

8 MANOR CLOSE PORTISHEAD

ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

for

Mr GARY HURST



Ecology
Archaeology
Arboriculture
Landscape Architecture

Written By:	S Newman
Checked By:	TRG
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1. Introduction

- 1.1. ACD Environmental was instructed in April 2021 to prepare the following Arboricultural Impact Assessment and Method Statement by Mr Gary Hurst. Reference should be made to the appended Tree Protection Plan (PRI23265-03).
- 1.2. This Method Statement is to be made available to all operatives on site during the construction process, so that they understand the scope and importance of the measures set out for tree protection. Implementation of the protection methods and other details within this report are integral to ensuring protection for the retained trees.
- 1.3. For details of trees to be retained, and locations and types of special protection methods, reference should be made to the latest revision of Tree Protection Plan (ref: PRI23265-03).
- 1.4. This report is based on the recommendations given in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- 1.5. No details have been supplied or sought of any statutory protection which may cover the subject trees.
- 1.6. The controlling authority North Somerset Council, who can be contacted at: North Somerset Council, Development and Environment, Town Hall, Weston Super Mare, BS23 1UJ or 01793466340.
- 1.7. Any questions relating to the content of this report should be directed in the first instance to: ACD Environmental, 4 & 5 The Old Mill, Fry's Yard, Bridge Street, Godalming, Surrey GU7 1HP, 01483 425714, quoting the site address and report reference number.
- 1.8. The following abbreviations have been used throughout this document:
 - Root Protection Area – RPA
 - Construction Exclusion Zone- CEZ
 - Tree Protection Plan – TPP
 - Tree Protection Fencing – TPF

2. Arboricultural Impact Assessment

- 2.1. An extension to the current property is proposed for construction as per the appended plan. A single mature oak tree is present in the rear garden.
- 2.2. This impact assessment is intended to evaluate the direct and indirect impacts on the tree on the site in relation to the proposed development. Any potential tree impacts are identified as per BS5837:2012 section 5.4, and details are given of proposed mitigation.
- 2.3. Any potentially damaging activities proposed in the vicinity of retained tree is identified, such that mitigation to significantly reduce or avoid this impact can be detailed in the Arboricultural Method Statement and Tree Protection Plan as recommended in BS5837:2012 section 5.4.2.
- 2.4. The development proposals are in accordance with BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'. Adequate protection can be provided to ensure all retained trees are protected throughout the development.
- 2.5. The proposed layout was supplied to ACD by the client. A laser measure was used to triangulate the position of the tree in relation to the existing building.
- 2.6. Details of the single oak tree present on site:

Tree	Species	Height	Stem Diameter (mm)	Crown Spread (N, E, S, W)	Life Stage	BS Category
T1	Quercus robur (Common Oak)	12	690	4, 3.5, 4, 4	M	B1

2.7. Protection for retained trees

- 2.7.1. BS5837:2012 section 6.2.1. states: 'All trees that are being retained on site should be protected by barriers and/or ground protection (see 5.5) before any materials or machinery are brought onto the site, and before any demolition, development or stripping of soil commences. Where all activity can be excluded from the RPA, vertical barriers should be erected to create a construction exclusion zone. A specification for protective fencing is given on the Tree Protection Plan. This consists of interlocking weld-mesh panels (e.g. heras) well braced by attachment to scaffold pole uprights driven firmly into the ground. Should any alternative method of barrier construction be proposed the design should be approved by the local planning authority.'

2.8. Demolition & Groundworks

To ensure damage does not occur to trees highlighted for retention, tree protection fencing must be erected prior to ANY plant machinery entering site whatsoever. No special demolition procedures need be observed on this site, other than respecting the tree protection fencing.

2.9. New Hard Surfaces within RPAs

2.9.1. In order to minimise impact where the proposed patio encroaches into the RPA of T1, sensitive surface construction will be required in the form of a no-dig surface. It is anticipated that using no dig surface means that installation of permanent hard surface in this area is unlikely to cause significant adverse impact on the trees to be retained.

