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Mr L Ward
Hayward Architects
19 Station Road,
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Dear Mr Ward

Further to my inspection of the tree on the property at Wharf Farm, Shakerstone, owned by Mr W Naylor, I provide details of the Horse Chestnut situated very close to the existing building which is being considered for demolition and redevelopment. The table below provides details of this tree and I have also provided a plan showing the location of this, canopy extents and the calculated root protection area.

BS5837 Tree Schedule		
Key:	Age – Class	BS 5837 2012 : Cascade Chart for Quality Assessment/Retention Category
	YNG-MAT-Young Mature	A – High
	SM – Semi-mature	B – Moderate
	Mat – Mature	C – Low
	OM – Over mature	U – Unclassified
	Con – structural condition, health and overall vitality	Sub-categories: 1 = mainly arboricultural values 2 = mainly landscape values 3 = mainly cultural values.
RPA = Root protection area (equivalent to a circle with a radius 12 x the stem diameter for single stem trees and 10 x the basal diameter for trees with more than one stem arising below 1.5m above ground level).		

Tree No	Species	Ht (m)	Stem Diam mm@ 1.5m	Canopy Spread (m)	Height of Crown Clearance	Age Class	Con	Structural condition	BS 5837 Category	RPA Radius (m)
T1	Horse Chestnut <i>Aesculus hippocastenum</i>	12	740	N-5 S-3 E-6 W-5	2	M	F	Canopy is irregular and extends to the north east. Trimmed over the nearby roof on the eastern side. Crown still extends across roof. Crown severely trimmed away from telegraph pole on south side. dense with regenerative growth in the crown interior. Rust and leaf minor present throughout the crown. Rather sparse at the canopy extremities with some evidence of die back in new growth. Minor canker noted on the main trunk.	C2	8.8

The tree has been surveyed to BS5837:2012. It is a large mature tree of significant stature, positioned in a highly visible position along the road frontage.

Having inspected the tree carefully from ground level I have placed this into Category C2 for the following reasons

- a) There is some evidence of canker, albeit not advanced, on the main trunk as photographed below. This disease will weaken the entire tree as it progresses and is often the cause of death for many Horse Chestnut.
- b) The tree is showing significant signs of stress in the form of die back in fresh growth around the canopy extremities. This may be from the canker but is just as likely to be a combination of the rust / leaf minor infection, and the combined seasonal trimming that has taken place to remove limbs and branches from the telephone pole very close by.
- c) As a result of the above, I am not convinced this tree has a minimum of 20 years of useful life remaining. If retained, it would continue to require trimming to protect the telephone pole and avoid the crown coming into contact with the roof of the building which it overhangs.

This tree is in the Conservation Area and therefore no works can be carried out to this without the prior written approval of the Planning Authority. However, in my experience, communication engineering companies do not need to obtain permission to maintain telephone poles and communication infrastructure and in this instance, it has resulted in this individual tree being very badly trimmed in the past. I also note that in the drawing you supplied the tree diameter is stated as being 830mm. However, having measured this at 1.5magl from multiple angles the representative trunk diameter is 740mm. Photographs of the tree surveyed are provided below.

I understand that proposals are being considered to demolish the existing building and use the position to construct a new building on the same footprint. The demolition of the existing building will potentially impact this tree and the land around this where it will be rooting. I have taken this into consideration and have provided proposals below to address how the work could be carried out without significant impact on the tree if it is retained in this position.



