

SEPA Environmental Checklist
Mercer Island Center for the Arts

Attachment I
Tree Assessment

January 2017

November 16, 2016

Bruce Lorig
Director
Mercer Island Center for the Arts
P.O. Box 1702
Mercer Island WA 98040

RE: Tree Assessment within proposed MICA Project Limits at Mercerdale Park

Dear Bruce,

We are pleased to present the Tree Assessment findings covering the proposed location of the Mercer Island Center for the Arts (MICA). ISA-Certified Arborist and Tree Risk Assessor Kyle Braun preformed a Level 1 assessment of all trees located within the proposed MICA project limits (Figure 1) on the northwest corner of Mercerdale Park on Mercer Island, Washington. The Watershed Company assessed the potential tree impacts in light of the proposed development and construction that will take place based on plans provided to The Watershed Company on October 13, 2016 from Magnusson Klemencic Associates.

Methods

A site visit was made on October 17, 2016 to assess the subject area and a basic Level 1 visual assessment was performed according to International Society of Arboriculture (ISA) standards. This assessment evaluated current tree forms, overall vigor of subject trees, proximity of trees to the proposed development and extent of impacts within the critical root zones of the trees. Photographs of the general study area and tree health are included at the end of this letter.

Local Regulations

Trees in Mercer Island are regulated under the Mercer Island City Code (MICC) Unified Land Development Code Chapter 19.10, Trees. In addition, activities within the standard buffer of the on-site wetland are regulated by MICC 19.07. The Mercerdale Park parcel is zoned Public Institution (P).

Overall Tree Evaluation

Mercerdale Park is on the north end of Mercer Island, south of the downtown area. The MICA lease area is located north of the Mercerdale Skate Park (Figure 1) in Township 24N, Range 04E, Section 12. Developed areas are present north and northeast of the project area. A forested hillside with trails is located to the west, and a maintained park lawn area is present to the east. A wetland is located to the south and west of the proposed MICA facility and there are also numerous informal trails running through various portions of the project area.

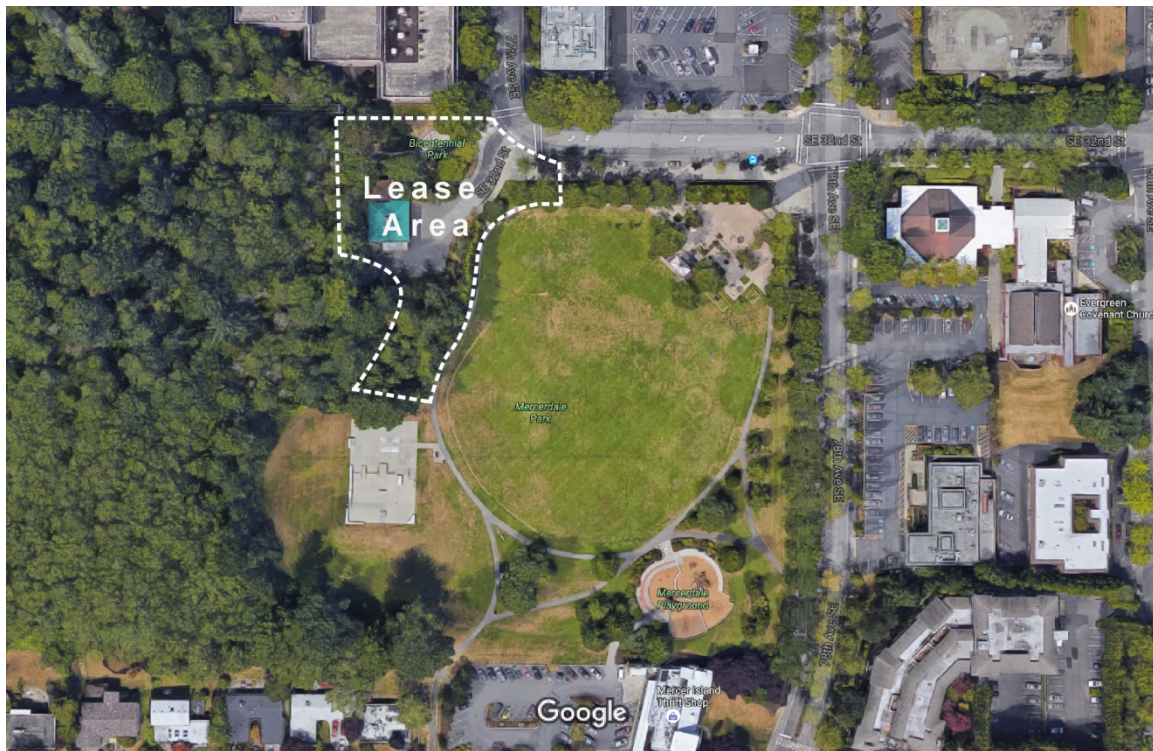


Figure 1 -- MICA lease area provided by AMS Planning and Research.

