

Pre-development Tree Survey BS5837:2012

The Chestnuts, Osbaston



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For: Jolene Hopkins

Report Author:

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Appendix 1: Site and tree images

Appendix 2: Tree location map

1.0. Introduction and Site Description

The client, commissioned Dr. Stefan Bodnar to undertake an arboricultural survey (BS5837:2012) on trees within a proposed development at land At The Chestnuts, Osbaston CV13 0HR. The trees included within the survey and their relationship to the Development Footprint are identified on the drawing in Appendix 2, the aerial photograph relating to the site and photographs of trees involved are included in Appendix 1, together with examples of the trees concerned.

BS 5837:2012 includes an assessment of all trees within the development footprint in addition to those near to the site boundary. The site assessed is indicated in the location plan of trees (Appendix 2). See site plan below in Figure 1.

The site consists of a house and garden that has a small number of landscape plantings, within the site mainly a heavily reduced Early mature Horsechestnut to the frontage and young trees to the side (and offsite), with small orchard trees also to the side. The BS5837 tree survey is to inform if any of these trees fall within the zone of influence of the development and if so any implications.

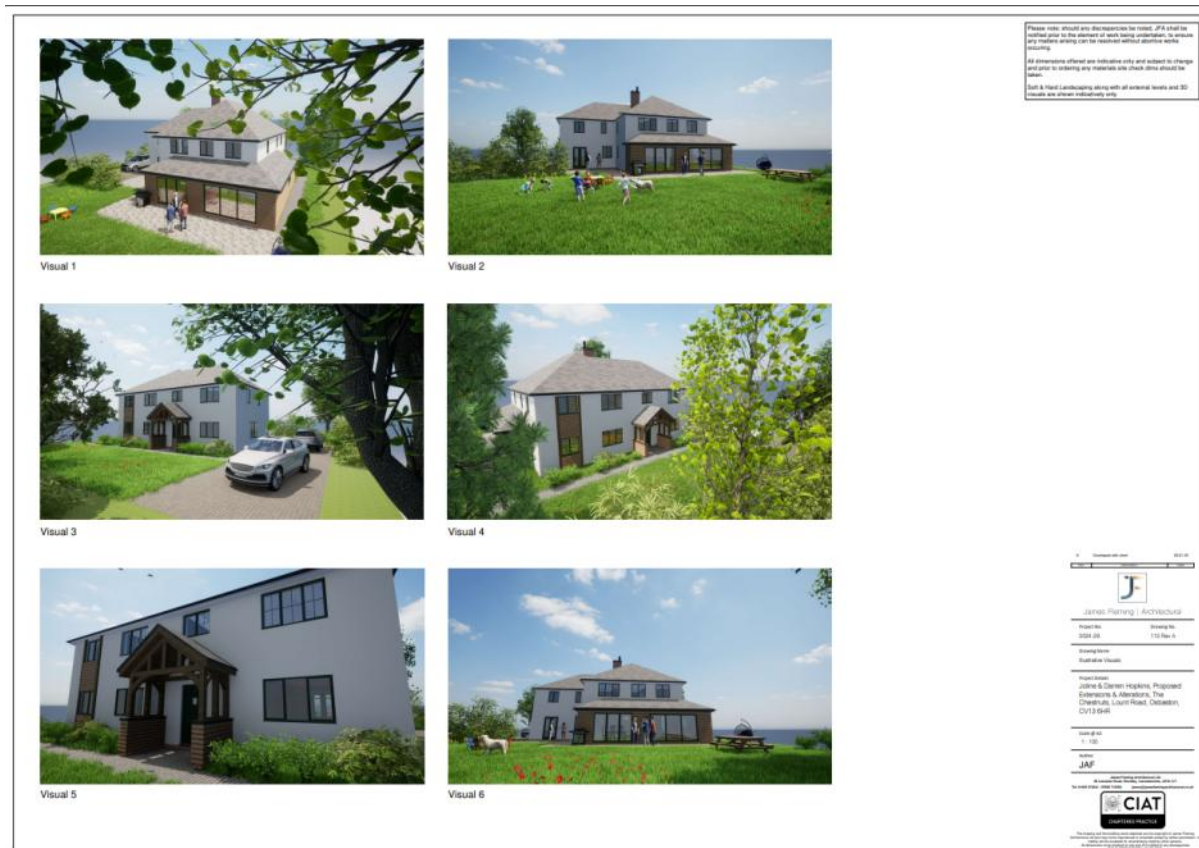
It is not known if any trees on site area protected via a Tree Preservation Order (TPO) though this would appear unlikely. It is recommended that the client fully satisfy themselves that this is the case during contact with the Local Planning Authority.

