GUIDELINES FOR ENVIRONMENTAL ASSESSMENTS (EA) AND ENVIRONMENTAL IMPACT ASSESSMENTS (EIA)

Environmental Assessments

An Environmental Assessment (EA) is initially required and it includes a baseline inventory or assessment of existing natural conditions. It is required to help determine the basic developable and protected areas, to determine how to best work with the natural landscape, and it identifies opportunities for enhancement & restoration of the ESA areas. The studies and detail required will depend on the complexity of the site, the sensitivity of the habitat, and type/scale of the proposed development occurring. The Environmental Impact Assessment EIA helps to identify any additional protection, mitigation, compensation, and coordination required for an integrated environmental and development layout proposal to move ahead.

The EA and EIA must be prepared by a Qualified Environmental Professional (QEP), who can demonstrate they have suitable education, experience, accreditation and knowledge relevant to the particular matter. The QEP may be reasonably relied on to provide advice within their area of expertise, and who, in BC is registered with their appropriate professional organization, and acting under that association's Code of Ethics and subject to disciplinary action by that association. They are responsible for coordinating with other professionals on site.

An initial EA will include a report with a bio-physical inventory and plan(s) showing the location of the following:

1. **Baseline Bio-Physical Mapping & Assessment For Water Features & Habitat**. Identify the location, characteristics, and protection status of Stream Protection Regulation (SPR) setbacks around waterbodies including ditches, ponds, and wetlands and their current condition based on field verification during an appropriate time of year to verify high water levels, local drainage concerns, and fish presence/absence. Verification of wetland features will require a wetland specialist familiar with contemporary Provincial wetland definitions and requirements. Sharing of background info and consultation with municipal environmental staff is recommended early on in the process.

2. The location of the active flood plain, top of bank or top of ravine banks along with the location of any watercourses, waterbodies, wetlands, ditches on site or immediately off site within 30 metres of the site must be included in the assessment. It must include any existing or proposed trail corridors, structures, or disturbed areas including invasive plant species within 30 metres of the SPEA areas from top of bank.

3. **Wildlife Habitat**. It must include an assessment for any high probability SARA habitat, rapid assessment for sightings of SARA species, raptor nests or bird nesting activity, wildlife trees, wildlife nesting activity or evidence of wildlife movement within 30 metres of the watercourse or water features from top of bank. Consideration for neighbouring habitat connections, wildlife movement corridors, and recommended mitigation buffers for endangered species or significant habitat reservoir/movement areas is required;

4. **Habitat Balance Compensation Plan** for any proposed or potential encroachment into setback areas, the biological justification for the encroachment and compensation must be identified with 2:1 ratio in favour of clear net habitat gains from a quantitative and qualitative perspective on site where possible. A detailed RAR assessment is required where setback variances are proposed within 15 metres of any water body. A copy of this assessment and submission to the RAR branch and WSA branch for review is also required.

5. Approval of setback variances must be provided by the City's Environment Section which is not always guaranteed.

6. **Hillside Management Review**. For sites with slopes over 15%, it must include integration of the geotechnical setback recommendations in addition to a review of how the natural form and character of hillside areas can remain, especially for crest of slopes. Slopes 25% or greater are not considered to be developable by the City of Maple Ridge for any new parcels, lots, or significant disturbance

7. The hillside assessment must include an assessment and verification of any slopes over 25% This assessment must also include the location of any rock outcroppings, ridgelines, bluffs, and cliffs to determine how these features will be protected. It must address how the development is going to meet OCP Hillside Mgmt. Policies and NFDP Guideline objectives. Identify potential areas where the proposed development is going to require bio-engineering & landscaping treatments to avoid or minimize impacts associated with cutting, grading, or alteration of natural slopes >15% up to the 25% slopes.

8. **Tree & Vegetation Mgmt. Plan**. A description of the type, size, and condition of vegetation onsite is required along with any significant sized trees over 50% identified on site within the developable portions of the site. Identification of potential tree protection and replacement areas on the developable portion of the site must be identified early on in the process in accordance with the Tree Bylaw. Based on the Tree Bylaw, protection and appropriate mitigation zones around edges of significant sized trees is required within 5-10 metres of an adjacent property boundary, or where clusters are identified immediately adjacent to an ESA boundary, and/or Park boundary.

