



ARBORICULTURAL IMPACT ASSESSMENT
(with tree survey and constraints)

20 Egloshayle Road
Wadebridge
PL26 6AD

Reference: EV-3735-AIA

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Report Date: 03.11.2020

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1 INSTRUCTION

- 1.1 Mr & Mrs Patterson instructed Evolve Tree Consultancy to provide a:
1. Tree Survey.
 2. Constraints analysis and Tree Constraints Plan.
 3. Arboricultural Impact Assessment and Tree Protection Plan.

2 INTRODUCTION

- 2.1 The site contains one notable tree, an early-mature tree of heaven. AWA Chartered Architects have been commissioned to design a scheme that includes alterations to the internal arrangement a small rear extension.



Image 1 – Site Location (from Concept Design Booklet)

- 2.2 AWA recognised the potential for the small rear extension to impact on the tree and requested an opinion from Evolve.
- 2.3 The tree is of overall low quality (BS quality category C). It is growing with poor vitality and is likely to have a relatively short life expectancy. It has a poor structure where the two principal stems are attached to each other with a bark included union at 0.5 m high. It has no significant arboricultural, landscape or cultural qualities that make it important to public amenity. Its modest dimensions of about 8 m height and spread cause it to be mostly concealed from the public behind the buildings along Egloshayle Road.



Image 2 – Only available view from Egloshayle Rd



Image 3 – View from Co-op car park 220m to west

- 2.3.1 A glimpsed view is available from Egloshayle Rd opposite No 20 and a small part of the tree is visible from a long distance away at the Co-op car park. This benefit is too small to warrant a higher quality category.
- 2.4 This report and constraints plan provide the baseline data that informs the feasibility assessment. It will assist with prioritising trees for retention and protection and help balance the weight of any competing interests. The impact assessment and tree protection plan goes on to analyse the final design and describes the implications of development on trees.
- 2.5 The report and plans will satisfy the validation requirements of a planning application by the local planning authority (LPA).

3 METHODOLOGY

- 3.1 **Tree Survey:** The survey and report follow the recommendations in British Standard 5837:2012 Trees in relation to design, demolition & construction - Recommendations (BS 5837). It is not a risk assessment, nor does it assess the problems related to subsidence, heave or other forms of disturbance associated with tree root growth or removal.
- 3.2 My survey was a visual one made from ground level. I did not have access to trees outside the boundary of the site. Any observations of these are confined to what is visible from within the property.
- 3.3 Tree Schedule Explanatory Notes & Methodology are listed in Appendix A. A survey schedule of the relevant trees is recorded in Appendix B. Tree positions are indicated on the Tree Constraints Plan (TCP).
- 3.4 **Arboricultural Impact Assessment:** Arboricultural impacts are a predicted change in condition as a result of the project. The importance of an impact is a relationship between the magnitude of a change and the quality or sensitivity of the feature being affected.

3.5 Impacts are generally described as either none, low, moderate, or high. Time frames are referred to as short (0—10 years), medium (10—20 years), long (20—40 years) and very long (40+ years). My assessment focuses on the impacts relevant to planning merits and is guided by BS 5837:2012. Trees in relation to design, demolition and construction – Recommendations. Typical considerations include:

- Tree loss.
- Build practicability.
- Mitigation planting.
- Future conflicts.
- Removal of structures.
- Construction access.
- Statutory Protection.
- Canopy protection.
- Proximity to structures.
- Effect on amenity value.
- Shading.
- Design conflicts.
- Necessary pruning.
- Infrastructure.
- Use of land near trees.

4 SUPPORTING DOCUMENTATION

4.1 Relevant documents provided to me include:

- Topographical Survey ref: AWD 001
- Concept design booklet 20_0821

4.2 This report should be read alongside Evolve drawing:

- Tree Constraints Plan EV-3735-TCP.
- Tree Protection Plan EV-3735-TPP.