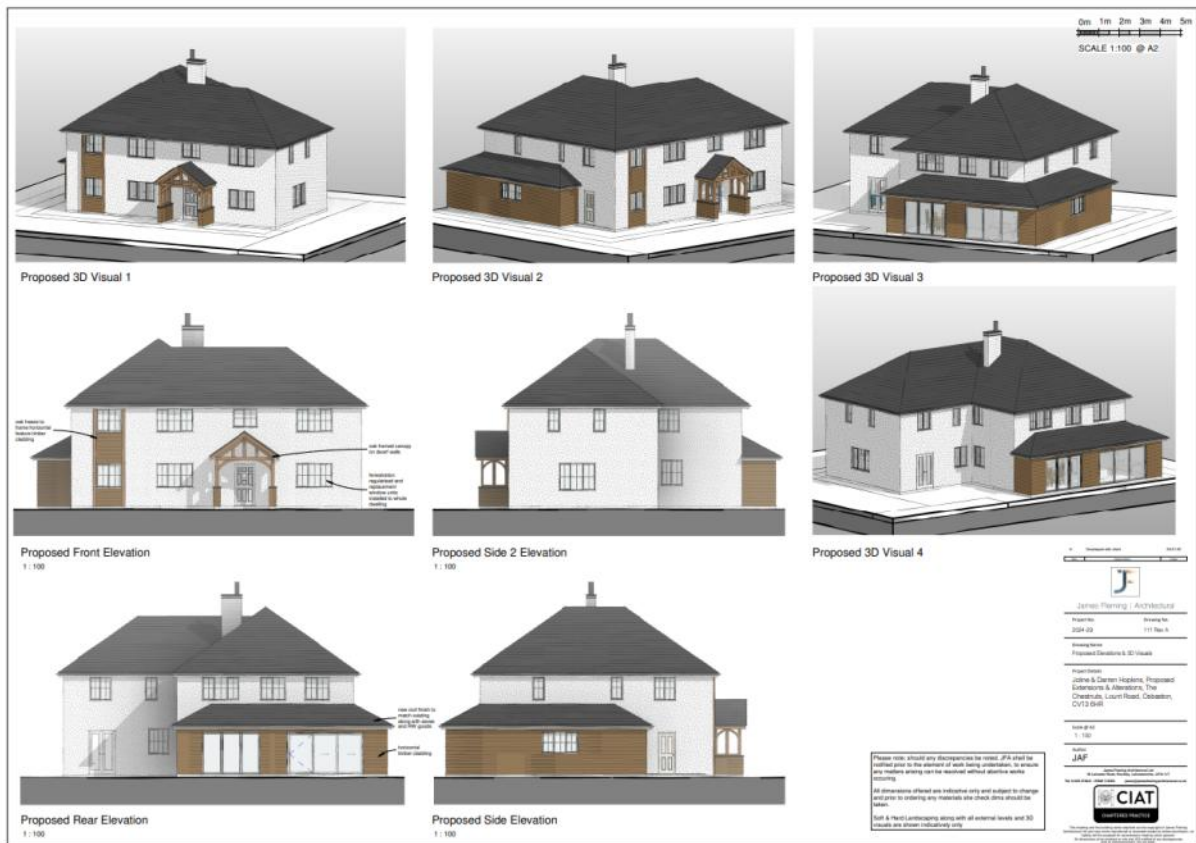