View of tree from south east



View of tree and pole from south



View of tree from south west



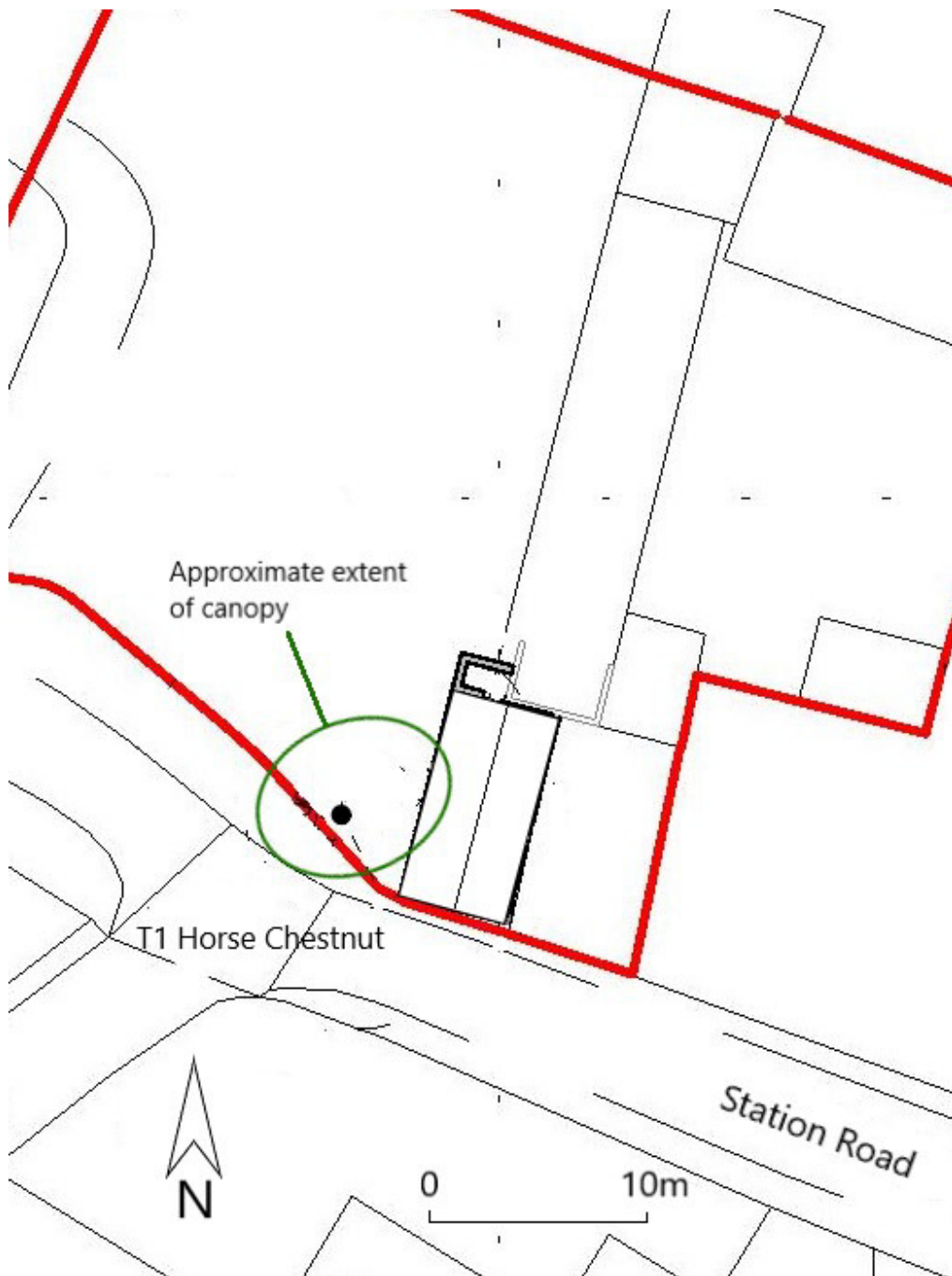
View of tree from north west



Severe trimming around telephone pole



Canker present on trunk



Tree Location and Canopy Extents plan

Recommendations

The proposed demolition of this building and its replacement with a new building will require works to be carried out within the canopy extents and root protection area of this tree.

Currently the crown extends across the existing roof at sufficient height, so that work using scaffolding for demolition and construction could be completed without the need for any trimming back or branch removal. In order to access the rear of the structure to erect scaffolding to work on the roof temporary ground protection will be required and tree protection fencing will also be needed as shown in the plan below, assuming this tree is retained.



RPA and Tree Protection Plan

Assuming the tree is retained the following measures will be required to protect it during demolition and construction:

- An area between the tree and the building will need to be accessible for scaffolding to be erected and pedestrian access. This area should be temporarily protected by laying a porous geotextile sheet over which 200mm of compressible material such as coarse bark mulch or chippings is laid. Over this $\frac{3}{4}$ inch plywood sheeting should be laid. This will provide a suitable temporary surface on which pedestrian access can be allowed and it is suitable for the erection of scaffolding.

- Tree protection fencing to BS5837:2012 should be erected to protect the remainder of the calculated RPA of this tree within the field area to the north and west of the root bole. This fencing should be put up immediately the temporary ground protection has been laid in place and before any materials or equipment are imported into the site. The fence must remain in place until all conversion works are completed.
- Removal of the existing foundations will require careful excavation to ensure that any existing roots in the soil to the west side of the existing building are not disturbed. This element of the work is likely to require supervision by an Arboricultural Consultant (assuming the existing tree is retained).

If the tree is retained, there will be pressure to reduce the crown as a result of risk from overhanging branches. This crown is already unbalanced and irregular due to the removal of large areas around the telephone pole. It would be reasonable to consider a more balanced reduction of the crown by around 2m on the eastern and northern sides which will remove the canopy overhanging the roof of the building and improve the balance and shape of this tree. Such work would have to be completed by a suitably qualified and professional arboricultural contractor and cannot be undertaken without the permission of the Planning Authority.

Alternatively, taking into consideration the condition and location of this tree and the likelihood that pruning will continue to take place in the future to ensure the telephone pole and wires attached to this are not impacted or compromised, there is an argument in favour of removing this tree completely and replacing it with a new tree. This could be conditioned as part of any planning approval granted for the demolition / construction being proposed. It would address concerns about impact on the telephone pole and falling branches and provide a longer-term solution to maintaining canopy cover in this location. If the tree is starting to decline due to disease, stress and past cutting back, as appears to be the case, then this decline may only accelerate.

A suitable new native tree such as Hornbeam *Carpinus betulus*, Oak *Quercus robur* or perhaps Small Leaved Lime *Tilia cordata* could be planted a little further to the west along the field edge where it will not compromise the telephone pole or be perceived as a risk to the building. If the tree is considered for removal and a replacement conditioned, this should be of extra heavy standard size with a trunk girth of 14-16cm and a height of between 3.5 and 4m to provide immediate impact in this area and it should be maintained under at least a five-year aftercare plan to ensure it successfully establishes.

The calculated RPA of the existing Horse Chestnut extends, in theory, under the footprint of the existing building. It is more likely that the building foundations will have redirected the roots to a significant extent to the north or restricted these. Provided the existing building foundations are not being excavated as part of the proposed works there is no risk any existing roots which may have penetrated under the footprint of the existing building.

Yours sincerely



Christopher Barker dipHort CEnv ACIEEM