



3.0 Results of Inspection

3.1 General Site Description

- The two trees are located along the eastern boundary fence line of Old Orchard and Hollybank, which is c.16m to their east
- The trees are subject to a tree preservation order, 00/608/TPO, and are in a south-to-north arrangement
- Using the numbering system used by Chichester District Council's TPO, the southernmost tree is T1 and the next, T2
- Below the eastern crown spread of T1 is the garage of Hollybank which is approximately 4.5m away from the base of the tree, along with a small timber shed
- Directly below the western crown spread of T2 is a timber outbuilding on a concrete raft type foundation
- A grassed track that serves the rear of Budelyn, Greenbank and East View terminates in front of the timber outbuilding mentioned above and beneath the southern crown spread of T1
- Building materials and machinery, including piled earth, are located beneath the eastern crown spread of both trees in the grounds of Hollybank
- The ground levels within Hollybank, have been lowered to allow for the building of the property, the construction of the garage and the access path to the storage area c.20 years ago; exposed roots were noted jutting out of the exposed bank
- Two tree stumps were noted north of T2 (T3 and T4 in 00/608/TPO). T3 was removed following the failure of T4; an appraisal of why T4 failed is not part of this report

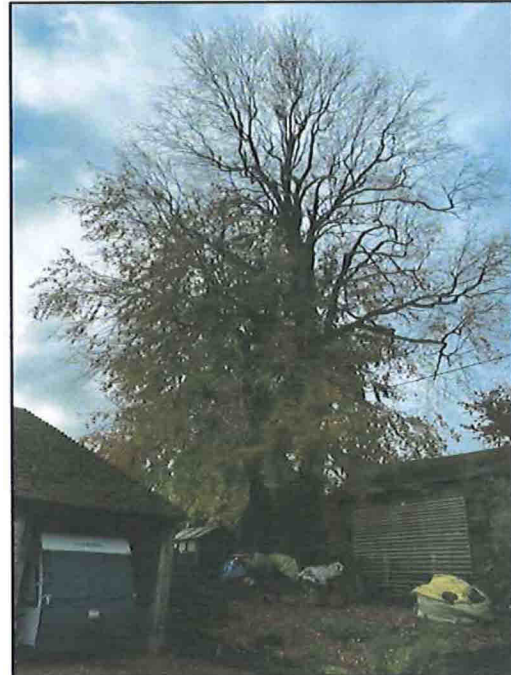


Fig.1 - looking from Old Orchard and Hollybank drive respectively
Note the timber outbuilding, shed and garage beneath the crown of both trees



3.2 Tree Species and Dimensions

No.	Species	Scientific Name	Stem dia.	H (m)	Crown Spread (m)				Age	Phys. Con.
					N	E	S	W		
T1	Common beech	<i>Fagus sylvatica</i>	75 Est.	22.0	3.0	6.5	9.0	7.5	M	FAIR

3.3 General Description

- Sections of the lower stem were obscured by thick holly and beech growth. The lower growth was pruned away to expose the western basal area
- A small split was noted on the western buttress roots along with a grey patch on the bark; when this area was assessed with the nylon headed mallet no change in tone was heard
- The remaining stem which was accessed between the thick holly and beech growth and when this area was assessed with the nylon headed mallet no change in tone was heard
- The main stem forks at c.4m to produce two primary stem sections in a northeast-to-southwest arrangement. The union formed looks occluded with no evidence of included bark¹ having formed
- The tree has been reduced previously at c.17.0 with the new growth forming the crown height and spread
- Stock netting has grown into the lower stem on the east side of the tree
- Deadwood was noted on the ground beneath the tree's crown



Fig.2 - western buttress root with 'split' and grey patch on the bark circled red
Note the dense holly and beech obscuring the lower stem area

¹ Included bark/unions - develops when two or more stems grow closely together causing weak, under supported branch angles. This results in a weakness due to the lack of a woody union and subsequently, any increase in lateral movement can result in the union failing



3.4 Tree Species and Dimensions

No.	Species	Scientific Name	Stem dia.	H (m)	Crown Spread (m)				Age	Phys. Con.
					N	E	S	W		
T2	Common beech	<i>Fagus sylvatica</i>	83	23.0	5.5	6.5	3.0	8.0	M	FAIR