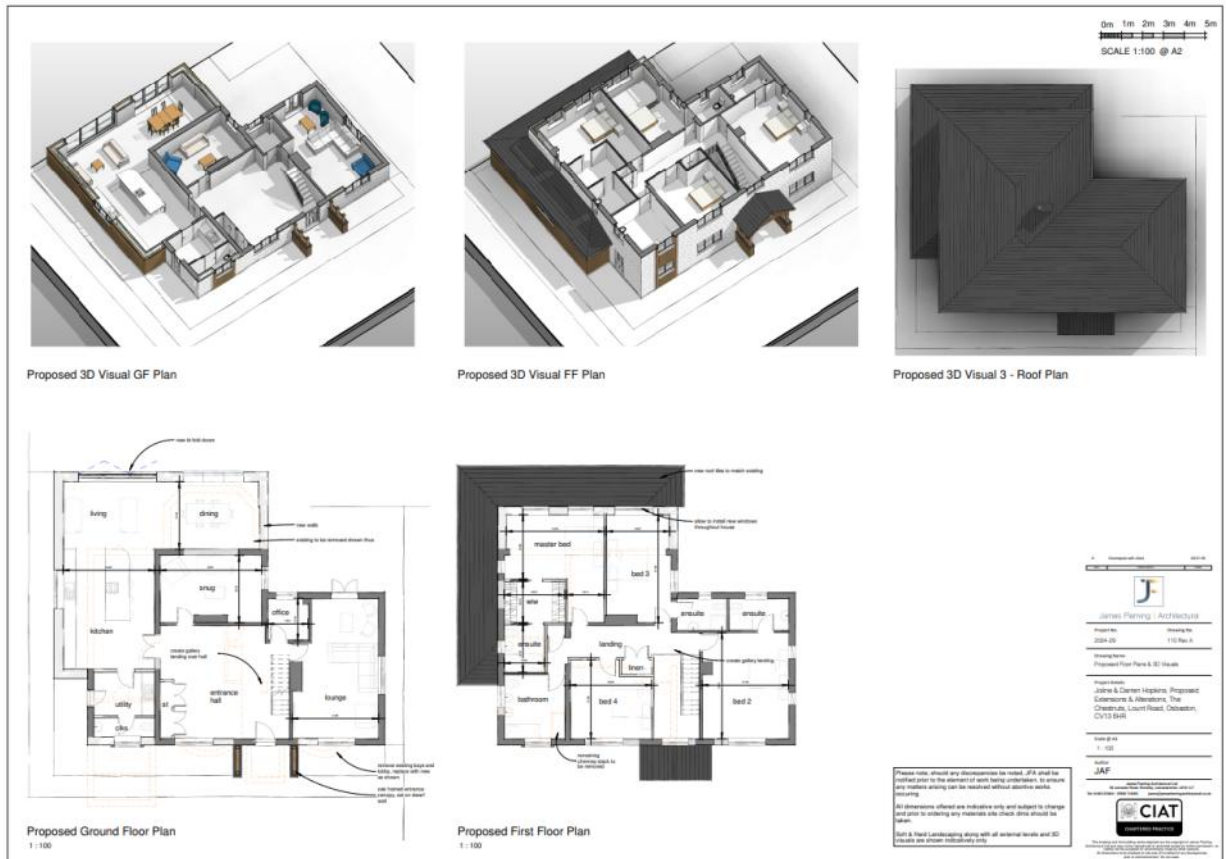
Figure 1. Satellite image of site



