

**SHREWSBURY TOWN COUNCIL
OPERATIONS COMMITTEE
3 SEPTEMBER 2025**

Officer: Helen Ball (Town Clerk)

QUARRY TREES

Purpose of Report

1. To update the Committee on the recent tree inspection of the Quarry Tree stock;
2. To note the proposed works to a number of trees in the Quarry;
3. To note recent press reports of casualties regarding tree failure on council owned land elsewhere;
4. To approve a programme of works to test for tree stability;
5. To agree the development of a Quarry Tree Management Plan

History of the Treestock in the Quarry

A special feature of the Quarry the rows of lime trees that line the various avenues within the park. Thomas Wright first planted avenues of hybrid limes in the Quarry in 1719. They had reached heights of over 40 metres by the early 1950s when they were felled on the orders of Percy Thrower. A falling branch had killed a young girl and so the trees were considered unsafe. It was felt at the time that the trees had originally been planted too close together. The felled trees were found to contain bee and wasp nests, large amounts of mistletoe and much dead wood. They were replaced with hybrid limes at much wider spacing. This wholesale removal was in the main park area with those along Victoria Avenue beyond Kingsland Bridge remaining. There are approximately 270 lime trees in the park.

Lime Trees

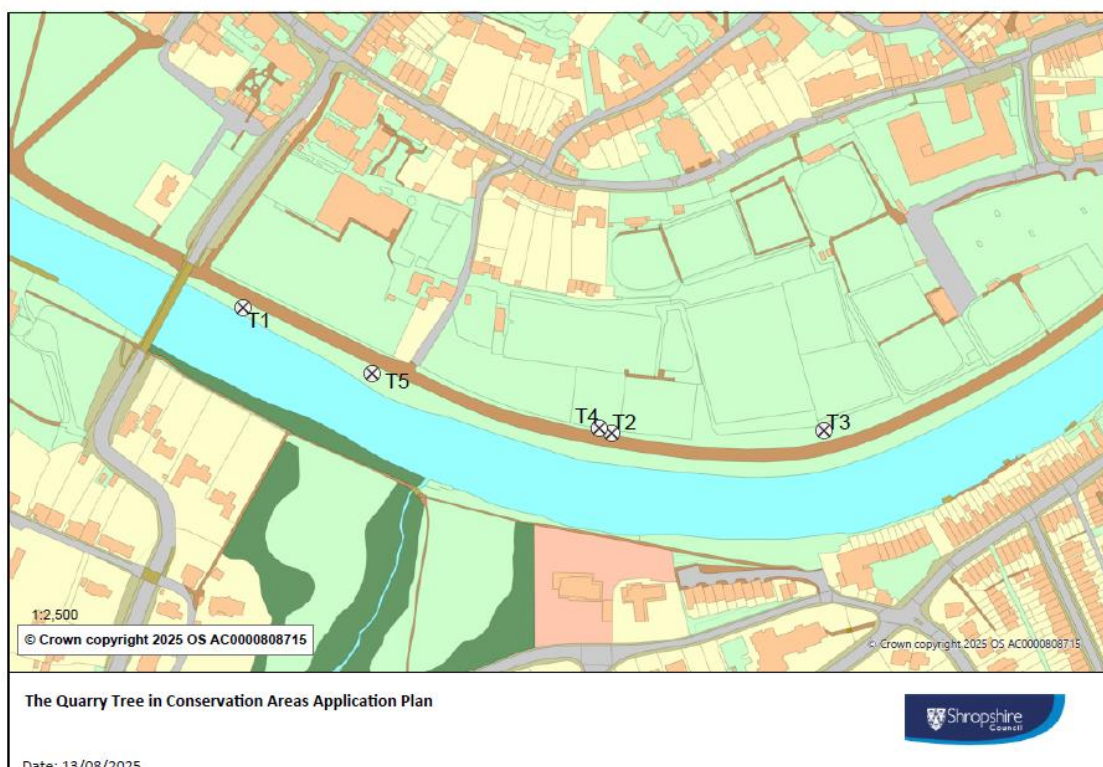
Tilia x europaea (Common Lime Tree) is widely grown as an ornamental tree. It was much planted to form avenues in 17th and early 18th century landscape planning. Life span of a Lime Tree is approximately 100 years at which they will have reached a height of around 40m. They best survive in a neutral to alkaline soil and prefer moist, well-drained soil, but can survive flooding though do not tolerate sitting in wet conditions for long periods; it is not highly drought tolerant.