5 STATUTORY PROTECTION & OTHER CONTROLS

- 5.1 I have used information supplied by Cornwall County Council Interactive map. If any tree is identified for removal, confirmation should be sought from the local planning authority (LPA) in writing about the protected status.
- 5.2 **Tree Preservation Orders:** None of the trees on or adjacent to the site are currently protected by a Tree Preservation Order (TPO).
- 5.3 **Conservation Area:** The site is within the Wadebridge Conservation Area. This provides similar protection to a TPO. Please note that anyone who cuts down, uproots, tops, lops, wilfully destroys or wilfully damages a tree in a conservation area is guilty of an offence.
- 5.4 **Felling Licences:** Parts of the site associated with the domestic property will not be subject to the provisions of the Forestry Act. Felling licenses are generally required for felling living trees unless they are fruit trees, or trees growing in a garden, orchard, churchyard or designated open space.
- 5.5 **Hedgerow Regulations:** The hedgerow regulations do not apply to the boundary of a domestic curtilage but will affect those hedgerows that border land used for keeping horses or agriculture. The Hedgerows Regulations 1997 make it an offence to remove most countryside hedges without first giving the local planning authority 42 days' notice.
- 5.6 **Planning Conditions/Covenants:** I did not investigate whether any planning conditions or legal covenants relevant to the trees are in place.

6 PLANNING POLICY & DESIGNATIONS

- 6.1 **National Planning Policy Framework (NPPF):** This sets out national planning policy.

- Paragraph 170 states that:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

- Paragraph 175 states that:

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons and a suitable compensation strategy.

- 6.2 **Cornwall Local Plan:** This sets out local planning policy. It includes the following relevant policies:
- Policy 12: Design – Development must ensure Cornwall’s enduring distinctiveness and maintain and enhance its distinctive natural and historic character.
 - Policy 22: European Protected Sites – mitigation of recreational impacts from development.
 - Policy 23: Natural environment. Development proposals will need to sustain local distinctiveness and character and protect and where possible enhance Cornwall’s natural environment and assets according to their international, national, and local significance.
- 6.3 **Cornwall Council Planning for Biodiversity Guide:** The guide sits below the Local Plan and provides additional information to guide decisions relying on policies 22 and 23.
- Paragraph 10.7.3 - Buffering for hedges suggests that for residential developments that an absolute minimum buffer of 2-metre either side of the hedge is required. For industrial and solar farm developments a 5-metre buffer is an absolute minimum. Where woodland is present a 10-metre buffer is absolute minimum.

7 IMPACT OF PROPOSAL ON TREES

IMPACT 1- TREE REMOVAL AND RETENTION

- 7.1 No trees will be removed.

IMPACT 2 – TREE T1 (TREE OF HEAVEN)

- 7.2 Due to its small size and low vitality it is of overall low quality. It makes only a small contribution to public amenity. Consequently, its benefits and likely short life expectancy do not warrant it causing a significant constraint to development. However, the designs do not require its removal and poses a very low risk to its viability.
- 7.3 Due to the existing ground conditions the design will not have any significant adverse effects on the tree. The garden is situated at a higher level than the ground floor of No 20. The existing retaining wall and other structures limit the spread of roots towards the building. This is described on the TCP.
- 7.4 The ground floor works are achieved without affecting the retaining wall and other structures that form a barrier to root growth. The existing retaining

wall will create a foundation for the first floor, the design of which includes a small cantilever. As such there is no requirement to excavate within the RPA.

- 7.5 It is assumed that the existing provisions for services and soakaways are adequate for reuse.
- 7.6 The crown of T1 provides adequate clearance from the rear elevation of the building and will not require pruning to facilitate access during construction (see image 4).



Image 4 – First floor will be cantilevered



Image 5 – Existing crown shape

8 TREE PROTECTION PROPOSALS

- 8.1 Based on the information provided to date, this report and TPP provide defined tree protection proposals (related to this design) which can be implemented without further specification. Regardless of the planning merits, the conservation area warrants a precautionary approach to protecting the tree. Its low vitality is relevant because this makes it vulnerable to changes to its growing environment such as soil compaction.
- 8.2 The RPA will only be subject to pedestrian traffic and use of hand tools, but not the movement of vehicles, storage of materials or mixing cement or disposal of washings. A construction exclusion zone is indicated on the TPP.
- 8.3 It is not necessary to provide fencing during the course of construction, however a visible marker (e.g. orange netting secured with timber posts of pig tails) at the edge of the construction exclusion zone (CEZ) would be prudent. The CEZ is indicated on the TPP. Ground protection is recommended unless the work coincides with a prolonged dry period because this would create firm ground that is resistant to damage from foot traffic. In other circumstances, the working area will be protected by way of sheets of plywood, road plates or proprietary plastic ground mats. The suggested area for ground protection is indicated on the TPP.