9. **Enhancement and/or Restoration Report.** Identify opportunities for improvement within protected watercourse or steep slope setback areas. This includes removal of debris, structures within SPEA areas, contaminated waste, habitat complexing, management of sparsely vegetated or disturbed areas, or areas with an abundance of invasive vegetative species is required. Additional recommendations for habitat enhancement opportunities including habitat complexing and planting for existing native species and potential species at risk and protected species is also required. A cost estimate for the works must be included, along with a security for the estimated works and maintenance period;

Environmental Impact Assessments

An Environmental Impact Assessment (EIA) is required once the development layout has been proposed. Final requirements or detail depends on the complexity of the site, the size of the proposed development, and/or the proximity of the site to protected or environmentally sensitive areas. An EIA will require all of the information outlined for the EA, plus additional detailed technical assessments to address additional impacts and recommendations for specific issues. An EIA is intended to address potential impacts and mitigation once the developable area has been established. Prior to final rezoning or subdivision being approved, the following information may be required:

1. **A Coordinated and Integrated approach** amongst the qualified professional is required on developments whereby the development must fit and work with the natural landscape to ensure there is an overall net environmental gain. Consultants of record must consider potential impacts onsite and surrounding properties, with consideration for overall protection, health, and long term functionality of ESA areas, features, and objectives;

2. **A Detailed Habitat Balance Assessment** is required where ESA setback reductions or encroachment is being proposed by the applicant in and around water features, steep slopes over 25%, protected tree areas, and any other areas/features that are protected by legislation or regulations. A habitat balance report is going to be required along with a detailed RAR assessment where variances to SPR setbacks beyond 15 metres from top of bank or top of ravine bank is required. This must be forwarded onto both the Senior Environmental Agencies as well as the City for approval.

The Habitat Balance Assessment must include the following:

i. **Habitat Balance Calculations** prepared by a QEP for proposed setback reductions. The justification should include both a quantitative and qualitative assessment of potential negative impacts from the proposed setback reductions, along with a description of proposed biological improvements in terms of habitat gains, in-stream improvements, riparian habitat management objectives, and low impact development mitigation being proposed on site to offset impacts. Proposed setback reductions should respect SPR setback methods. The final compensation measures must demonstrate a clear net benefit to the overall natural environment and aquatic ecosystems.

ii. **Ecological Justification/Rationale** The reports must include an explanation of how and where compensation can take place on site or in the near vicinity of the proposed impacts. With respect to the justification of habitat losses, the report must include how and where:

a) A best effort has been demonstrated to avoid negative impacts or reductions to setbacks;
b) the development design has included a best level of effort around ESA boundaries that exceeds normal requirements for low impact development mitigation on site with respect to tree retention and replacement, landscape design, enhancement works, servicing & drainage designs, and environmental regulatory measures;
c) appropriate compensation opportunities are available on site or off site that will provide a clear net benefit at 2:1 in favour of quantitative and qualitative gains to the natural environment

10. **Coordination and Integration**. Consideration for various municipal regulations, disciplines, and professionals on site and off site. This includes coordination and integration with the following information and professionals:

- Tree protection and management plan as per Tree Bylaw requirements;
- Natural hazard protection and mitigation including geotechnical, wildfire, blowdown, flooding;
- On site 3 tier stormwater plans and groundwater mgmt.;
- Senior agency requirements including Approvals and Authorizations;
- On Site Landscape design plans;
- Trail networks and integration with public parks and green spaces ;
- Legal agreements – surveys, R/Cs, dedication, enhancement agreements
- Environmental Monitoring and maintenance supervision.

11. **Phasing and timing** Phased clearing, adaptive measures, & timing of construction works for development works to minimize potential negative impacts. This includes recommendations for retention of vegetation, trees, and native soils where possible, and protection mitigation for protected areas/features during construction, erosion sediment control measures, on site 3 tier drainage for longer term construction projects, and mitigation of impacts during critical bird nesting periods;

12. **Temporary Protection Measures**. The locations of where temporary protective fencing is to be placed and supervised monitoring of construction works. Fencing is required for protected or non-disturbance areas and features. Fencing and conservation covenants are to be applied for protected areas or non-disturbance areas including watercourse setbacks, tree setbacks, geotechnical covenanted areas and steep slopes >25%. These areas must be fenced with a continuous temporary barrier not less than 1.5 m in height, to be replaced by permanent fencing, such as post and rail fencing, that has been approved by the City.