3.5 General Description

- The concrete raft base and fabric of the timber outbuilding are within 18cm of the western side of the tree where a patch of moribund bark was noted forming between the west and northwest buttress roots. No change in tone was heard when this area was assessed with the nylon headed mallet
- As with T1, much of the lower stem was obscured with thick growth of holly and beech growth. On the areas it was possible to assess, the exposed stem did not yield any change in tone when assessed with the nylon headed mallet
- The stem forks at c.5.5m to form two primary stem sections in an east-to-west arrangement. The union formed is included on the north side of the stem with a large rib forming on the southern side
- The western primary stem section forks once again at c.7.5m to create two secondary stem sections in a southeast-to-northwest arrangement, the union of which is included on the northeast side with a rib forming on the southwest side
- Deadwood was noted on the ground beneath the tree's crown



Fig.2 - western buttress root and fabric of outbuilding 18cm apart, the moribund bark area is circled red

The two unions with ribs forming on the southern and southwestern side circled red



4.0 Summary of Results

T1 Common beech

- Basal decay can occur due to a number of reasons including stem wounds, root-to-root contact with another tree which has a pathogen and from the failure or damage of a root
- The lack of any change in tone when assessed with the nylon headed mallet suggests that the lower stem is free from defects close to the outer edge of the stem where they would normally be heard
- However, it was not possible to assess the entire stem due to the dense growth, nor was it possible to assess below ground level due to the scope of the inspection
- The split in the western buttress root is not deep and is limited to the bark layer only suggesting it has been caused by rapid growth which has caused a separation in the bark
- This is typical of the tree species and can readily occur on the older sections of the tree. However, in the event cracks or splits occur which extend into the wood structure, further analysis should be made as these could be due to a separation of the wood fibres
- Common beech trees are susceptible to a decay fungus called *Kretzschmaria deusta*, which starts off as a grey crust - see below



Fig.3 - library image of *Kretzschmaria deusta* fruiting body on a Horse chestnut tree circled red

- Principally affecting the lower stem and principal roots of the host tree, the fungus forms a soft rot in its early stage which eventually makes the wood brittle; in advanced stages, it can lead to catastrophic failure
 - Upon further investigation, the grey patch on the lower stem rubbed away suggesting it was more than likely a leaf mould that was forming on the bark rather than a fruiting body of *Kretzschmaria deusta*
 - The tree has been reduced previously, where the new growth has formed at the pruned ends
 - This new growth can be weakly attached as it has not formed as a true branch and can be prone to snapping
- To minimise this risk, the new growth can be reduced to the previous pruning points
 - Whilst performing the reduction, any deadwood greater than 25mm in diameter should be removed
 - This is by no means necessary at this time but should be considered for the continued management of the tree and as such I would suggest a timeframe of no later than two years from the reports date
 - If the new growth is allowed to become thicker in girth, any new pruning wound will leave large wounds which could become an entry point for pathogens



T2 Common beech

- The patch of moribund bark between the buttress roots on the northwestern side of the stem may be a precursor to a cavity forming; at the time of the assessment no decay fungi fruiting bodies were noted
- However, due to the process involved in laying the concrete raft for the outbuilding, damage to the rooting system may have occurred which may become an entry point of decay fungi and other pathogens²
- This also applies to the rooting system on the east side of the stem which will have been damaged by the lowering of the soilscape to facilitate the building of the garage for the neighbouring property
- Common beech trees are known for their predilection to produce included unions which can fail given the right situation. Such a situation would be when wind gusts cause an oscillation in the crown structure resulting in the unions separating
- To help reduce this risk, the tree should be reduced to its previous pruning points to establish a smaller tree with a smaller crown mass. The arborist undertaking the work should fully assess the unions for defects, reporting their findings back to me for comment if necessary
- Whilst performing the reduction, any deadwood greater than 25mm in diameter should be removed
- This is by no means necessary at this time but should be considered for the continued management of the tree and as such I would suggest a timeframe of no later than two years from the reports date
- If the new growth is allowed to become thicker in girth, any new pruning wound will leave large wounds which could become an entry point for pathogens

² Feeder roots inhabit the top 60cm of a soil where access to water and essential nutrients are readily available



5.0 Recommendations

- Implement the reduction of the new growth back to the previous pruning points to be undertaken no later than two years from the reports date
- Reassess in three years of the reports dates
- This time frame should be shortened in the event:
 - The tree's local environment changes significantly
 - Fruiting bodies emerge from anywhere on the tree
 - After extreme weather events such as:
 - Wind gusts in excess of Force 8 on the Beaufort Scale – see Appendix 3
 - After named extreme weather events
- If the tree is located within a conservation area or subject to a tree preservation order, a formal application to the local planning authority will be required and written consent obtained prior to any work is carried out

This concludes my report.

Signed:



Andrew Gale *Dip Arb L6 (ABC) M.Arbor.A*

Date: 5th December 2023

