

Mr & Mrs Williams  
1 St Catherine's Court  
Baglan  
PORT TALBOT  
SA12 8AJ

10 July 2023

Our Reference: 15857 / 70434

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Dear Mr & Mrs Williams

### **RE: Beech Tree on Rear Garden Boundary.**

In accordance with our quotation 15857/70294 dated the 21<sup>st</sup> June 2023, during my site visit on 29<sup>th</sup> June 2023 I carried out a visual, ground level visual inspection of your Beech tree which is located on the west boundary of the rear garden.

### **Site description**

The detached property is located on a corner plot north of the road junction of St Catherine's Court and Church Road, Baglan. The property was constructed around 15 years ago and appears to be of a standard modern brick construction with a separate garage and rear conservatory extension. The Court was constructed within the grounds of the former Baglan Bay Hotel. You confirmed that the area in which the tree now stands was much more of a gentle bank to the east much of which was excavated and terraced to allow construction of the house and garden.

The tree is situated in an elevated position on the western boundary with an historic and substantial retaining wall to the west which is showing evidence of cracking and bulging immediately adjacent to the tree. A close board fence has been installed on top of the wall to provide private rear garden space to the property (Photograph 2).

The tree is the last one remaining of a line of trees along this west boundary which have all been lost over recent years, aerial photographs from around 2006 show a substantial tree belt. A Sycamore stump remains to the south of the Beech. The Sycamore was removed around 8 years ago and you showed me photographs of the stump substantially covered in fungal fruiting bodies of Honey fungus, mainly located on the north side.

As part of the construction and terracing works, a vertical cut was made just 2.5 metres from the base of the Beech and a 1.3 metre long retaining wall installed. The corner of the property is positioned at this reduced level and is 5.2 metres from the base of the tree, with the later conservatory addition 3.8 metres.

The area around the tree is covered in gravel and you stated that nothing appears to grow, with new, healthy plants dying within a few months of installation despite you providing suitable care (photograph 3).

### **Position and Risk Consideration**

The tree is located on the west boundary. The trunk leans to the west and the broad spreading crown

overhangs the property and garden, the neighbouring garden (in which the neighbours' children play), the road and footpath of Church Road and is within falling distance of gardens on the west side of Church Road.

You confirmed that Church Road is the main throughfare for Baglan and the main route to the Ysgoll Glnadd Baglan Primary School. You indicated that the road was fairly busy at most times of the day and in all weathers.

### Tree Condition and Observations

The tree is a mature Purple Beech (*Fagus sylvatica* 'pupurea'). It is approximately 15 metres in height with a broad spreading, domed crown extending 5-6 metres radius in the 4 compass point directions. The tree has a trunk diameter of 620mm measured at 1.5 metres above ground level.

The tree's Physiological Condition is fair but declining, as the upper crown is thin with a secondary crown forming 3-4 metres below the outer edge. The distance between leaves (internodal distance) is reduced and clumps at the branch ends have upturned growing points often associated with declining vitality and infection by *Necteria*, sp. which results in the death of small twigs (Photograph 4). Leaf size and colour remain good, but you confirmed that the tree is shedding a fairly continuous stream of small twigs and deadwood.

You confirmed that the crown has been reduced twice in the time you have owned the tree, work which has been carried out to high standard, but pruning wounds are slow to occlude (grow over). You also indicated that the tree has been producing large amounts of mast (seed) and has done for the last few years. Deadwood generation, slow wound closure and increased mast production all support that the tree has declining vitality.

The trunk leans gently to the west and contains a number of fully occluded old pruning wounds low down on the trunk. A larger and more recent pruning work slightly higher up is again showing evidence of slow wound closure and early stages of decay which does not appear significant to safety at this time. The uniform taper of the trunk starts to flair at around 1.2 metres and broadening towards the base (Photograph 5).

Root spread to the west will have always been restrained by the stone retaining wall, footpath and road which would provide unfavourable conditions for root development. It would therefore be reasonable to assume that the majority of the roots would have developed in the garden area of the former hotel. Root growth north and south would have been limited by group competition of adjacent trees. Although the tree would have been slightly smaller at the time of development, current guidance would indicate that a tree with a trunk diameter of 620mm would require a root protection area (RPA) of 7.44 metres radius or 173m<sup>2</sup> of undisturbed soil. Given the constraints of the wall, road and footpath, this RPA should have been fully within the soft landscape area of the site. Given that the retaining wall installed is only 2.5 metres from the tree at its closest point, extensive root damage is likely to have occurred at the time of construction.