Map data 2025 © Google.

Figure 1a. Proposed plans: See below:





2.0. Arboricultural Survey Methodology

2.1 Condition Status

To determine the status of the trees within the site a full arboricultural survey has been undertaken, assessing species and status of all trees present within the footprint of development. The survey has been carried out in accordance with BS 5837 (2012).

The surveyor has extensive experience of arboriculture, through undertaking BS5837 surveys on many sites between 2005 and 2025. Previous to this, he has undertaken Lantra approved courses for arborists, and is competent to the level of a tree officer operating within a Local Authority, being familiar and having used the systems undertaken by tree officers for undertaking safety and condition surveys for Birmingham City Council. Dr. Bodnar possesses numerous ecological qualifications including a full member of CIEEM and a PhD (Community Forestry, 1998). Recent Certificated BS5837 training (May 2015) from Tree Life Arboricultural Consultancy Ltd.

Individual trees above 75mm (diameter at 1.5m above ground level) have had their position confirmed on the survey drawing. The trees were visually assessed and a schedule prepared listing tree number, species, trunk diameter at 1.5m above ground level, tree height, crown spread (radius), age, class and estimated remaining years. Any specific observation or recommendations with regard to management were also noted.

A plan drawing indicating the location of each tree assessed is included in Appendix 2.

The condition of each tree was assessed according to the following categories:

Category A

Those trees of high quality and value. Significant trees that are structurally sound and can be retained in the long term (i.e., >40 years) or trees that can be retained in the long term following remedial tree surgery. Colour code on the plan: pale green.

Category B

Those trees of moderate quality and value. Trees that may live 15-40 years. Trees that may live for more than 40 years, but whose removal may be required in that time frame to allow development of retained trees. Trees that are defective but could be retained in the medium term by remedial tree surgery. Colour code on the plan: mid blue.

Category C

Those trees of low quality and value. Trees that can only be retained in the short term (i.e., 5-15 years) and that have little landscape impact due to poor form or condition. Trees having a stem diameter of <150mm at 1.5m above ground level that could be replaced. Colour code on the plan: grey.

Category U

Unsuitable for retention. Trees that are dead, dying or diseased that will become dangerous in the near future (within years). Colour code on the plan: red.

Categories A, B and C have further sub-categories with regard to the reasons for tree retention:

- 1: Mainly arboricultural values
- 2: Mainly landscape values
- 3: Mainly cultural values, including conservation.

2.2 Root Protection Area (RPA)

In order to avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the category A, B and C trees. This is a minimum area of m^2 , which should be left undisturbed around each retained tree. These figures are calculated utilising the formula from BS 5837 (2012).

During construction works the root protection areas – ‘Construction Exclusion Zones’ are to be protected by barriers and ground protection in accordance with Section 9.0 of BS 5837:2012 and as specified and indicated on an approved Tree Protection Plan.

Where construction operations (demolition / hard surfacing) are proposed/ permitted within the Root Protection Area precautions should be taken to maintain the condition and health of the root system in accordance with BS5837:2012.

Construction of hard surfacing within the root protection area should be designed to avoid root loss during excavation. The structure of the hard surface should be designed to avoid localised compaction, including the use of three dimensional cellular confinement system as an integral component of the sub-base.

The hard surfacing in these areas should be a permeable and gas-porous nature such as washed gravel or paving slabs and block pavers (with infiltration spaces). Edge supports such as kerb and edgings on foundations and haunchings are not to be used within the RPA. Consideration should be given to the use of pegged timber edging or propriety or steelpaver or edge restraints.

3.0 Results

The tree stock on site consists of a range of mainly young planted trees. The trees are mainly C category trees, and the majority are outside the development area and will be unaffected by the proposal. .

In general, A and B category trees or hedges should be retained and carefully protected during any development work with appropriate root protection fencing. As many C category trees and hedges as possible should be protected and retained, although suitable replacement planting within the scheme area could adequately mitigate for losses of category C trees.

A map detailing the location of trees and their BS5837:2012 determined category can be seen in Appendix 2, all other trees on site are noted as being below 150mm stem diameter and therefore, outside the requirements of BS5837:2012. Trees below 150mm stem diameter but above 75 mm stem diameter are included in the topographical survey of the site. Appendix 1 contains images of all the trees and all significant specimens.

