

Technical Note 001

Report on false acacia tree

Background

A tree survey was undertaken to inform planning application reference ????. Consent was granted and construction works are underway.

A recent visit by the Council raised concerns in respect of the poor condition of a false acacia tree (number 33 as shown on the Tree Protection Plan).

An inspection of the tree was undertaken on the 22nd May 2024 by Jago Keen, MSc, Dip.Arb., MArborA, MICFor.

This note sets out the findings of that inspection and makes a recommendation to remove the tree based on its condition. It concurs with the opinion expressed by the Council earlier in the year.

The tree

The tree is a false acacia of circa 17m in height with an average crown radius of circa 5m. The stem measures 67cm diameter at 1.5m above ground level. The tree in relation to Lancaster Road can be seen in Figure 1 in the photographs at the end of this note.

The tree has a pronounced lean, biased over Lancaster Road, due to the past competition for light with the adjoining group of mostly beech trees.

The stem has several vertical 'furrows' in the stem tissue (see Figures 2, 3, 4 and 5). This species naturally produces such furrows but they can also indicate past death of bark and resultant internal decay. In this case there is a combination of both. The prior tree survey identified a vertical strip of decay, associated with a furrow, at circa 7m to 8m above ground level. This is still visible.

From ground level to circa 2.5m above ground level, on the north western side of the stem, is a further narrow furrow. Probing of the furrow revealed decay to circa 200mm depth, as can be seen in Figure 3. Several other furrows are noted in the main stem and I suspect decay is present in most.

The presence of decay weakens the structural integrity of the wood. It renders it more susceptible to breakage.

The weight of the tree is biased over the road due to past growth habits. I noted at my visit that there is some separation between the crown of this tree and the adjacent trees indicating that the stem is subsiding to the south east, in the direction of lean (see Figure 6). That movement does not appear to be at ground level so I suspect it is easing of the main stem structure that is resulting in the crown separation. Bark is being shed from one of the buttress sections of the lower stem that does indicate the tree is trying to lay down additional tissues in an attempt to strengthen the stem (see Figure 5).

The visible presence of decay and crown separation combine to indicate the structural integrity of the wood of this tree is materially weakened. It renders the stem of the tree liable to failure. That failure is to be expected but its timing is unpredictable.

Management considerations

Having identified that the tree is weakened and prone to collapse we need to consider what management options are available to reduce the chances of failure.

Given the location of the decayed, and weakened wood, and the open nature of the crown of this species I do not consider pruning of the tree to be a practical option to manage the problem. The pruning would need to be extensive leaving large pruning wounds that would take time to heal and are susceptible to further decay. The pruned tree would be disfigured, offering little visual amenity. Repeat pruning would be required to remove any regrowth to avoid that placing undue loading on the decayed stem.

Removal of the tree, whilst not ideal, is the other option. It overcomes the propensity for failure, avoids further management of a disfigured tree, and affords room for a replacement to be planted and develop to offer long term amenity.

On balance, in order to avoid the collapse of the tree, secure good quality trees on the site, and to conserve the tree cover of the local area I suggest the removal of the tree followed by replacement planting.

To add a gradient to tree height so that overly large trees on the road boundary are avoided I would suggest a medium height species at maturity. A tree such as hornbeam would be ideal as it is a native tree, is robust, is attractive and supports biodiversity. I would suggest it is planted at a stem size of 10-12cm girth in order that it can quickly establish.

Summary

Following concerns raised by the Council an inspection of the tree was undertaken.

Pockets of decay in the main stem were identified and the stem of the tree seems to be subsiding in the direction of its lean.

Retention of the tree, in its current condition, alongside the road is untenable and work needs to be undertaken to the tree to avoid the risk of harm from its failure.

Pruning of the tree is impractical and results in onerous maintenance in the future.

Removal of the tree, followed by replacement planting, is the most appropriate course of action to remove the hazard and secure long term tree cover in the area.