Although there are larger buttress roots at the base of the tree these are not well defined, with reaction growth developing between the natural buttress roots (Photograph 6). An area of dead bark was located at ground level on the south side which, when removed, indicated a white fungal mycelium and soft, wet white rot which extends around 150mm. No fungal fruiting bodies were present but the type and position of decay would be consistent with the tree being colonised with Honey Fungus (*Armillaria*, sp.) (Photograph 7).

### Discussion and Conclusions

It is clear that the tree is of deteriorating condition and vitality. Continuous twig shedding, slow wound closure, reduced internodal distance, increased seed production and upturned growing points all support this.

The historic site constraints and close position of the retaining wall installed will have resulted in extensive root loss and damage, further reducing vitality and providing points for colonisation of wood destroying pathogens. The stump of a previously felled Sycamore has provided a food source for the colonisation and development of Honey Fungus. The photographs you showed me confirmed that this colonisation has already occurred to the stump.

Honey Fungus, which has the capacity to be actively parthenogenic (being able to enter a living tree through its own volition). It is a pathogen which causes a simultaneous white rot of the roots and lower trunk, it actively kills live tissue and results in reduced vitality and eventual death and/or windthrow of the tree.

As indicated above, the Beech has already been colonised in its south side at ground level with dead bark and initial stage of decay being present. Given the production of reaction wood between the buttress roots, it is likely that the decay is more advanced than seen at the time of the survey possibly occupying a larger proportion of the trunk's cross section at ground level.

The tree has already been reduced on two previous occasions which will have removed part of the energy producing leaf area. The crown is continuing to decline and Beech as a species are known generally not to tolerate crown reduction and wounding and has an inability to resist decay. Mature trees are even less tolerant and are known to decline rapidly once compromised.

Given the above, I consider the tree is in decline. It is not yet imminently dangerous but it is no longer a question of if the tree will be lost but rather when. Consideration could be given to reducing the tree once again by 3 -4 metres and this would retain the tree and the amenity it provides all be it in a smaller and more compact form. Such works will further reduce tree vitality, the tree's ability to resist decay and increase its rate of decline. Decay development will put the tree at greater risk of failure over the next 5-10 years and possibly increase the cost for its eventual removal. In addition, the tree will require regular survey to ensure it does not pose an unacceptable risk to highway users and it is likely to require additional maintenance works to remove dead and declining limbs.

Felling would be, initially, more expensive and would result in the loss of visual amenity. However, it would be a one off cost and will remove the ongoing liability associated with a mature and declining tree. It would also provide an opportunity to install a new tree/trees to reinstate the boundary feature; if correctly installed and maintained this would provide a sustainable, long term amenity in the local and wider landscape. New trees would be of a Honey Fungus resistant species which would be planted inside the site by at least 1.5 metres to avoid future damage to the boundary retaining wall.

On balance, although reduction is possible, it would increase the rate of decline and could potentially continue to increase risk and future costs. I believe that felling and replacement would be the most appropriate management option at this point. The initial cost will be higher and result in the immediate loss of the tree, but provide complete risk reduction including damage to the retaining wall and to users of the adjacent highway. New trees will provide a long term sustainable and developing amenity for decades to come and go some way to reinstate the historic boundary associated with the former hotel grounds.

## **Recommendation**

Fell tree to ground level. Install suitable replacement/s no closer than 1.5 metres from the boundary wall.

The tree should be removed within 12 months.

I trust this information is of assistance but please do not hesitate to contact me if you have any queries.

Yours sincerely

**Ken Sheppard, Senior Arboricultural Consultant**  
**MICFor, FArborA, Dip Arb (RFS), Tech Cert (ArborA), CUEW**

Enc. Photograph appendices.

Photograph Appendices: 1 St Catherines Court, Baglan.

Photograph 1. Site Location



Photograph 2. Boundary wall and Fence



Photograph 3. Raised gravel area around tree.



Photograph 4. Tree with declining crown condition (Viewed from north)



Photograph 5. Trunk with decaying pruning wound and slow wound closure.



Photograph 6. Buttress roots with reaction growth (North east side)



Photograph 7 Dead bark and basal decay on south side.

