

LPC Model Strategy for Antenna Systems

Submitted by Oona McQuat to the Salt Spring Trust Advisory Commission
June 1, 2019

OVERVIEW & RECOMMENDATIONS

- The consultant who prepared the *LPC Model Strategy for Antenna Systems* now under review copied most of the protocol's contents directly from Innovation, Science and Economic Development's (ISED's) CPC-2-0-03 — *Radiocommunication and Broadcasting Antenna Systems* found here: <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08777.html>
- Although antenna siting is regulated by the *Radiocommunications Act* and falls under federal jurisdiction, ISED encourages local governments to create siting protocols that reflect local interests. When a local policy is not in place, the ISED document above becomes the default process. **Instead of approving what is essentially a carbon copy of ISED's default policy, Salt Spring and the Islands Trust as a whole are encouraged to create an antenna siting protocol that authentically represents our region and is as proactive and protective as current federal policy allows.**
- As discussed, the telecommunications industry is preparing for 5G, moving away from macro tower installations and towards installing many small cell or microcell antennas on utility poles in our neighbourhoods, right by our homes. **The template you are reviewing makes no mention of this trend, and takes no measures to address it.**
- Salt Spring's *Official Community Plan* advocates we follow the Precautionary Principle. Although the link made by science between radiofrequency radiation (RFR) and biological harm has solidified over the past few years, **this draft template renders null and void the protective measures found in our existing 2011 policy.** It is essential that our antenna siting protocol maintain the requirement that RFR-emitting antennas be located no closer to areas of continuous human activity than 500 metres, with the cumulative sum total of incident radiofrequency power density levels at regularly occupied buildings not to exceed 2 microwatts/cm².
- Salt Spring's LTC is encouraged to invite the public to participate in the draft protocol process. Participants could include a representative body of informed citizens and those with specific expertise, backed by independent scientists.

- It would be prudent for the Salt Spring Local Trust Committee to keep 5G away from the island until proven safe. *Let's Connect Salt Spring* is a local organization committed to bringing the fastest, safest, greenest, most cyber-secure connectivity possible to the island (faster than wireless 5G) through wired-to-the-premises community-owned fiber optics. **It makes sense for the Trust to prohibit any further installation of microcells on the island while this locally controlled fiber-to-the-premises project is underway.** To learn more about community-owned fiber please visit [Connected Communities ~ Wired fiber for Sustainable Last-Mile Solutions](#)

Part 1: Suggested Amendments to Specific Sections of the *LPC Model Antenna Strategy and Consultation Protocol*

Section 3 MODEL CONSULTATION PROGRAM (Pg 7)

3.2 Model Public Consultation Protocol for Local Trust Areas (Pg 14)

For towers under and over 15 metres in height, the proponent will provide written notice, sent by regular mail or hand delivered, to all property owners and residents within a notification distance of 1000 metres from the base of the structure, consistent with the 2018 Galiano Trust protocol.

Section 4 LAND USE SITING CRITERIA (pg 30)

4.2 Criteria (pg 30)

General Guidelines:

- Areas where people frequently congregate including beaches and lakes are to be 1000 metres away from Telecom facilities, consistent with the Galiano siting protocol.
- Radiofrequency radiation exposure levels in public facilities and shopping areas are to be ALARA (As Low As Reasonably Achievable), in consultation with the Local Trust Committee. Ideally, these radiofrequency radiation levels should fall at or below the 2 uW/cm² range.
- All RFR-emitting facilities shall be away from public sight lines and employ camouflage in accordance with ISED recommendations, public opinion, and LTC approval.

- Height limits are to be determined at a location-by-location basis to minimize visibility.
- Co-location is encouraged, in a manner that causes no increases in cumulative RFR emission levels beyond the 2uW/cm² requirements.
- Tower lighting is to be configured in a manner whereby Navigation Canada and Transport Canada regulations are met, while lighting impacts on homes are minimized.

A. Preferred Locations (Pg 31)

The order of preference for the location of antenna installations on Salt Spring, from most preferred to least preferred is:

1. Industrial zone
2. Commercial zone
3. Mixed commercial and residential zone
4. Residential zone

C. Discouraged Locations: (Pg 32)

- All residential areas
- schools, day cares, playground facilities, hospitals, and long-term care facilities, recreation fields, public parks
- Areas that adversely impact view corridors
- Heritage areas or on heritage structures unless it forms an integrated part of the structure's overall design
- Nature protection areas
- Environmentally sensitive ecosystems
- Installations must be relocated if/when they would interfere with a public project.