Tree Inspection

In accordance with the Council's Tree Strategy, the Lime Trees in the Quarry are inspected annually and a programme of annual works looks at removing any dead wood and epicormic growth.

The most recent inspection has highlighted a number of trees with signs of *Kretzschmaria deusta*. One has already been removed along Gloucester Avenue as a matter of urgency and a further five (see map below) require removal along Victoria Avenue in the old tree avenue. An application for Conservation Area Consent to remove these trees has been submitted to the Planning Authority.

The report also identified a number of locations suffering from significant ground compaction. This was due not only to high footfall in the Quarry but also the fact that for best part of 6 months, the Victoria Avenue Lime Trees either sit in flood water or a raised water table.



Kretschmaria deusta

Commonly known as Brittle Cinder fungus, Kretschmaria Deusta is a fungal pathogen found in the UK, particularly affecting hardwood trees like beech, sycamore, and lime. It causes a type of decay called soft rot which attacks the roots and lower trunk, making the wood brittle and potentially leading to structural instability. The fungus is often found at the base of trees or on exposed roots.

Risk of Failure

As has been reported by the Operations Manager, this hot, dry summer has caused significant stress to the tree stock and whilst the Town Council hasn't seen any substantial limb or full tree loss, there have been a number of high-profile reports of injury and death due to falling trees (or branches) elsewhere in the country. Given the presence of Brittle Cinder Fungus in a significant number of trees in the Quarry a more structured approach to assessing the stability of trees is required.



Sonic Tomography

A PiCUS test, also known as PiCUS Sonic Tomography, is a non-destructive method used to assess the internal condition of trees, specifically for detecting decay or cavities. It involves sending sound waves through the tree trunk and measuring how quickly they travel, with faster speeds indicating sound wood and slower speeds indicating decay. The results are visualized as a tomogram, an image showing areas of decay or cavities.

Investigations have been made around the best options to undertake sonic tomography. Given the number of Lime Trees in the Quarry, commissioning an Arboriculturalist is cost prohibitive. PiCUS Testing equipment is available at around £23,000 which would mean that by the time a quarter of the trees are tested, it would prove a return on investment compared to an average professional rate of around £400 per tree. This equipment would prove beneficial for the Council's wider tree-stock as well as the contracted tree-work we undertake for Shropshire Council.

Air Spading

The recent tree survey identified that areas of the Quarry were in need of decompaction. This is done by air spading. An air spade is a specialised tool that uses a high-speed jet of compressed air to excavate soil. It's particularly useful in situations where traditional digging could damage tree roots, underground utilities, or other sensitive areas. By precisely directing the airflow, the air spade loosens and removes soil without causing damage, making it a valuable tool for arborists, landscapers, and utility companies. At the same time, it is also possible to add nutrients to the soil; it has also been recommended to try to inject biochar into the ground to nourish the soil. This is specialist work and contractors are being sought.

Quarry Tree Management Plan

The above reactive works has identified the need to develop a more proactive response to managing an aging treestock. With the newest of the Lime Trees in the Quarry having been installed some 75 years ago, many of the older trees are beyond their 100-year lifespan. This now requires a plan to develop a replacement programme over the next 20-30 years to ensure that all of the benefits (including the visual amenity value of) the Lime Trees and the avenue effect they create are maintained for future generations

RECOMMENDATIONS:

- (i) That the Report be noted;**
- (ii) That the urgent tree works be noted and approved;**
- (iii) That specialist PiCUS Testing Equipment be procured;**
- (iv) That specialist Air Spading work is commissioned;**
- (v) That a Quarry Tree Management Plan is developed**