9 CONCLUSIONS

- 9.1 The overall arboricultural impacts of the proposed development are low. Consequently, the proposal does not conflict with either local or national planning policies.
- 9.2 It is recommended that the tree protection measures indicated in section 8 are implemented as a precautionary measure.



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I am a Chartered Arboriculturist and a professional member of the Arboricultural Association. I hold the Royal Forestry Society's Professional Diploma in Arboriculture. I have been working as a full-time, professional arboriculturist since 1998 and have experience in both the public and private sector.

The authority of this report ceases when any site conditions change or pruning or other works unspecified in the report are carried out to, or affecting, the subject tree(s). The statements made in this report do not consider the effects of extremes of climate, vandalism, or accident, whether physical, chemical or fire. Evolve Tree Consultancy cannot accept any liability about these factors, nowhere prescribed work is not carried out in a correct and professional manner in accordance with current good practice.

The recommendations within this report remain valid for the period stated for re-inspection or twelve months from the date of survey.

The limit of Evolve Tree Consultancy's indemnity over any matter arising out of this report extends only to the instructing client; Evolve Tree Consultancy cannot be held liable for any third-party claim that arises following or out of this report. This report remains the intellectual property of Evolve Tree Consultancy.

APPENDIX A

Tree Schedule Explanatory Notes

Sequential Tree, Group or Woodland Reference Number.

Name: Scientific name (Common name in brackets).

Height: Recorded in metres by inclinometer in each discrete area and estimated from the measured tree. **(lwr crn ht)** Lower crown height, the height of the canopy above the ground.

Trunk diameter: Tree stem diameter in millimetres at 1.5 metres above adjacent ground level rounded up to nearest 50 millimetres. For multi-stemmed trees, a cumulative diameter is calculated (in accordance with BS 5837:2012 Annex C).

Crown Spread: Measured in metres & taken at four cardinal points (N E S W).

1st Sig branch: Existing height in metres above ground level (agl) of the first significant branch with direction of growth (if available).

Life stage	Y	Young	Recently planted or establishing tree.
	SM	Semi-mature	Age less than one-third life completed. Established tree but one that has not reached its potential ultimate height and has significant growth potential.
	EM	Early-mature	One-third to two-thirds life completed. A tree reaching its ultimate potential height, whose growth rate is slowing down but will still increase in stem diameter and crown spread.
	M	Mature	Two thirds plus life completed. Specimen with limited potential for any significant increase in size but with a reasonable life expectancy.
	LM	Late-mature (Over-mature in the BS)	Two-thirds plus life completed and declining. A tree that has passed its optimum growth rate and may require specialist management. These trees may offer significant benefits in terms of nature conservation
	V	Veteran	A tree that 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.

Category: A grade given in accordance with BS 5837:2012 - Tree Categories (see copy of Table 1 from BS 5837:2012 below).

Comments: General observations e.g. collapsing, the presence of any decay and physical defect and including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat.

Life Expectancy: Estimated remaining contribution in years in terms of amenity (<10, 10+, 20+, 40+).

Physiological condition	G	Good	Tree that appears to be in good condition and healthy without significant defects.
	F	Fair	Tree that appears to be structurally sound but due to minor defects is downgraded from good.
	P	Poor	Tree which shows signs of poor health, in decline and/or with significant defects.
	D	Dead	Tree which is moribund or has died.

Recommendations: Preliminary management recommendations based on the site as surveyed and for any likely pruning likely to be required should any development proceed.

RPA-R (m) - Root Protection Area (RPA) Radius - The radius of an indicative circle of the RPA.


