



9.6 ENVIRONMENTALLY SENSITIVE AREA GUIDELINES

The following guidelines apply to all Environmentally Sensitive Areas as shown on Attachment 3 of this Bylaw in order to protect the natural environment.

9.6.1 ALL NATURAL AREAS

- a) As far as is practicable, there should be no net loss of natural areas as development occurs. Buildings and structures should be located on portions of the site that are not environmentally sensitive to development;
- b) Wherever possible, large tracts of wildlife habitat or long continuous corridors should be preserved in order to facilitate movement of wildlife from place to place. Such areas may also serve as trails or drainage canals;
- c) Potentially polluting activities should be set back and buffered from natural areas. Soil should be protected from pollution or spills, including runoff from pavement;
- d) Development should not unduly increase storm water runoff and should not alter the natural drainage pattern of adjacent properties. Design and construction practices should minimize erosion and sedimentation in stormwater runoff;
- e) Where it is not practicable to preserve all natural features of a site as development occurs, the developer may compensate by replanting or dedicating and restoring a similar area nearby;
- f) Wherever possible, landscape plans should enhance, expand or create wildlife habitat such as ponds, wetlands, native aquatic and terrestrial plants, and hedgerows. Traditional Richmond peat bog plants are recommended. Refer to *Caring For Wildlife at Home by Naturescape BC* (1995), and the City of Richmond's "*Criteria for the Protection of Environmentally Sensitive Areas*".

9.6.1.A Intertidal Areas (Littoral Zone)

- a) All intertidal areas shall be preserved, except in accordance with the conditions of the permit;
- b) Works shall be constructed, where required, to preserve and enhance the shoreline by:
 - Providing safe, durable access such that people are afforded an unobstructed view of the waterfront wherever possible;



- Retaining mature vegetation, including existing large trees, shrubs, and aquatic vegetation;
 - Replanting disturbed areas with native vegetation;
- c) Where development over the water is necessary, land fill shall be avoided. The preferred method of development over the water is on pilings or floating structures;
- d) No alterations should be made to the intertidal area without appropriate environmental studies and implementation of mitigation measures;
- e) Conformance with these guidelines does not exempt applicants from meeting requirements of other agencies, such as those participating in the Fraser River Estuary Management Program (FREMP).

9.6.1.B Foreshores

- a) Foreshore developments should dedicate or preserve and maintain a natural, vegetated buffer strip within the first 30m (98.4 ft.) above the high-water mark of the Fraser River, except where access is essential for water transportation or public use. The width of the buffer may be averaged to preserve significant stands of existing trees;
- b) Potentially polluting activities shall maintain a minimum 30m (98.4 ft.) setback from the high water mark, except in accordance with the conditions of the permit;
- c) All construction activity outside the crest of Richmond's perimeter dyke is subject to review under the Fraser River Estuary Management Program (FREMP);
- d) Developments adjacent to canals or sloughs located in Environmentally Sensitive Areas shall dedicate or preserve and maintain a natural, vegetated buffer strip within the first 15.2m (50 ft.) above the high-water mark of the slough. The areas within that high-water mark buffer shall remain free of development, except in accordance with the conditions of the permit. Works shall be constructed, wherever required, to preserve and enhance the banks of the slough;
- e) The West Dyke canal between Francis Road and Blundell Road is exempted from the above rule and, in that case, the buffer areas shall be within 6m (19.7 ft.) of the natural boundary of the canal;
- f) In all cases, the width of the buffer may be averaged to preserve significant natural features;



- g) Public access to the waterfront for the purpose of recreation or education should be designed into each foreshore development in a manner that is consistent with the natural values of the site;
- h) Water quality and natural systems should be protected by leaving stream banks intact and by not altering natural slopes and existing vegetation.

9.6.1.C Upland Natural Areas

- a) Developments should dedicate or preserve a natural vegetated strip 6m (19.7 ft.) wide immediately adjacent to existing natural environmental features;
- b) Applicants for development should refer to the current edition of "*Criteria for the Protection of Environmentally Sensitive Areas*" for further details.

9.6.2 VEGETATION SURVEY GUIDELINES

- a) All applicants for development permits involving Environmentally Sensitive Areas (ESA) should submit a vegetation survey with the application. The vegetation survey should include the following:
 - The location, diameter (dbh), crown elevation, base elevation, and species of all trees greater than 15.2cm (6 in.) in diameter at breast height above the ground (dbh) in and adjacent to the designated ESA. Adjacent trees includes trees within 6m (19.7 ft.) of the designated ESA. Multistemmed or clumped trees should also be included where the dbh of the two largest stems, when added together, exceed 15cm (5.9 in.);
 - The extent of coverage and species of the dominant understorey shrubs within the areas described above;
 - The location and type of all known utilities entering or immediately adjacent to the ESA;
 - Existing and proposed property lines and building footprints for the entire site;
 - The location of the high water mark (if adjacent to the foreshore or a waterway system) and the extent of the ESA on the site;
- b) The application should also include:
 - One or more photographs showing as much of the ESA as possible. The photographs should be notated on the plan showing the viewpoint and direction of view;
 - A grading plan or cross section showing finished grade and appropriate drainage within 1.5 times the drip-line of the tree;



- If necessary, a landscaping plan showing the location, size, and species of trees and shrubs to be planted as compensation for those anticipated for removal. At least 50% of the replacement species should be selected from the City's listing of recommended plantings for natural areas and should be compatible with natural vegetation growing in the area. All planting is required to conform to BCSLA/BCNTA planting standards.