Jago Keen

22 May 2024

Photographs



Figure 1: Tree 33 (false acacia) seen from Lancaster Road.



Figure 2: Vertical pocket of decay in 'furrow' in main stem. One of several such features.

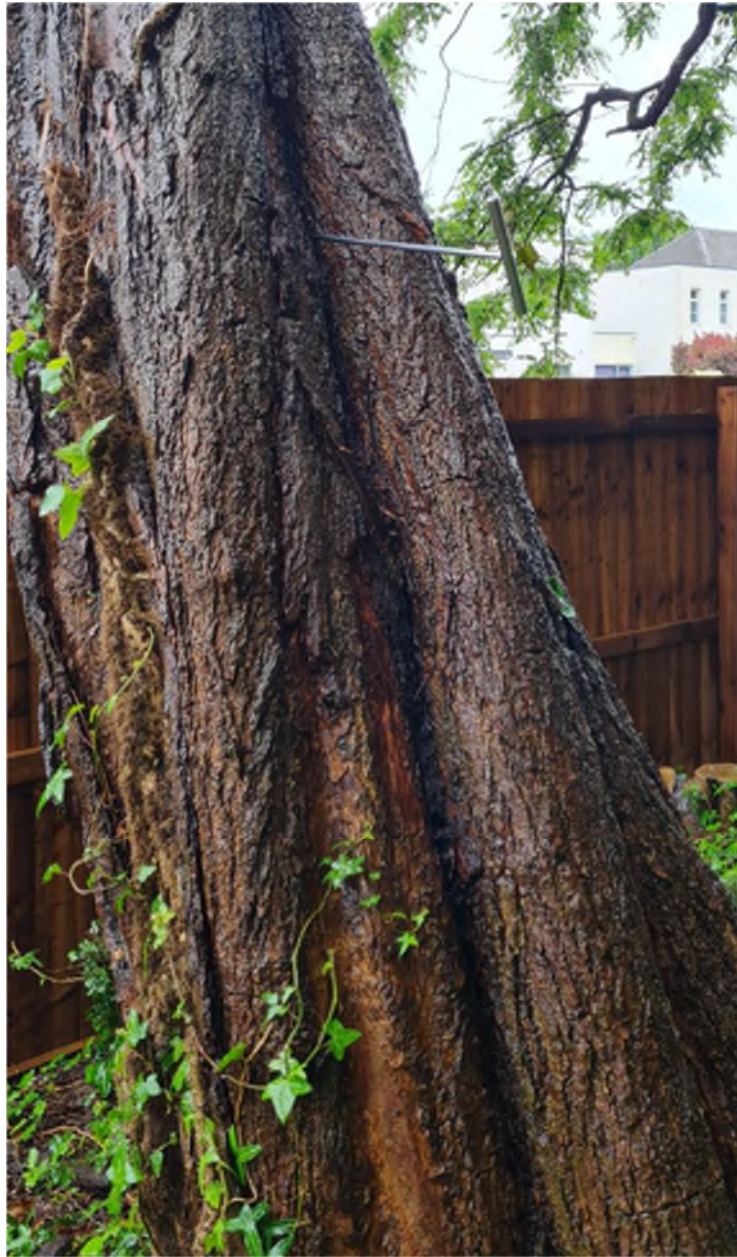


Figure 3: Furrow in lower stem with decay present. Steel probe, seen in upper section of image, is inserted to depth of circa 200mm.



Figure 4: Further 'furrow' at height on main stem. Decay likely at this point.



Figure 5: Further 'furrow' lower on main stem. No decay identified at this point. Paler section of bark on left hand side of stem indicates bark is being shed due to higher growth stresses as tree seeks to lay down more strengthening tissue.



Figure 6: Not easy to capture in a photograph, but it is evident on site that the crown of tree 33 is separating from the other trees indicating the tree is leaning more towards the road.