RPA (m²) - RPA Area in metres squared.

APPENDIX B
Tree Schedule

Tree No.	Name (Common & Scientific)	Ht (m)	Stem dia. (mm)	Branch Spread (m)				1 st sig branch (m)	Life Stage	Comments	Life Exp (yrs)	Cond	Advice	Cat	RPA R m	RPA A m ²
				N	E	S	W									
T1	Ailanthus altissima (Tree of Heaven)	8(3)	370,420	5	6	3	3	3(E)	EM	Included stem union at 0.5m Low vitality Minor visual amenity	10+	Fair		C2	6.7	142
T2	Malus (Apple)	5(1)	300	4	4	4	4	0.5(SE)	EM	Fine tree Not prominent	20+	Good		C2	3.6	41
T3	Prunus avium (Wild Cherry)	5(2)	200,200	2	2	2	1	2(W)	SM	Poor quality tree	10+	Fair		C2	3.4	36

Table 1 from BS 5837:2012

Trees in relation to design, demolition & construction – Recommendations. Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
<p>Trees unsuitable for retention (see Note)</p> <p>Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i></p>			<p>RED</p> 
<p>Trees to be considered for retention</p> <p>Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years</p>	<p>1 Mainly arboricultural qualities</p> <p>Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</p>	<p>2 Mainly landscape qualities</p> <p>Trees, groups, or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>3 Mainly cultural values, including conservation</p> <p>Trees, groups, or woodlands of significant conservation, historical, commemorative, or other value (e.g. veteran trees or wood-pasture)</p>	<p>GREEN</p> 
<p>Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years</p>	<p>Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation</p>	<p>Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality</p>	<p>Trees with material conservation or other cultural value</p>	<p>BLUE</p> 
<p>Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits</p>	<p>Trees with no material conservation or other cultural value</p>	<p>GREY</p> 

APPENDIX C

Legal Constraints

Trees outside the site/property

Landowners and managers have a duty of care not to damage trees on the neighbouring land. The common causes of damage (root damage, compaction, physical damage, and inexpert pruning) must be avoided through good planning and site management.

However, branches and roots from trees on adjacent properties that extend over boundaries can be pruned back to the boundary line without the permission of the owners. However, the branch material belongs to the tree owner and should be returned where appropriate.

Statutory wildlife obligations

The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds, bats and other species that inhabit trees. All wild birds are protected by law under the Wildlife & Countryside Act 1981, and it is an offence to disturb injure or kill a nesting bird intentionally or to take damage or destroy an occupied nest or egg. If nesting birds are discovered works on the trees should be deferred until the nests are abandoned. Care should be taken during any felling operation, or surgery works to trees to avoid damage or disturbance to birds during the nesting season.

Tree Preservation Orders

Advice can be found at: <http://planningguidance.communities.gov.uk/blog/guidance/tree-preservation-orders/tree-preservation-orders-general/>

Conservation Areas

Advice can be found at: <http://planningguidance.communities.gov.uk/blog/guidance/tree-preservation-orders/protecting-trees-in-conservation-areas/>

Important: Exceptions for tree work relating to planning permission and permitted development from the Planning Practice Guidance 15 April 2015 paragraph 36-083-20150415.

Under the heading "Is there an exception for tree work relating to planning permission and permitted development?", of the PPG states:

"The authority's consent is not required for carrying out work on trees subject to an Order so far as such work is necessary to implement a full planning permission. For example, the Order is overridden if a tree has to be removed to make way for a new building for which planning permission has been granted.

Conditions or information attached to the permission may clarify what work is exempt.

However, the authority's consent is required for works on trees subject to an Order if:

- development under a planning permission has not been commenced within the relevant time limit (i.e. the permission has 'expired');
- only outline planning permission has been granted; and
- it is not necessary to carry out works on protected trees in order to implement a full planning permission."

Felling licence

In any calendar quarter*, you may fell up to 5 cubic metres on your property without a licence if no more than two cubic metres are sold. Contact your local Forestry Commission office if you are not certain whether these exemptions apply.

