. Tree Works

No tree work is required for the current proposal to be completed.

3.4. Incursions into RPAs

In many instances, a low degree of root disturbance can be deemed acceptable. A low level invasion can sometimes be achieved by the use of specialist methods to limit the degree of root disturbance. In this case, the raft-type foundations have been designed to avoid significant disturbance and to allow for the percolation of moisture along with gaseous exchange and venting through the soil. The table details the incursions and how they are to be dealt with.

Incursions into RPAs of retained trees		
Type of incursion	Tree number	Precautions to be taken
Foundation for garages	T3, T8, T11 & T13	Use a raft-type foundation.

3.5. Light and Proximity Issues

There are no arboricultural light or proximity issues associated with the current proposal.

3.6. Mitigation

No mitigation planting is required in this instance as no trees will be lost to facilitate the current proposal.

3.7. Conclusion

Assuming full compliance with the AMS in this report, the net arboricultural impact is acceptable.

4. ARBORICULTURAL METHOD STATEMENT

4.1. Introduction

During the development process, the tree protection measures set out in this method statement must be adhered to in order to safeguard the retained trees. The principles below are specifically designed to offer a significant degree of protection to both the root systems and aerial parts of the trees for the duration of the works.

A copy of this method statement must be made available on site at all times until the cessation of any demolition, construction, and landscaping work, and the site personnel will be made familiar with the key implications of this AMS.

It should be remembered that powers were granted to Local Planning Authorities in 2005, which allow them to serve Temporary Stop Notices if agreed protection measures are strayed away from before work is completed. This can be extremely costly and very time consuming.

4.2. Pre-commencement Meeting

If the Local Planning Authority deem it necessary, a pre-commencement meeting will be held, attended by the project Arboricultural Consultant, the Site Manager, and the LPA Tree Officer. During this meeting potential problems and protection sequencing can be discussed and it is expected that all aspects of the tree protection measures set out in this AMS will be understood and agreed. Following this meeting, all parties involved will receive an email from the Arboricultural Consultant containing a record of what was discussed and agreed.

4.3. Sequencing and Supervision

Sequencing of events and effective arboricultural supervision are important elements of the tree protection process.

There is no necessity for any direct arboricultural supervision in this instance.

Key Stages:

- AMS issued to Site Manager/Building Company
- AMS to be read by all site personnel to ensure a full understanding of implications. Any raised issues are to be addressed to the project Arboricultural Consultant
- Recommended and agreed tree works to be carried out
- Tree protective fencing and ground protection installed
- Existing buildings to be demolished where appropriate
- Construction work carried out
- Tree protective fencing and ground protection removed
- Landscaping (if any) carried out

Summary of Arboricultural Monitoring and Supervision

Activity	Level of monitoring/supervision required
Erection of tree protective fencing and installation of ground protection measures	Signing off of the approved tree protection measures by the project arboricultural consultant prior to any development work commencing

It is also imperative that telephone contact between the site manager and the Arboricultural Consultant is maintained with regard to any tree protection measure issues.

4.4. Site Precautions

The following points will be observed at all times:

- No fires will be lit within 15m of any retained tree on or around the site
- No access will be permitted inside the tree protection fences
- No materials, equipment, or waste will be stored inside the tree protection fencingl
- Notice boards, telephone cables, or other services will not, under any circumstances, be attached to retained trees
- Material which contaminate soil, such as concrete, diesel oil, vehicle washings and even builders sand, will not be allowed to enter the RPA of any retained tree

4.5. Carrying out tree works

All tree works, where required, will be carried out in accordance with BS3998:2010 (Recommendations for Tree Works) and to the current arboricultural best practice. Tree works will be carried out by a suitably qualified and insured contractor. The contractor will be solely responsible for carrying out their own site risk assessment prior to the commencement of work.