Scientific names for species identified:

Common Name	Species Name
Apple	<i>Malus domestica</i>
Cypress	<i>Cupressus sp.</i>
Leyland cypress	<i>Cupressus x leylandii</i>
Cherry	<i>Prunus sp.</i>
Spruce	<i>Picea sp.</i>
Holly	<i>Ilex aquifolium</i>
Horsechestnut	<i>Aesculus hippocastaneum</i>
Laurel	<i>Laurus nobilis</i>

Survey as of March 2025

Tree no.	Species	Stem diam (mm) DBH	Crown S (m)	Crown W (m)	Crown E (m)	Crown N (m)	Height (m)	Age Class	Estimated remaining contribution (years)	Physiological and Structural Condition	Category	Radius of nominal circle	Root Protection area (m ²)
1	Apple	150	1	1	1	1	2	Y	10-15	Lost to accommodate the development	C3	1.8	10
2	Spruce	100	1	1	1	1	4	Y	10-15	Outside Zone of Influence (ZOI)	C1	1.2	5
G1	Cherry (offsite)	200	3	3	3	3	9	Y	10-15	Heavy ivy	C2	2.4	18
H1	Hawthorn hedge	To 100	1	1	1	1	2.5	Hedge	20+	Outside ZOI	B3	1.2	5
3	Cherry	300	4	4	4	4	9	EM	20+	Outside ZOI	B2	3.6	41
4	Apple	175	2	2	2	2	4	Y	10-15	9m from existing building, outside ZOI	C3	2.1	14

H2	Laurel hedge	150	3	3	3	3	3	Hedge	10-15	Outside ZOI	C1	1.8	10
5	Horsechestnut	500	0	0	0	0	3	EM	10-15	Severely reduced, 10m to nearest part of front extension (to be demolished, outside ZOI	C2	6	113

G = Group H = Hedge T = Tree

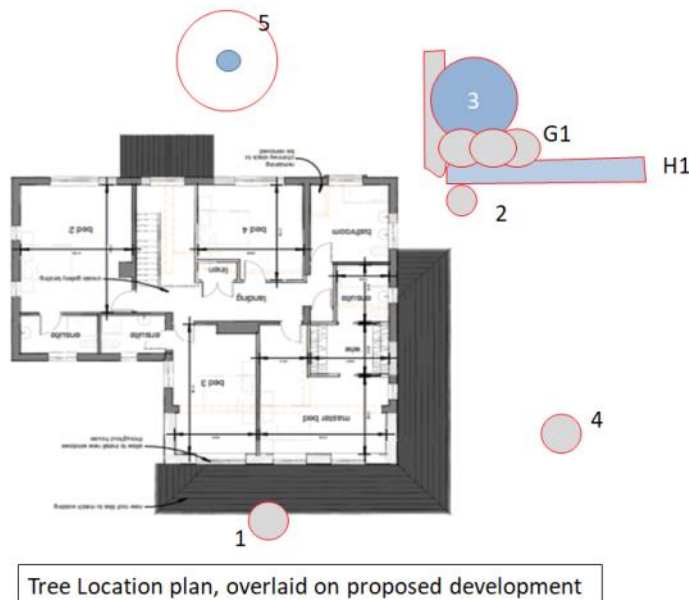
4.0 Discussion

4.1 Tree Protection: Tree Removal and Retention Plans: Tree Constraints plan

There are no significant tree constraints on site.

Impacts on trees of development: see below:

Removal of 1 x C quality tree (tree 1) will be required to accommodate the development. No RPAs fall within the zone of development or demolition (of existing front single storey extension).



No other trees are to be removed from site. And all RPAs are outside the Zone of Influence of the proposed development.

The arboricultural impacts are minimal and providing there is adequate tree protection employed, do not required specialised measures.

It is recommended that tree protection fencing be erected around the root zones of the retained trees and hedges in the development zone to prevent any root compaction via storage of materials or access onto the site.

4.1.2 Avoiding Accidental Damage to Trees: Trees may be negatively affected by the construction period by both direct and indirect actions, which are often borne out of ignorance as to the tree physiological requirements. Careful site planning and management along with the implementation of robust physical protection measures is necessary to ensure the retention of important trees.