*1 Jan to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October 31 December

Exemptions: Certain types of felling do not need permission from the Forestry Commission. The Forestry Act 1967, as amended, and related regulations give these exceptions in full. The main categories are listed below:

Lopping and topping (which usually includes tree surgery, pruning and pollarding).

Felling included in an approved dedication plan.

Felling fruit trees, or trees growing in a garden, orchard, churchyard or designated public open space (e.g. under the Commons Act 1899).

Felling trees which, when measured at the height of 1.3 metres from the ground:

- have a diameter of 8 centimetres or less; or if thinnings have a diameter of 10 centimetres or less; or
- if coppice (i.e. managed by cutting to promote multi-stemmed growth arising at or near ground level) or underwood, have a diameter of 15 centimetres or less.

Felling trees immediately required for carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) or for work carried out by certain providers of gas, electricity and water services and which is essential for the provision of these services.

Felling necessary for the prevention of danger or the prevention or abatement of a nuisance (e.g. which may involve the threat of danger to a third party). This exemption will only apply if there is a real rather than a perceived danger. We may be able to give you advice that would minimise the danger without felling the trees. We strongly recommend that you contact us if you are considering felling a tree or trees in these circumstances. You may be prosecuted for illegal felling if it is shown that the tree did not present a real or immediate danger.

Felling necessary to prevent the spread of a quarantine pest or disease and done in accordance with a notice served by a Forestry Commission Plant Health Officer (under the Plant Health (Forestry) (Great Britain) Order 1993, as amended).

The felling is done in compliance with any obligation imposed by or under an Act of Parliament.

More advice can be found at

[http://www.forestry.gov.uk/pdf/treefellingaugust.pdf/\\$FILE/treefellingaugust.pdf](http://www.forestry.gov.uk/pdf/treefellingaugust.pdf/$FILE/treefellingaugust.pdf)

APPENDIX D

Constraints Advice and Design Considerations

The key constraints posed by the trees are shown on the TCP drawing. Both the above and below ground constraints have the potential to influence the design.

Tree Quality Assessment: The cascade chart, presented as part of Appendix B, is a construct of the BS5837 designed to help describe the characteristics and relative value of trees. It provides guidance enabling an estimate of which trees are important and which trees are not.

It does not dictate which trees ought to be retained or removed, merely the weight that should be given to them when balancing competing interests. Certain trees may be of such importance and sensitivity that they justify having a major influence on design. Others may be of little significance that could be removed without adverse impacts.

The key trees are identified in the survey schedule presented as Appendix B.

The root protection area (RPA): This is an area (representing a volume of soil) considered necessary to maintain the trees viability. The area represented on the TCP is a minimum recommended by BS5837 and is capped at 707m².

The shape of the RPA will vary in accordance with site conditions e.g. a road is likely to form a barrier to root growth. Whilst the notional RPA is circular the shape plotted on the TCP may be a polygon to reflect likely barriers to root growth.

Encroachment within the RPA of retained trees will require justification and be supported by a sound rationale from the project arboriculturist.

Tree species: The species will influence a number of factors relevant to design including height (represented by the length of the shade arc), spread (indicated on the TCP), ultimate height and spread (which may be indicated where appropriate), deciduous/evergreen nature, crown density, seasonal nuisance etc.

The proximity of a tree to built houses and gardens can be a key factor affecting people's enjoyment of a property.

Age: Mature and over-mature trees are generally more sensitive to change than young trees. Their inability to adapt to altered soil conditions within or near the RPA means that care is required when designing in these places.

Shade Arc: This is an average pattern of the shade as it passes through the day. It provides an indication of how trees may impede direct sunlight.

Dense shade can be addressed by the siting of dwellings and a reasonable proportion of the garden outside the shade arcs.

Siting buildings within the shade arc can adversely affect the availability of natural daylight to principal living rooms. The internal arrangement of buildings and fenestration design can make significant improvements to daylight availability.

Services: It is prudent to locate new service outside the RPA and crown (allowing for future growth) of retained trees. However, the impact of putting services close to trees will be determined by the sensitivity and/or quality of the trees.