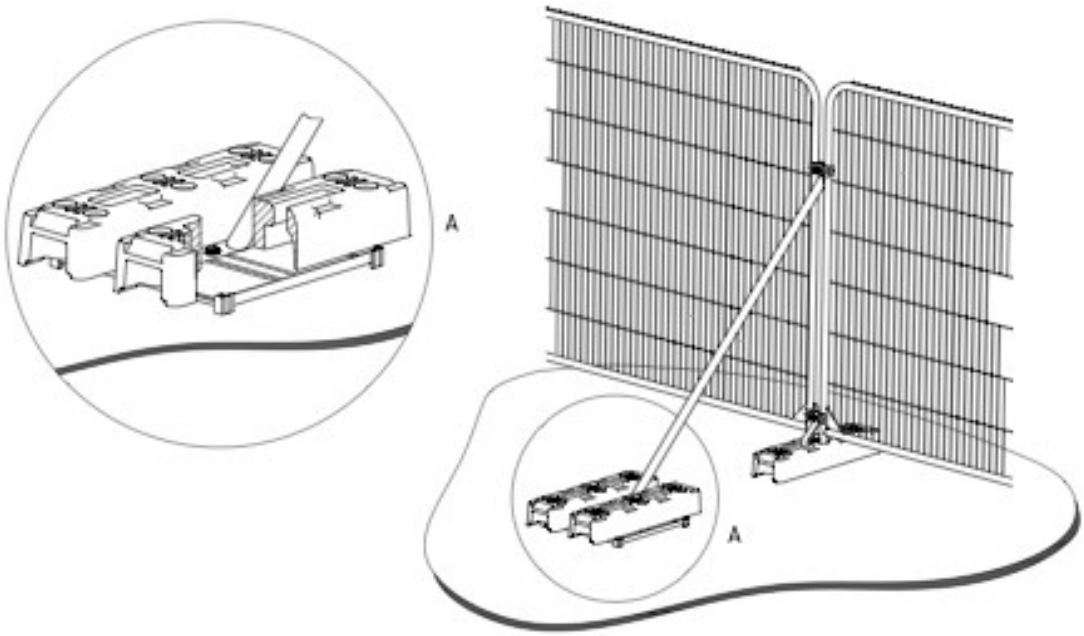
If at any time during the development a need for additional tree works is highlighted to facilitate the proposed works or access for machinery/plant, the Arboricultural Consultant will be contacted to advise on appropriate works and liaise with the LPA as necessary.

In this instance, there is no requirement for any tree work to be carried out for the proposed garages to be constructed.

4.6. Protective Fencing and Ground Protection

The required tree protective fencing should be installed to fence off the construction exclusion zone(s), or CEZ, shown on the tree protection plan (Figure 2). This must only be altered or moved as agreed in writing by the Local Planning Authority following advice from a competent Arboricultural Consultant.

The Tree Protective fencing will be 2.4m Heras fencing as specified in the BS. The fencing will be supported by rubber or concrete feet with supporting struts firmed into the ground on the side of the trees. The purpose of the supports is to prevent the fencing being moved during the development. Clear signs will be attached to the fencing (e.g. Tree Protective Fencing – Keep Out).



4.7. Site Access

Site access will only be available via the existing site entrance on Selham Road for construction purposes.

4.8. Demolition Work

Once the approved tree protection measures are in place, demolition will be carried out in the normal way. All waste from demolition will be stored away from the RPAs of all retained trees until it can be removed for disposal.

4.9. Underground Services

New underground services will be routed into the footprint of the new garages avoiding the RPAs of all retained trees.

Run-off water will be routed into soakaways, the position of which will be agreed with the LPA before work commences.

4.10. Foundations and Construction

Because of the RPA incursions caused by the foundations for the garages, a raft-type foundation will be used to ensure minimal disturbance to the tree roots.

In the case of Garage B, the ground slopes downward away from the front of the garage, and this area has already been surfaced with a substantial layer of gravel. The remaining parts of the RPAs in this area are undisturbed, permeable and natural surfaces. This makes this foundation easy to install without causing any negative impact to the trees.

In the case of Garage A, the RPA incursions would be so small that there will be no negative impact on any of the trees in that area.

A damp proof membrane will be used when pouring concrete within the RPAs of retained trees so that the toxic leachate from curing concrete cannot contaminate the soil around the roots.

4.11. Fencing and Landscaping

During the landscaping phase of the development (if any landscaping takes place), the following precautions will be observed:

- No compaction of soil within the RPAs (or where new tree planting is to be carried out).
- No changes in ground levels.
- Unwanted vegetation to be removed manually or using contact herbicides that will not damage existing tree roots.
- No underground irrigation or drainage pipes to be installed
- If soil has been compacted in areas where planting is proposed, measures to improve soil structure (e.g. decompaction) may be necessary to facilitate successful plant establishment.

If any fence posts are installed within the RPAs of retained trees, excavation will be carried under direct arboricultural supervision using hand tools. Posts will be re-positioned if roots in excess of 25mm in diameter are encountered. Post holes will be lined with heavy gauge polythene where concrete is used to safeguard the rooting environment of the trees from the potentially toxic effects of leaching concrete.

