### Environmentally Sensitive Areas

The District of Sechelt contains a wealth of natural features and habitats, most of which are associated with large forest stands or with bodies of water (marine and stream environments). Habitats include major fish bearing streams, as well as smaller streams, springs and wetlands dispersed throughout the community that provide wildlife habitat.

An overview inventory of environmentally sensitive areas was completed in 1993 by Golder & Associates\(^1\), and forms the basis of the DPA designations, as shown generally on Schedules D1-D3. The original report and maps should be referenced for full details. These sensitive areas provide habitat for a wide variety of plants, birds and wildlife, as well as important visual resources. The DPA’s include the marine shoreline, foreshore and tidal areas, rocky outcrops and streams, creeks, ponds, estuaries and adjacent riparian areas. As Sechelt has recently enacted a tree protection bylaw (Environmental Management and Protection Bylaw 484), forested lands are not included as a DPA. However, any major development is required to assess and protect habitats associated with forested areas as part of any new development proposal.

Additional information on sensitive habitats, including eel grass beds, riparian areas, watershed boundaries, wildlife habitat, fish species, sensitive ecosystems and forest cover is also provided by the Sunshine Coast Habitat Atlas\(^2\), which should be referenced as part of any environmental development permit application. Recent air photo/GIS analysis by the District of Sechelt provides mapping of steeply sloped lands as shown on Schedules E1-E3. All development permit applications should use these sources as a general guide, but site-specific field investigation is required to determine the actual environmental values.

The objectives of the environmental DPA’s are:

- To provide protection of sensitive terrestrial sites and upland areas, including visually sensitive areas;
- To provide protection of the aquatic resources associated with creeks, marshes and wetlands, and marine/foreshore areas;
- To provide protection for unique and/or sensitive sites which may contain elements of both terrestrial and aquatic habitats.

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\(^1\) Sechelt Geotechnical and Environmental Reconnaissance Study, 1993 (Golder Associates).

\(^2\) The Habitat Atlas incorporates the Sunshine Coast Sensitive Ecosystem Inventory (SEI) completed in 2002 as a joint project between Sechelt, Sunshine Coast Regional District, Ministry of Environment and Department of Fisheries and Oceans (DFO). It is available at [http://habitat.scrd.bc.ca/](http://habitat.scrd.bc.ca/)
Hazard Lands

Map Schedules D1-D3 provide an overview of lands that may be potentially hazardous for development, based on the 1993 Golder study. The study identified lands prone to landslides, landslip, mudflows, debris flows/debris floods, gully and beachfront erosion, flooding, rockfalls and previous gravel mining lands. (More detailed description of the hazards and detailed mapping should be referenced in the 1993 Golder Report). Additional hazards may exist, both within or outside the DPA’s, that become evident on specific sites during the building permit or development process. The District of Sechelt may require geotechnical or other professional assessment of these sites in accordance with the provisions of the Community Charter and/or the Land Title Act.

The objectives of the natural hazard DPA’s are:

- To direct development away from hazardous land or portions of sites, and ensure safety of properties and residents;
- To require site specific assessment and field review to determine actual extent and location of hazards;
- To require that appropriate measures, such as adequate building setbacks or cut and fill precautions be taken where potential geotechnical or flood hazards exist.

Combined Environmentally Sensitive and Hazard DP Areas

Where both environmental sensitivity and geotechnical hazard considerations apply, the environmental assessment should be carried out first to determine whether the proposed land use is compatible with environmental constraints, and to establish suitable means and methods of carrying out the geotechnical investigation within the constraints of the environmentally sensitive conditions.

Qualified Professionals

Site-specific assessment reports and recommendations for natural hazard and environmentally sensitive DPA’s are to be prepared by the following Qualified Professionals:

- **Environmental assessments** - require a Qualified Environmental Professional (QEP), which means an applied scientist or technologist, acting alone or together with another environmental professional, if the individual is registered and in good standing with an appropriate professional organization, and the individual is acting within that individual’s area of expertise.

- **Hazard Tree Assessments** - trees within a SPEA can only be certified as “danger trees” by someone who is certified as a Wildlife/Danger Tree Assessor by the Wildlife Tree Committee of BC.

- **Hazard Assessments** - The Qualified Professional who provides designs such as reinforced or mechanically stabilized slopes, retaining walls or other geotechnical structures to reduce landslide hazards and/or landslide risks requires registration with APEGBC as a Professional Engineer. The Qualified Professional who investigates or interprets complex geological conditions, geomorphic processes and geochronology in support of landslide assessments is typically registered with APEGBC as professional geoscientist in the discipline of geology or environmental geoscience or as a professional engineer in the discipline of geological engineering.

- **For flood hazards**, the Qualified Professional must have experience and expertise in river engineering and hydrology, and in appropriate cases, debris flow processes, and must be registered as a Professional Engineer or Professional Geoscientist with APEGBC. Only a registered Professional Engineer may design structural flood protection works (dykes, berms, seawalks, etc.).

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3 Association of Professional Engineers and Geoscientists of British Columbia
General Exemptions DPA’s 1-5 (Natural Hazards and Environmentally Sensitive Areas)

Minor development or uses that occur outside the DPA may be exempted from the Development Permit requirements. The District may require detailed plans and/or legal survey before granting an exemption. A development permit will generally not be required for the following activities in DPA’s 1-5:

1. Development, upon written submission to the District of a written statement from a Qualified Environmental Professional confirming the absence of riparian habitat or an aquatic ecosystem within the area that would be affected by the proposed work;

2. Subdivision of land where minimum parcel sizes are met exclusive of any potential hazard or environmentally sensitive areas, and where no restoration or mitigation works are required, as determined and confirmed in writing by a Qualified Professional;

3. Repairs, renovations, alterations and additions to existing legal or legal non-conforming structures located:
   - within the original footprint; or
   - where the addition or alteration provides no further encroachment into the DPA.