The lease area contains a paved parking lot and an abandoned recycling building accessed from SE 32nd Street. On the day of the site visit, approximately 130 trees were assessed, many of which are located within the standard (50-foot) wetland buffer. The tree species observed consisted of a majority of deciduous, “weedy” species as defined in MICC 19.10.000, such as red alder (*Alnus rubra*), black cottonwood (*Populus trichocarpa*), and bitter cherry (*Prunus emarginata*). There are approximately nine western red cedars (*Thuja plicata*) with an average diameter at breast height (DBH) of 6 inches, all of which are dead or in severe condition. There are also approximately 18 Douglas-firs (*Pseudotsuga menziesii*) with an average DBH of 7 inches, most of which are dead or in severe condition (Figure 2-8). This is uncharacteristic for trees of this age which suggests there are other abiotic or biotic issues that are causing these trees to die. It is suspected that the lack of rainfall in the Puget Sound region over the last couple of years has

resulted in a significant amount of drought stress on many of the trees in the region. This has caused many of the Douglas-firs (*Pseudotsuga menziesii*) and western red cedar (*Thuja plicata*) in the region to become unusually susceptible to disease and pests.

There are also many newly planted young trees throughout the project area (Figure 5), but many of the young trees are also dead or in severe condition. The suspected cause of the poor health of the young trees is also lack of sufficient water in the summer and fall, making them more susceptible to other biotic issues.

Located on the west side of the large, central lawn is a hedgerow consisting of 15 Leyland Cypress (*Cupressus x leylandii*). These trees are approximately 10-15 years old and have been consistently hedged since their installation (Figure 2). These trees have very little habitat function and are also in poor health. They were also planted very close together to serve as screening for the recycling center; this has resulted in die-off of many of the inside branches. If these trees were to be removed it would result in no loss of function to the overall forest health.

The proposed MICA site plan calls for the removal of 54 conifers and 58 deciduous trees. The deciduous population being removed consists mostly of “weedy” trees such as alders (*Alnus rubra*) and cottonwoods (*Populus trichocarpa*), including many from within the standard wetland buffer. The coniferous population being removed consists of western red cedars (*Thuja plicata*) and Douglas-firs (*Pseudotsuga menziesii*), nearly all of which are dead or in severe condition. The proposed mitigation plan, prepared by The Watershed Company, specifies 74 trees to be planted within the wetland buffer. This includes 60 conifers and 14 deciduous trees, which would meet replacement requirements defined in MICC 19.10.060. This includes full replacement of all conifers to be removed and partial replacement of the “weedy” deciduous species to be removed. The plan also specifies soil amendments designed to improve the health of both the proposed new trees and remaining trees on the site.

Conclusions

Overall health of the trees within the project area is very poor. The cause of death and poor health conditions of these trees is suspected to be drought stress and lack of watering which is consistent with these species around the region. The majority of the conifers in the project area are dead or in severe condition, therefore removal and reuse of the logs for habitat structures within the reduced wetland buffer would be a more desirable method than attempting to retain any of these trees.

After review of the proposed project extents, grading limits, proposed drainage, and current site functions, it is concluded that the trees proposed for removal are either dead or in poor health and provide little function to the park, the wetland and wetland buffer.

Implementation of the mitigation plan will eventually result in a higher functioning forest compared to the current condition.

Limitations

The findings of this report are based on the best available science and are limited to the scope, budget and site conditions at the time of the assessment. Although the information in this letter is based on sound methodology, internal structural flaws (such as cracking or root rot) or other conditions that are not visible cannot be detected with this limited basic visual screening. Trees are inherently unpredictable. Even vigorous and healthy trees can fail due to high winds, heavy snow, ice storms, or rain.

This report is based on the current observable conditions and may not represent future conditions of the trees. Any change in site condition, including clearing and grading, will alter the condition of remaining trees in a way that is not predictable. Remaining trees should be monitored for signs of stress, pathogens and structural defects after clearing and MICA construction by the project arborist.

The conclusions contained within this report have been made for permitting purposes only. Tree assessment related to park visitor safety and safeguarding structures or other targets must be done separately and after The Mercer Island Center for the Arts has been completed.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kyle Braun', with a long horizontal line extending to the right.

Kyle Braun
ISA Certified Arborist®/ Tree Risk Assessor



Figure 2 – Dead Douglas-firs (*Pseudotsuga menziesii*) located near the former recycling center and Leyland Cypress (*Cupressus x leylandii*) hedge located behind the Douglas-firs.



Figure 3 – Dead conifers located near hedge row and former recycling center.



Figure 4 – Dead Douglas-firs (*Pseudotsuga menziesii*) located in project area.



Figure 5 – Dead young western red cedars (*Thuja plicata*).



Figure 6 & 7 – Dead western red cedar (*Thuja plicata*) and Douglas-fir (*Pseudotsuga menziesii*).



Figure 8 – Dead conifers located near former recycling center.