2.9.2. As per the recommendation of BS5837:2012 section 7.4.2.3, the new permanent hard surfacing does not exceed 20% of any existing unsurfaced ground within the RPA.

2.9.3. To avoid root damage, a no-dig approach must be taken, limiting the impact on the trees:

2.9.4. The Arboricultural Method Statement describes installation of a typical no-dig surface. This follows the recommendations set out in Section 7.4 of British Standard 5837:2012. The author of this report is not an engineer and therefore detailed engineering design and analysis must be carried out by a suitably qualified engineer. However, any design must be approved for use by the project arboriculturist.

2.10. Construction within RPAs

2.10.1. BS5837:2012 states at section 5.3.1: 'The default position should be that structures (see 3.10) are located outside the RPAs of trees to be retained. However, where there is an overriding justification for construction within the RPA, technical solutions might be available that prevent damage to the tree(s) (see Clause 7). If operations within the RPA are proposed, the project arboriculturist should:

- a) demonstrate that the tree(s) can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA;
- b) propose a series of mitigation measures to improve the soil environment that is used by the tree for growth.'

2.10.2. The construction of the proposed extension encroaches slightly into the RPA of T1. This encroachment has been measured accurately in cad as being 4.5% of the RPA. This is considered to be a marginal encroachment, and the retention of the tree is still viable. It should be noted from the Tree Protection Plan that the 4.5% encroachment is compensated for with the extra area protected by protective barrier proposed. Therefore special construction measures or adjustment of the plans are NOT required.

2.11. Levels and Landscaping

Full details of any changes in ground levels on site remain to be finalised. Any alterations to levels close to trees may damage roots and affect tree health and stability. Unless no-dig methodology is proposed for installation of surfaces within RPAs the original levels in these areas must be noted, retained, and integrated into the engineering design of the site. Landscaping operations within the RPAs of retained trees must be carried out in a sensitive manner and be subject to a detailed method statement.

3. Arboricultural Method Statement

TO BE READ IN CONJUNCTION WITH THE APPENDED TREE PROTECTION PLAN REFERENCE: PRI23265-03

3.1. Phasing of operations for tree protection

3.1.1. Implementation of tree protection measures on the site must be carried out in the following order

- 1) Accurate erection of tree protection fence
- 2) Site accessible to construction/demolition traffic
- 3) Demolition/site clearance
- 4) Construction
- 5) Removal of tree protection fencing

3.1.2. The above phasing must not be changed without approval from the project arboriculturist and agreement with the Council.

3.2. Restrictions within tree protection areas

3.2.1. Inside the exclusion area of the fencing, the following shall apply:

- No mechanical excavation whatsoever
- No excavation by any other means without arboricultural site supervision
- No hand digging without a written method statement having first been approved by the project arboriculturist.
- No lowering of levels for any purpose (except removal of grass sward using hand tools)
- No storage of plant or materials
- No storage or handling of any chemical including cement washings
- No vehicular access
- No fire lighting

3.2.2. In addition to the above, further precautions are necessary adjacent to trees:

- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builders sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees
- No fire shall be lit such that flames come within 5m of tree foliage.

3.3. Avoiding damage to stems and branches

3.3.1. Care shall be taken when planning site operations in proximity of retained trees to ensure that wide or tall loads, or plant with booms, jibs and counterweights, can operate without coming into contact with retained trees. Such contact can result in serious injury to them and might make their safe retention impossible.

3.4. Tree protection fencing

- 3.4.1. The Tree Protection Plan (see the latest revision of: PRI23265-03) shows the alignment of Tree Protection Fencing (TPF), which is to be installed prior to any of the following taking place:
- Demolition
 - Plant and material delivery
 - Soil stripping
 - Utility installation
 - Construction works
 - Landscaping
- 3.4.2. Stages for installation of TPF:
- 1) Hand clearance of any vegetation to allow clear working access.
 - 2) Setting out of fencing points
 - 3) Fencing erected
 - 4) Site accessible to demolition/construction traffic
- 3.4.3. Once erected, all TPF will be regarded as sacrosanct, and will not be removed or altered without prior recommendation by the project arboriculturist and approval of the local planning authority.
- 3.4.4. Once the exclusion zone has been protected by barriers and/or ground protection, construction work can commence.
- 3.4.5. All weather notices should be erected on the barriers (for example see figure below).