Exemption 4 will not apply where the nature of the proposed renovations, additions or alterations provide reasonable opportunity to incorporate floodproofing measures that would otherwise be applied to a new structure.

4. Alterations or repairs to existing roads, paths or driveways, provided there is no further disturbance of land or vegetation, and provided the alteration or repair does not raise the grade of a designated floodway;

5. Interior renovations to an existing structure;

6. Replacement of a roof or exterior siding with the same or similar style and building materials;

7. Routine maintenance of existing yards and gardens, provided no removal of vegetation or placement of fill with the DPA occurs;

8. Construction of a small accessory building less than ten (10) sq.m. in size (such as a tool shed or gazebo) or addition of an unenclosed balcony, deck or patio not exceeding an area of 20 sq.m., provided the construction is located within an existing landscaped area and provide that the proposed structure meets all relevant setbacks from the ocean, watercourses and ravine banks;

9. Construction of a private access trail less than 1.0m wide where no trees are removed and the surface of the trail is pervious (soil, gravel, wood chips);

10. Alteration of land where less than 20 cubic metres of soil is deposited or removed on land with less than 20% slope, and does not take place within 15m of top of bank of any stream or within a designated floodway;

11. Removal of trees deemed hazardous or otherwise removed in accordance with District Environmental Management and Protection Bylaw 484;

12. For any exemptions under this section, the District of Sechelt may require registration of a covenant under S.219 of the Land Title Act in such cases to ensure that development conditions are registered on title, for awareness of future owners, and to ensure long-term compliance with geotechnical or environmental report recommendations.
Development Permit Areas - DPA 1, 2, 3, 4 and 4R

- **DPA 1** Gravel Pit Areas
- **DPA 2** Watercourse Habitat
- Watercourse Hazard
- **DPA 3** Marine Foreshore and Shoreline Areas
  
  [DPA3 applies 15m upland of highest high water mark to 15m below below tide line.]
- **DPA 4** Rocky Beach Front, Escarpments and Slope Hazards
- **DPA 4R** Rockfall Hazards

All DPA Boundaries are for illustration only. All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP, and to the original report (Geotechnical and Environmental Reconnaissance Study of the District of Sechelt; Golder Associates, 1993.)

Habitat Atlas

- **Old Growth Management Area**
- **Eelgrass Beds**

Source: Sunshine Coast Habitat Atlas, 2009

Scale: 1:30,000

Date: July 2011

District of Sechelt Official Community Plan
Bylaw No. 492, 2010.
Development Permit Areas

DPA 1, 2, 3, 4 and 4R

DPA 1 Gravel Pit Areas
DPA 2 Watercourse Habitat
Watercourse Hazard
DPA 3 Marine Foreshore and Shoreline Areas

[DPA3 applies 15m upland of highest high watermark to 15m below below tide line.]

DPA 4 Rocky Beach Front, Escarpments and Slope Hazards
DPA 4R Rockfall Hazards

All DPA Boundaries are for illustration only. All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP, and to the original report (Geotechnical and Environmental Reconnaissance Study of the District of Sechelt; Golder Associates, 1993.)

Habitat Atlas

Old Growth Management Area
Eelgrass Beds

Source: Sunshine Coast Habitat Atlas, 2009
Development Permit Areas - DPA 1, 2, 3, 4, and 4R

- **DPA 1** Gravel Pit Areas
- **DPA 2** Watercourse Habitat
- **Watercourse Hazard**
- **DPA 3** Marine Foreshore and Shoreline Areas
  - [DPA 3 applies 15m upland of highest high watermark to 15m below below tide line.]
- **DPA 4** Rocky Beach Front, Escarpments and Slope Hazards
- **DPA 4R** Rockfall Hazards

All DPA Boundaries are for illustration only. All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP, and to the original report (Geotechnical and Environmental Reconnaissance Study of the District of Sechelt; Golder Associates, 1993.)

- Chapman Creek Fan Boundary
- Area of active landsliding
- Chapman Creek Watercourse Hazard
- Active Erosion

**Habitat Atlas**
- **Old Growth Management Area**
- **Eelgrass Beds**

Source: Sunshine Coast Habitat Atlas, 2009

Scale: 1:30,000

Date: July 2011

District of Sechelt Official Community Plan
Bylaw No. 492, 2010.

Environmental and Natural Hazard DPA Guidelines
NOTE:
All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP.

Legend
- Slope > 30%
- Slope 20-30%

DATE: JUNE 2011

District of Sechelt Official Community Plan
Bylaw No. 492, 2010
Environmental and Natural Hazard DPA Guidelines
NOTE:
All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP.
DPA 5 - Steep Slopes

Legend

- Slope > 30%
- Slope 20-30%

NOTE:
All development permit applications should use the DPA maps as a general guide, but site-specific field investigation is required to determine actual environmental values or hazard areas. For detailed information, refer to the DPA guidelines in the OCP.

Scale 1:30,000

DATE: JUNE 2011

District of Sechelt Official Community Plan
Bylaw No. 492, 2010.

Environmental and Natural Hazard DPA Guidelines