4.1.3 Soil and Root Protection: It is essential to safeguard a pre-determined volume of soil around the base of the retained trees to ensure that their ongoing biological functioning of the root system along with the interaction with the soil is not impaired. This requires, that prior to the commencement of development activity on site that a robust protective barrier is erected.

4.1.4 Suitable Barriers: The specifications for this barrier should be as per the British Standard 5837 of 2012 (Trees in Relation to Construction – recommendations). In brief, this consists of 2.3m high panels attached to an adequately braced scaffold structure to deter un-authorized dismantling and robust enough to rebut physical impacts from site plant and machinery. In practice Heras weld-mesh type panels perform well when attached to the above mentioned scaffold structure.

4.1.5 Bird breeding season: All site clearance should ideally take place outside of the bird breeding season. Bird breeding season is between mid March and mid July, although certain species can breed outside these months and if breeding birds are found then work should cease and the advice of an ecologist sought. If clearance is undertaken within the bird breeding season then all site features should preferably be checked immediately prior to clearance by a suitably qualified ecologist.

4.1.6 Shading: The existing trees are around the site edges mainly on the north of the plot and there is unlikely to be additional significant shading issues, especially with the proposed removals.

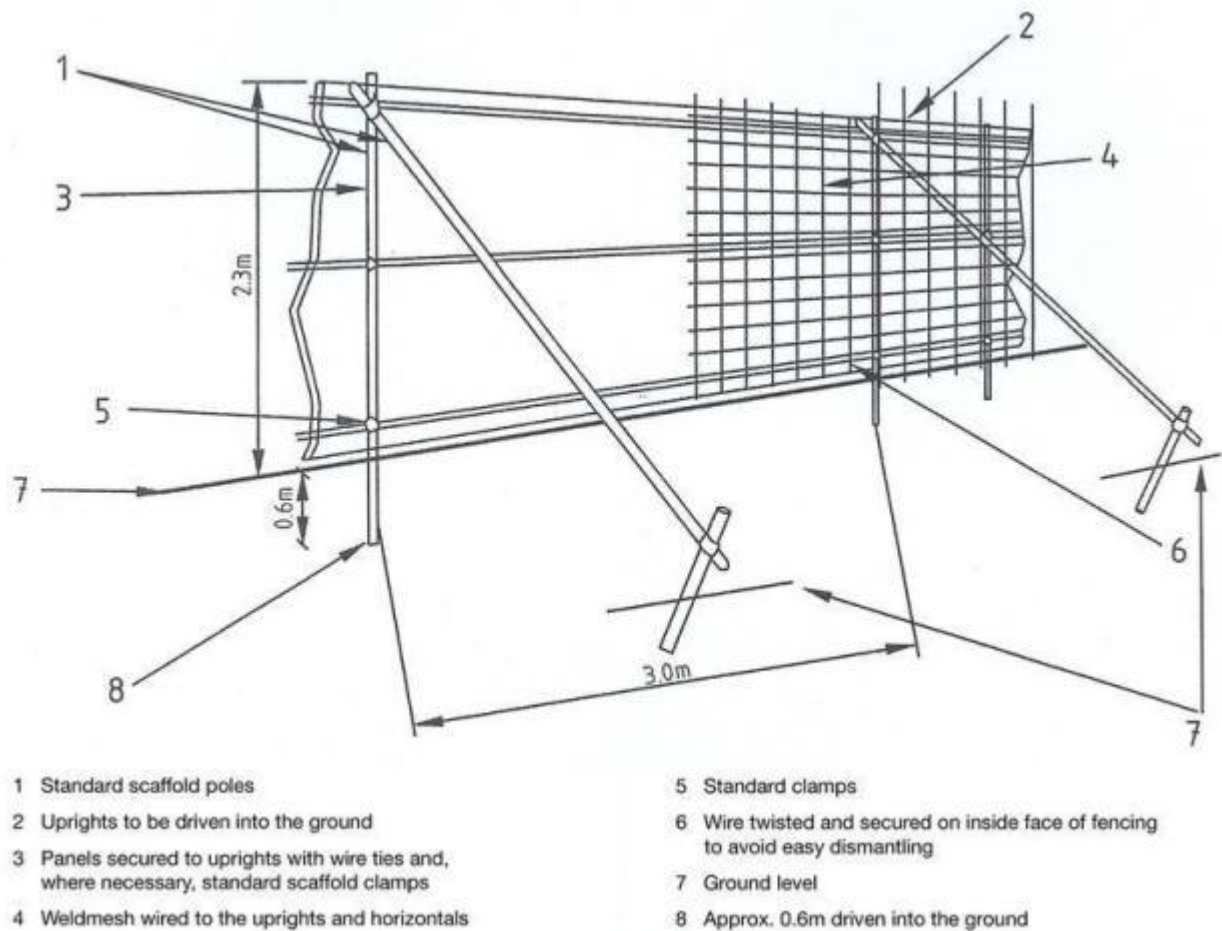


Figure 3. Example of protective fencing required for all Root Protection Areas.



Figure 4. Example of an all weather tree protection poster.

4.2.4 Care is to be exercised when locating the vertical poles to avoid underground services and, in the case of the bracing poles, also to avoid contact with structural roots. If the presence of underground services precludes the use of driven poles, an alternative specification that provides an equal level of protection is to be prepared in conjunction with the project arboriculturist as illustrated within Figure 3 above.

4.2.5 Where the set-back of the tree protection barrier exposes unmade ground to construction damage, temporary ground protection is to be installed as part of the implementation of physical tree protection measures prior to work starting on site.

4.2.6 Temporary ground protection is to be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. Detail is shown in Figure 5 below: Scaffolding and root protection within the RPA.

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane.

b) for pedestrian-operated plant up to a gross weight of 2t, proprietary, inter-linked ground protection boards placed on top of a compression resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane.