2. Other considerations, irrespective of land use designation

- Locations directly in front of doors, windows, balconies or residential frontages
- Community gathering places such as community halls, churches, commercial eating & drinking establishments
- Sites of topographical and geographic prominence

Section 2 MODEL OFFICIAL COMMUNITY PLAN POLICIES (pg 34)

2.1 Advocacy Policies (pg 34)

1. Appoint a committee to study the viability of a community-owned wired to the premises fiber optic network. Wired FTTP networks are *always* faster, greener, and safer than wireless networks.

2. Amend Section C.5.1.1.2: *Power and Telecommunications Objectives and Policies* of our [Official Community Plan](#). Replace:

C.5.1.1.2 To accommodate telecommunications facilities that Industry Canada considers must be located on Salt Spring Island.

with South Pender's 6.2.2 *Communication and Utilities Policies*:

e) Industry Canada and its agents are requested to ensure adequate community consultation occurs prior to approval of new communications towers. (*Amend to include microcells.*)

3. Add these two clauses from Section 6.2.2 of South Pender's Community Plan to our OCP:

a) Communication and utilities land use and development whose primary purposes are for meeting the needs of the community are to be recognized and provided for in the regulatory bylaws implementing this OCP. No such provision is to be given for those whose primary purpose does not serve the community's needs.

b) Locations for additional communication and utilities service development, excluding electrical, telephone, and cablevision distribution lines, are only to be considered on a site-specific basis upon application and consultation with the community.

4. Adopt Galiano's *Community Facilities Advocacy Policies* under Section II 4.1 (Land Use) of their Official Community Plan:

4.1 g) The Local Trust Committee will support efforts to expand electronic communications and infrastructure within the community provided it can be demonstrated that there are no harmful health or environmental effects.

5. Adopt Galiano's *Land Transportation Policies* under Section III 1.1 (Services) of their Official Community Plan:

i) Utilities and their contractors shall be requested to engage in a consultative process with the community with respect to the use of the road right-of-way and the Local

Trust Committee may consider entering into letters of agreement with the utilities or their contractors.

6. Begin a dialogue with BC's Ministry of Transportation and Infrastructure's *Senior Project Manager of Utilities Services*, so that when microcells arrive on our shores we have a clear permitting procedure in place for them. For more on permitting, see "Part 2" below.

7. Encourage *Innovation, Science and Economic Development Canada* to close the loophole in CPC-2-0-03 that excludes antennas placed on existing structures from public consultation.

Part 2: Other Areas ISED Permits Local Governments to Address not covered in the *LPC Model Antenna Strategy and Consultation Protocol*

ADMINISTRATIVE

1. PERMITTING PROCESS

1.1 Permit Required. No microcell or antenna installation shall be constructed, erected, modified, mounted, attached, operated or maintained on Salt Spring and within any public right-of-way without the issuance of a permit.

1.2 Application Content. All permit applications must include:

A. Detailed site and engineering plans for each proposed microcell and antenna installation, including all associated equipment necessary for its operation;

B. A master plan showing the geographic service area for the proposed microcell and/or antenna installation(s), and all of applicant's existing, proposed and anticipated installations on Salt Spring;

C. Photographs of proposed facility equipment;

D. Visual impact analyses with photo simulations;

E. Certification by a certified radio-frequency engineer that the cumulative sum total of incident radiofrequency power density levels at regularly occupied buildings within 500 metres of microcell installations and antennas does not exceed 2 microwatts/cm², including aggregate emissions for all co-located equipment, consistent with the Salt Spring Antenna protocol of 2011;

F. Certification that the applicant has a right under federal law to install wireless telecommunications facilities in the public right-of-way;

G. Documentation demonstrating a good faith effort to locate the microcell and/or antenna installation in accordance with the preferred provisions of this protocol;

H. Documentation that owners of all properties within 150 metres of a proposed microcell installation have been notified in writing via certified mail of the proposed installation, including its exact location;

I. An executed indemnification agreement as set forth in section 1.6 hereof.

1.3 Application Fee. The Trust shall assess a per-installation fee of _____ to cover the costs of processing, reviewing, evaluating, conducting a public hearing, and other activities involved in consideration of the application, and conducting oversight of the construction of the microcell and/or antenna installation to ensure compliance with zoning requirements.

1.4 Consultant Fee. The Trust shall have the right to retain an independent technical consultant to assist in its review of the application. The reasonable cost of the review shall be paid by the applicant.

1.5 Compliance Bond. Upon approval of the application, the Permittee shall be required to post a bond in the amount of \$50,000 for each microcell/antenna installation, such bond to be held and maintained during the entire period of Permittee's operation of each installation on the island as a guarantee that no such installation, including any co-located equipment, exceeds or will exceed the allowable Safety Code 6 limits for RF radiation exposure to the general public as determined by a qualified independent RF engineer under Section 1.7.2 hereof.