4.12. Amendments

Issues may arise on development sites that require amendments to the previously agreed tree protection details. Any amendments to this AMS will be approved in writing by the LPA prior to being implemented. Copies of paperwork relating to any amendments will be communicated by the Arboricultural Consultant to the Client and LPA.

This concludes the advice given in this report
Compiled and presented by
Jon Harper cert.Arb (RFS)

TREE SURVEY SCHEDULE

Please note that any recommendations on the tree survey schedule have not been considered in relation to the design of any potential proposed development, but are derived from observations made on site.

Tree Survey Schedule

Date: June 25th 2021
Site: Lower Ham Mead
Surveyor: Jon Harper cert.Arb (RFS)

= Category A trees
= Category B trees
= Category C trees
= Category U trees

Type (Tag)	Name	Age	Category	Diameter (Stems)	Height (L/Hgt)	North	East	South	West	Condition	Life Exp	Comments	Recommendations	RPR	RPA
T1	Alnus incana (Grey Alder)	M	B1	320(1)	12(3)	3	3	4.5	4	Good	20	None at present.	None at present.	3.84	46.33
T2	Alnus incana (Grey Alder)	M	B1	340(1)	12(3)	6	6	3	7	Good	20	None at present.	None at present.	4.08	52.3
T3	Fraxinus excelsior (Ash)	M	B3	650(1)	18(5)	10	7	10	10	Fair	20	Low bud/leaf density.	None at present.	7.8	191.16
T4	Crataegus monogyna (Hawthorn)	SM	C1	75(1)	5(1)	2	2	2	2	Good	40	None at present.	None at present.	0.9	2.55
T5	Quercus robur (Common Oak)	Y	C1	75(1)	5(1.5)	0.5	2	2	2.5	Good	40	None at present.	None at present.	0.9	2.55
T6	Chamaecyparis lawsoniana (Lawson	M	B3	180(1)	7(1)	2	2	2	2	Good	20	None at present.	None at present.	2.16	14.66
T	Chamaecyparis lawsoniana (Lawson	M	B3	180(1)	7(1)	2	2	2	2	Good	20	None at present.	None at present.	2.16	14.66
T7	Chamaecyparis lawsoniana (Lawson	M	B3	280(1)	11(1)	3	3	3	3	Good	20	None at present.	None at present.	3.36	35.47
T8	Alnus incana (Grey Alder)	M	B1	290(1)	11(3)	3	3	5	3	Good	20	None at present.	None at present.	3.48	38.05
T9	Alnus incana (Grey Alder)	M	B1	300(1)	11(3)	3	3	3	3	Good	20	None at present.	None at present.	3.6	40.72
T10	Alnus incana (Grey Alder)	M	B1	250(1)	11(3)	3	3	3	3	Good	20	Spindly.	None at present.	3	28.28
T11	Alnus incana (Grey Alder)	M	B1	330(1)	11(3)	3	3	3	3	Good	20	Spindly.	None at present.	3.96	49.27
G12	Chamaecyparis lawsoniana (Lawson	M	B2	290(1)	13(2)	3	3	3	3	Good	20	None at present.	None at present.	3.48	38.05
T13	Fraxinus excelsior (Ash)	M	B1	600(1)	15(6)	9	7	6	6	Good	20	None at present.	None at present.	7.2	162.88

TREE CONSTRAINTS PLAN

Category A trees | Category B trees

Category C trees | Category U trees

Notes & Legend:

RPAs

Trees to be removed (red crowns and numbers)

T2-B2

BS5837 Specification Ground Protection

No Dig Permeable Hard Surface Treatment

Tree Protective Fencing

Proposed development

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Client: Alan Pearson	Date: June 25th 2021
	Ref: Figure 1
Site: Lower Ham Mead, Selham, West Sussex	Scale @ A3: 1:250
	Title: Tree Constraints Plan

TREE PROTECTION PLAN

Category A trees | Category B trees

Category C trees | Category U trees

Notes & Legend:

RPAs

Trees to be removed (red crowns and numbers)

T2-B2

BS5837 Specification Ground Protection

No Dig Permeable Hard Surface Treatment

Tree Protective Fencing

Proposed development

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Client: Alan Pearson	Date: June 25th 2021
	Ref: Figure 2
Site: Lower Ham Mead, Selham, West Sussex	Scale @ A3: 1:250
	Title: Tree Protection Plan