Figure 1: Tree Protection Sign (digital copies available for download at: www.acdenvironmental.co.uk)

3.5. Site storage, parking, welfare facilities

- 3.5.1. The site will require provision for; site storage, contractor parking, welfare facilities, temporary services/drainage, material drop of points, etc.
- 3.5.2. No details of these provisions are available at the time of writing of this report.
- 3.5.3. None of the above provisions will be sited within RPAs of retained trees without the input or the project arboriculturist and the consent of the Local Authority.

3.6. Soft landscaping within RPA

- 3.6.1. All landscaping and associated ground preparation within exclusion zones will be carried out sensitively to ensure root damage is mitigated as much as is practicable. At no time is any heavy plant to be used within any protected area. Removal of existing vegetation will be carried out by hand, turf may be removed using a mechanical turf stripper or by hand.

Turfing

- 3.6.2. Stages for turfing gardens and open spaces:

No plant machinery¹ to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
- 2) Do not reduce any high spots or excavate in any way.
- 3) Existing poor quality turf may be removed with a turf stripper.
- 4) Use good quality top-soil to level any low-lying areas and hollows, and provide a fine tilth to lay turf on. This imported soil must not result in a level increase of more than 100mm in any area.
- 5) Import turves by hand in wheelbarrow
- 6) Lay turves

Planting

- 3.6.3. Should the soil be compacted or have a poor structure which may hinder the development of any new planting, soil decompaction techniques may be used upon consultation with the project arboriculturist.

- 3.6.4. Stages for planting within tree protection areas:

No plant machinery to be used in the area for whatever reason

- 1) Remove TPF to allow access to area.
- 2) Remove existing vegetation by hand, turf may be removed using a mechanical turf stripper.
- 3) Do not reduce any high spots or excavate in any way.
- 4) Import good quality top-soil by hand (with wheelbarrow) into area.
- 5) Level to a depth of no more than 100mm with hand tools
- 6) Dig individual planting pits for each plant by hand (including hedging which must not be trench planted)
- 7) Any mulch should also be imported and spread by hand.

- 3.6.5. No works will be carried out within any protected areas if the soil moisture is of a level likely to allow compaction to occur.

¹ Including rotovators

3.7. Installation of proposed paving within RPA

- 3.7.1. The proposed paving is partly within the root protection area (RPA) of T1. Where within the RPA, the following methodology will be adhered to:
- 3.7.2. All contractor personnel to be working within the area are to be made aware of the extent and nature of the tree protection areas as per Tree Protection Plan PRI23265-03.
- 3.7.3. Stages for installation of proposed paving within tree protection areas:

No plant machinery to be sited on any exposed rooting area

- 1) All works to be undertaken using hand tools only, with no plant or machinery to be used within RPAs
- 2) Remove existing vegetation using hand tools only.
- 3) Level soil using landscaping rake, retaining original ground levels after vegetation removal, with no further excavation.
- 4) Install a non-woven Geotextile (such as Fibretex F4M) directly over soil grade level (levelled where necessary, by non-compacted washed sand) and fix in place.
- 5) Lay 100mm well graded grit sand (sharp sand).
- 6) Gently compact using manual roller, or edge of a 75mm section of e.g. scaffold board
- 7) Lay stone slabs 2 – 5mm apart
- 8) Fill joints with kiln dried fine sand

Simon Newman *Dip Arb L4 (ABC)*
Arboriculturist

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Head Office

Rodbourne Rail Business Centre
Grange Lane
Malmesbury
SN16 0ES
Tel: 01666 825646

Surrey Office

The Old Mill
Fry's Yard
Bridge Street
Godalming
GU7 1HP
Tel: 01483 425714

Hampshire Office

Crescent House
Yonge Close
Eastleigh
SO50 9SX
Tel: 02382 026300

Email: mail@acdenv.co.uk

Website: www.acdenvironmental.co.uk

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