City of Maple Ridge Enhancement & Landscape Standards for Habitat Restoration Areas

Habitat Restoration is subject to the parameters detailed in the Enhancement and Maintenance Agreement for the Development Permit (the Agreement) and its Habitat Restoration Plan prepared by a Qualified Environmental Professional (QEP). The native plant species selected for the protected riparian area must be conducive to the local environment, and will be placed to maintain stability of the soil substrate, provide a tiered canopy structure, provide shading and food and nutrient source as well as increase the plant diversity of the area. The Restoration Plan will comply with the following requirements:

- All plant materials, site treatments, soils, labour, and plant installation shall be in accordance with current BC Landscape Nursery Association standards.
- Restoration Plans shall include a program for removal of invasive vegetative species and replacement with native vegetative species.
- The contractor shall provide no less than three to five years of plant maintenance, as determined by the City in the Agreement. An estimate of capital costs and maintenance costs must be submitted to the City as part of the Cost Estimate. A refundable security deposit for 125% of the cost estimate shall be submitted to the City before issuance of a Permit.
- The QEP must inspect, approve, and submit a final letter of completion to the City before return of the security deposit.
- Tree survivorship shall equal 100% and shrub survivorship shall equal at least 80%.
- All debris and / or excess materials from landscape operations shall be collected and disposed of in accordance with all regulatory requirements.

Diversity and Quality of Planting Plans

- All materials, site treatments, labour and plant installation shall be conducted in accordance with the current Canadian Landscape Standards.
- Use a diversity of species, horizontal and vertical structure, sizes, and age.
- Choose plants whose needs are met closely by the conditions of the site. Use native plants on the site as indicator species.
- Preserve existing native trees and plants, especially dominant plants.
- Riparian plantings should be based on a minimum 1 plant per 1.5 square metre density.
- Proposed plant species for planting should reflect the existing structure and plant species of nearby and adjacent undisturbed habitats.

Grading, Soil and Surface Treatments

- **Site stability**. Steep slopes greater than 15% or floodplain areas will require professional consultation. For sites that require geotechnical or hydrological consultants, the professional engineers of record must be consulted to ensure surface treatments will not compromise the integrity of the site.
- **Grading**. Water must flow away from existing or potential footings and foundations and must respect neighboring properties.
- **Drainage and Soil Texture.** For drainage purposes, a minimum of four to six inches of sandy loam soils should be placed on exposed, disturbed, or compacted areas to allow for adequate drainage, especially where existing soils on site are compacted and consist mostly of clays. Clay or compacted soils shall be dry and tilled or scarified before the sandy loam layer is placed on top.
- **Topsoil.** If the native topsoil is no longer on the site, a minimum six to ten inches of appropriate organic soil (topsoil) shall be placed above the sandy loam layer to support re-planting and slope stabilization.
- Use appropriate types and volumes of topsoil to suit the natural conditions of the site.
- Install plants into the native topsoil of the area whenever possible.
- No placement or storage of soils, clay, sand, gravel, concrete or any non-native material within the setback area
- No Sediment is allowed to enter the adjacent channel.
- Complete works within the setback by hand where possible. No track machinery or long term compaction is allowed in the riparian area or designated infiltration areas.
- Retain and protect organic soils, mature healthy trees, and native vegetation currently located on-site.
- Use appropriate erosion and sediment controls. All exposed soils must include appropriate surface treatments.
- Stockpile excavated good quality top soil material in a safe location on the same property where it will not impact any sensitive area. Use these top soils to ensure a healthy soil base and proper soil surface treatment.

Plant Condition

- The botanical name should be used when ordering stock to ensure the desired native species is being purchased. Each specimen should be tagged with the botanical name and the tag should be removed after planting and maintenance periods expire.
- Tree stock should be a minimum of 1.2 m in height when planted.
- Shrubs and ground covers shall be a minimum one gallon pot size.
- The root system of nursery stock shall be strong, fibrous, free of disease, insects, defects, girdling, or injuries and shall be sufficiently developed to guarantee successful transplanting.
- All plant material shall be of good health and vigor with no visible signs of disease, insect pests, damage or other objectionable disfigurements.

Plant Installation

- Installation shall comply with Canadian Landscape Standards, latest edition.
- Take necessary precautions to protect the plant material from severe weather conditions during transportation and planting.
- Plant during the fall or the spring as dictated by weather conditions. Planting in frozen ground or with a frozen root ball is not acceptable. Planting will not be permitted during extremely hot, dry weather, or when rain has accumulated in the tree pit
- Removal of invasive plant species (e.g. Himalayan blackberry, Japanese knotweed, Scotch broom, etc.) shall be required before planting of native plants.

Plant Maintenance

The Developer is responsible for costs associated with hiring a qualified professional consultant to maintain all trees and shrubs in a healthy condition for a three to five year period as determined by the Enhancement and Maintenance Agreement. The maintenance period shall begin upon final completion of the planting works, and Final Inspection Report prepared by the QEP and approved by the City.

Maintenance work shall include but not be limited to:
• Watering
• Removal of invasive vegetative species
• Pruning where necessary
• Repair or replacement of vandalized trees or hazard trees within striking distance of structures
• Use natural means of fertilizing, weed and predator control instead of synthetic chemicals.
• Removal of tree staking and tags at the end of the maintenance period

Replacements

1. During the maintenance period, the Developer/Land Owner shall replace all trees that die, are damaged or have failed to grow satisfactorily as determined by the QEP Technician.
2. All replacements shall be the same species, variety, and size as the original planting plan; unless advised otherwise by the QEP, and approved by the City.
3. The maintenance period will be extended to cover Replacement trees for a period of one year.

Reference Resources

Canadian Landscape Standards, 2020 –

https://bclna.com/bclna-resource/canadian-landscape-standards/

Native Plant Society of British Columbia https://npsbc.wordpress.com/native-plant-gardening/

Land Development Guidelines for the Protection of Aquatic Habitat

https://stewardshipcentrebc.ca/portfolio/land-development-guidelines/

Department of Fisheries and Oceans website for riparian re-vegetation:

https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/315523.pdf

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