1.6 Indemnification. Permittee shall provide an executed agreement in the form provided by the Trust pursuant to which Permittee agrees to defend, hold harmless and fully indemnify the Trust, its officers, employees, agents, attorneys, and volunteers, from:

(i) any claim, action or proceeding brought against the Trust or its officers, employees, agents, or attorneys to attack, set aside, void, or annul any such approval of the Trust or

(ii) a successful legal action brought against the Trust for loss of property value or other harm caused by the placement or operation of a microcell installation.

This indemnification agreement shall be in a form acceptable to the Trust Attorney and shall include, but not be limited to, damages, fees and/or costs awarded against the Trust, if any, and cost of suit, attorney's fees, and other costs, liabilities and expenses incurred in connection with such proceeding whether incurred by the Permittee, the Trust and/or the parties initiating or bringing such proceeding.

The agreement shall also include a provision obligating the Permittee to indemnify the Trust for all of the Trust's costs, fees and damages, which the Trust incurs in enforcing the indemnification provisions of this Section.

1.7 Annual Re-certification

1.7.1 Each year, commencing on the first anniversary of the issuance of the permit, the Permittee shall submit to the Trust an affidavit which shall list all active microcell and antenna installations it owns on Salt Spring by location, certifying that

(1) each active installation is covered by liability insurance in the amount of \$2,000,000 per installation, naming the Trust as additional insured; and

(2) each active installation has been inspected for safety and found to be in sound working condition and in compliance with all federal safety regulations concerning RF exposure limits.

1.7.2 The Trust shall have the right to employ a qualified RF engineer to conduct an annual random and unannounced test of the Permittee's wireless installations located on Salt Spring to certify their compliance with all Safety Code 6 radio-frequency emission limits as they pertain to exposure to the general public. The reasonable cost of such tests shall be paid by the Permittee.

1.7.3 In the event that such independent tests reveal that any installation or installations owned or operated by Permittee or its Lessees, singularly or in the aggregate, is emitting RF radiation in excess of Safety Code 6 exposure guidelines as they pertain to the general public, the Trust shall notify the Permittee and all residents living within 500 metres of the installation(s) of the violation, and the Permittee shall have forty-eight (48) hours to bring the installation(s) into compliance.

Failure to bring the installation(s) into compliance shall result in the forfeiture of all or part of the Compliance Bond, and the Trust shall have the right to require the removal of such installation(s), as the Trust in its sole discretion may determine is in the public interest.

1.7.4 Any wireless installation which is no longer in use shall be removed by the Permittee within 30 days of being taken out of use.

1.7.5 Any wireless installation which is not removed within 30 days after being listed as no longer in use in the annual re-certification affidavit shall be subject to a fine of \$100/day until such installation is removed.

1.7.6 Where such annual re-certification has not been properly or timely submitted, or equipment no longer in use has not been removed within the required 30-day period, no further applications for wireless installations will be accepted by the Trust until such time as the annual re-certification has been submitted and all fees and fines paid.

1.8 Non-Permitted Installations Any wireless installation constructed, erected, modified or enhanced prior to the issuance of a site-specific permit from the Trust shall be removed prior to the submission of any other application. No application for a wireless installation shall be considered while such unauthorized installations remain.

2: INSTALLATION SPECIFICATIONS

2.1. The Permittee must construct, install and operate microcell and macrocell installation in strict compliance with the plans and specifications included in the application.

2.2. Where feasible, as new technology becomes available, the Permittee shall replace larger, more visually intrusive facilities with smaller, less visually intrusive facilities, after receiving all necessary permits and approval required by the Trust.

2.3. The Permittee shall submit and maintain current at all times basic contact and site information on a form to be supplied by the Trust. The Permittee shall notify the Trust of any changes to the information submitted within seven days of any change, including the name or legal status of the owner or operator.

2.4. At all times, all required notices and signs shall be posted on the site as required by ISED and federal law, and as approved by the Trust. The location and dimensions of a sign bearing the emergency contact name and telephone numbers shall be posted pursuant to the approved plans.

2.5. The Permittee shall maintain current at all times liability and property insurance for each antenna installation in the Public Right of Way in the amount of \$2,000,000 (Two Million dollars) naming the Trust as additional insureds.

2.6. The proposed antenna installation shall have an adequate fall zone to minimize the possibility of damage or injury resulting from pole collapse or failure, icefall or debris fall, and to avoid or minimize all other impacts upon adjoining properties.

2.7. Single or co-located microcell installations must be mounted on an existing structure such as a utility or lighting pole that can support its weight and the weight of any existing co-located equipment. All new wires needed to service the microcell installation must be located within the width of the existing structure so as to not exceed the diameter and height of the existing utility pole.

2.8. All equipment not to be installed on or inside the pole must be located underground, flush to the ground, within 1 metre of the utility pole. Each installation is to have its own dedicated power source to be installed and metered separately.