c) for wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

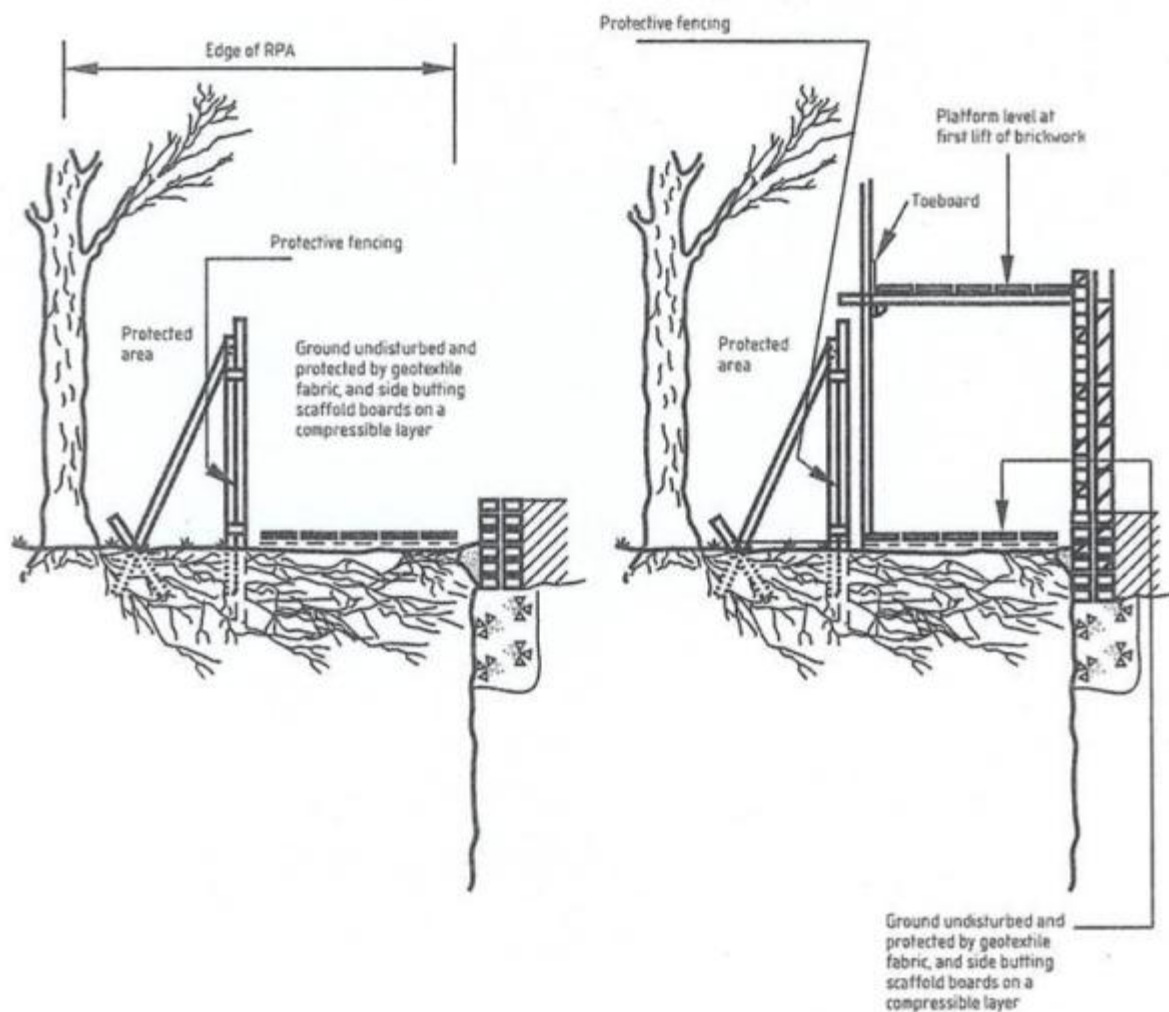


Figure 5. Scaffolding and root protection within the Root Protection Area.

4.3 Landscape considerations:

Consideration should be given to maintaining tree-lined boundary features, the appearance of frontages, screening and landscape impacts.

Further consideration should be given to habitat connectivity and reinforcing site boundaries. It is understood that extensive compensation and enhancement tree planting will be