

What if the tree isn't as sick as they say?

In a response to the groups trying to save the centenary elm on Parliament Hill, Carla Qualtrough, Minister of Public Services and Procurement, repeated the declining health story already pushed by her officials. But this majestic tree's health history is not so cut and dried. It deserves a second look. That's why a spring assessment of the tree's health is needed before removing it forever.

We have obtained from the NCC and from PSPC the four assessments made of the condition of the elm during 2018. They tell an interesting story.

In May 2018, the NCC had a professional assessment done of the trees on the east side of Centre Block. The reason given was that the need for access to the east side of the building during renovations could possibly lead to conflicts with the adjacent trees. The assessment covered 25 trees in all, including the centenary elm, and provided information on size, overall condition, structure, rooting area, whether native or introduced and likelihood of successful transplanting out of the way of construction.

The White Elm was measured at 87.3 cm in diameter at breast height. The following observations were made:

- Good condition
- Very mature
- Primary union at 8.5 m with four co-dominant stems
- Major lateral at 4.5m on southeast side – cabled twice
- Major wound at 3.5m on southwest side from past loss of lateral – laminated decay fungi and past woodpecker activity apparent
- Similar wound higher in crown on southwest side – with callus formation except near top of wound near torn stub
- Very good root collar – two binding roots present on west and southwest sides
- Minor deadwood throughout crown
- Very restricted rooting area
- Native

This assessment was done over a two day period in early May, before leaf out.

Another assessment was performed on September 1, commissioned by Public Services and Procurement Canada. The goal was to assess the condition of 5 trees on the east side of Centre Block, including the centenary elm, and specifically the feasibility of relocating them. Here are the observations made:

- Tree is in fair health (defined as moderate health with less than desirable form and structure)
- Early fall colouring with some signs of stress
- Good pedestal but tree is in a confined planting zone bordered by asphalt
- Tree has poor structure with 40 cm co-dominant stem beginning at 4m. Tree has two set of eyebolts at ½ height and second cable slack.
- It also has canker with decay at 4m (25 cm wide and 200 cm long).
- The crown is unbalanced to the south side, with some deadwood and stubs up to 10 cm.

The second report could comment on foliage, which is described as “early fall colouring with some signs of stress”. The second assessment also judged that the tree had “poor structure”, based on what is

called in this report “co-dominant stem beginning at 4 m”. In the first report, this is described as “two laterals at 3.5 m”, which did not detract from the tree being rated as being in good condition.

A further assessment was commissioned by PSPC, with a site visit on September 11. The goal was to evaluate the overall health of the centenary elm specifically, and to make recommendations regarding preserving, transplanting or removing the tree. This report contains mostly conclusions rather than observations, but the following can be discerned:

- The tree appears to be in declining health and was given a condition rating of 40%
- The tree’s critical root zone is limited by sidewalks
- A large cavity can be seen at the main union at approximately 5 m.
- The tree has compartmentalized this old wound but decay and rot can be seen from the ground.
- Further up, two support cables can be seen.
- The tree is showing numerous dead and dying branches.
- Leaf growth and vigour could be considered poor, with leaf scorch on remaining live branches.

Based on these observations, made 10 days after the site visit for the previous assessment, there seems to have been a precipitous decline in the condition of the tree and it is now adjudged to be in poor health.

A final professional opinion was sought by PSPC, fulfilled on very short notice and provided in a brief email report. It was based on a site visit on September 26. In full:

- The elm currently has less than 20% of the expected live crown of a healthy tree
- The few leaves present are less than half the normal size expected, are curling and show dead tissue along the leaf margins.

Based on these observations, the tree was considered unhealthy and “may not survive into the spring of 2019”. It was acknowledged that the reason for this decline could not be ascertained without further testing, although Dutch elm disease and phloem necrosis were cited as probable causes. The third report also opined on possible causes for the elm’s apparent decline, including poor root zone management, verticillium wilt, Dutch elm disease and environmental conditions such as drought.

So we have a story of a mature tree found to be in good condition in May 2018, in fair condition, mostly on a judgement made regarding its structure, on September 1, in poor condition on September 11 and unlikely to survive the winter on September 26. What could explain such a precipitous collapse in September? Only further testing would confirm if the tree is diseased. However, environmental conditions can be ascertained through weather records for September 2018.

According to the daily records from the Weather Office, there was a long dry spell and two heat waves in the first half of September 2018. From September 1 to September 5, daily highs were 26.9, 26.8, 32, 26 and 32 C, and from September 13 to September 17, they were 26.3, 28.4, 29.9, 29.6 and 29.5. From September 1 to September 21, there was only 11 mm of rain, scattered over 7 small rain events. This long dry period finally broke with the historic storm and tornados that swept through the region on

September 21, which also brought gusts of 78 kph from the southwest, causing extensive tree damage to many southwest exposed trees, such as the centenary elm.

http://climate.weather.gc.ca/climate_data/daily_data_e.html?StationID=49568&timeframe=2&StartYear=1840&EndYear=2019&Day=1&Year=2018&Month=9#,

Given the conflicting information concerning the condition of the tree, the dramatic unexplained changes observed in September 2018, the lack of testing or other inspection other than ground level visual observation and the fact that weather conditions in September 2018 might well indicate that heat and water stress were at the root of the tree's observed condition, it would seem appropriate to delay the removal until such time as 1) it is ascertained whether the tree has survived into spring 2019, and 2) further testing is done to determine if the tree is affected by any disease.

Greenspace Alliance of Canada's Capital

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