Talbot Mackenzie & Associates

Consulting Arborists

July 11, 2016

Unitech Construction Management Ltd.
Suite 400-1530 56th Street
Delta, BC Canada V4L 2A8

Attention: Derek Chichak

Re: 88.0 cm d.b.h. Horse Chestnut

Assignment: To conduct a health and risk assessment on an 88.0 cm d.b.h. Horse chestnut tree located at the North side of the property at 955 Hillside Avenue. Prepare a report on our findings giving recommendations for mitigating any associated risk. Review the proposed new building plans for the property and provide recommendations for mitigating any potential impacts the proposal may have on the tree, should we find it suitable to retain.

Methodology: We visually examined the above mentioned tree on June 16, 2016 and for the purpose of detecting internal decay or signs of fungal infection resistograph readings were taken at the soil line, at the root collar from all sides of the tree.

Observations: Based on a visual examination of the tree canopy, it appears to be in relatively good health with good leaf size, colour and density and average shoot elongation for the species. There is some deadwood and indications of end weighted limbs, and pieces of wood nailed to some of the scaffold limbs.
At the base of the tree in two places we found fruiting bodies of the fungal decay pathogen *Ganoderma*. Resistograph readings taken at the base of the tree encountered significant drops in resistance on three sides of the tree indicating the fungal infection has weakened the wood tissue quality in these areas. This type of decay is a white rot in which both lignin and cellulose are degraded together resulting in a great loss of strength at an early stage of infection and leading to transverse trunk fractures. A relatively large volume of decaying wood is required to support fruiting; therefore, when a basiocarp (fruiting body) develops on a living tree, extensive decay is often present.

Recommendations: In our opinion, given the existing fungal infection and the low readings encountered with the resistograph, this is not a tree that we would recommend retaining in a high target area as is proposed in the new construction. As the tree is already infected with a decay pathogen and we anticipate there may be additional impacts from the proposed construction activity, we feel it would be a better option to remove this tree to eliminate all associated risk and replant with a healthy new tree that can better adapt to the new growing conditions that are going to be introduced.

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Please do not hesitate to call us at 250-479-8733 should you have any further questions. Thank you.

Yours truly,
Talbot Mackenzie & Associates

Graham Mackenzie & Tom Talbot
ISA Certified, & Consulting Arborists
Encl. 1-page pictures

Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve the health and structure of individual trees or group of trees, or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an arborist to identify every flaw or condition that could result in failure nor can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

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Location of tree, taking resistograph readings from the lower trunk.

Fruiting bodies of the fungal decay pathogen *Ganoderma* found in two places on the lower trunk.

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