undertaken and located to enable the landscape value of this area to be reinforced

4.4 Mitigation and Compensation:

There is likely to be a limited requirement in terms of compensation for the loss of the existing trees indicated.

REPORT ENDS

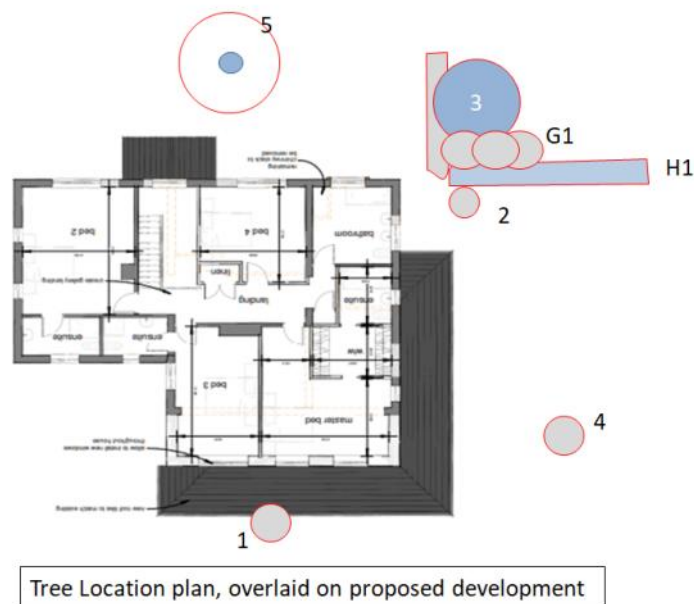
Appendix 1: Images of trees and shrub vegetation

Garden and orchard trees, H1 in background



Reduced Early mature chestnut to frontage

Appendix 2: Tree Location and Protection Plan



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