



STAFF REPORT

Date: April 8, 2015

File No.: SS-RZ-2013.9

To: Salt Spring Island Local Trust Committee
For meeting of April 16, 2015

From: Stefan Cermak
Island Planner, Local Planning Services

CC: Janis Gauthier

Re: Application to Amend the Land Use Bylaw

Owner: Capital Regional District

Applicant: Janis Gauthier, JG Consulting Services Ltd.

Location: Lot A, Section 20, North Salt Spring Island, Range 3 East, Cowichan District
Plan EPP20136; PID: 028-848-870

Civic Address: 161 Drake Road, Salt Spring Island

THE PROPOSAL

The Capital Regional District (CRD) proposes a multi-family affordable housing complex of up to 80 units to be built within the designated Ganges Village core. The applicant proposes a 3-phase master plan that limits uses and includes special provisions for use of common accessory structures, screening from neighbouring agricultural uses, a reduction in required parking spaces, and approval for three storey structures. The applicant is seeking flexibility regarding phasing and building form to allow the project to be guided by need and market conditions and capital funding opportunities. Housing affordability will be ensured through long-term housing agreements. The Draft Bylaw (No. 478) is included in Appendix 1. The draft Housing Agreement is included in Appendix 2.

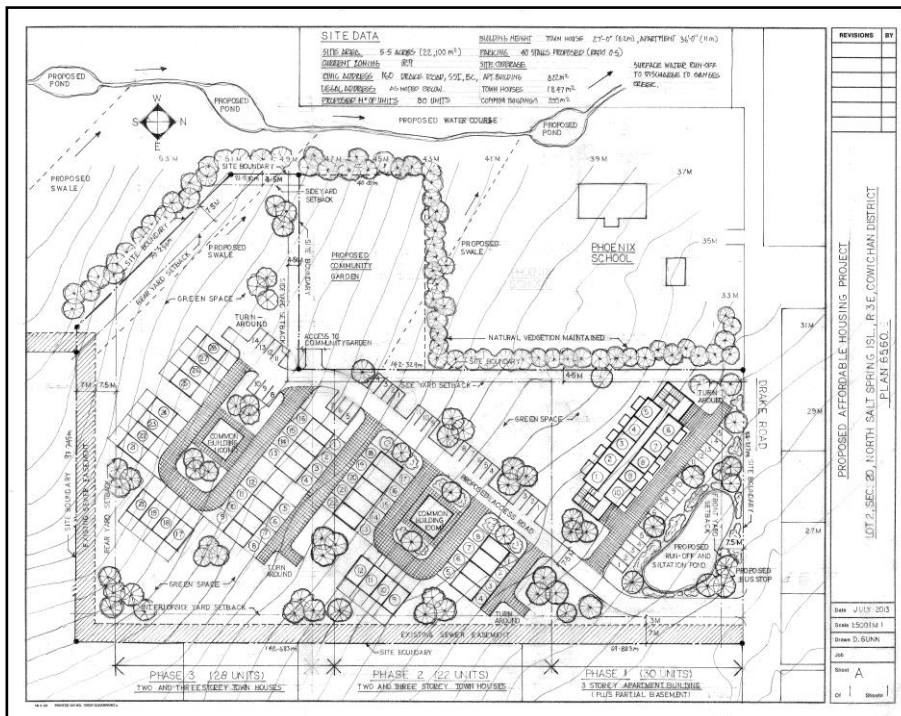


Figure 1 DRAFT Conceptual site design by D. Gunn July 2013

BACKGROUND

This report follows a preliminary staff report presented to the Salt Spring Island Local Trust Committee on March 20, 2014. At that meeting, LTC directed staff to:

- Refer the applicant for preliminary referral to relevant agencies,
- Prepare the requested bylaw,
- Request the applicant to provide evidence based rationale supporting the proposed 60% decrease in required parking, and
- Request the applicant to submit a draft affordable housing agreement.

These directions have been completed.

The applicant also hosted a Community Information Meeting March 4, 2015. See Appendix for details.

CURRENT PLANNING STATUS OF SUBJECT LANDS

Trust Policy Statement

Staff has attached for Local Trust Committee consideration the Directives Only Checklist as Appendix 3 in accordance with Section 1.9 “Policy Statement Implementation” of the Islands Trust Policy Manual. Staff consider the proposed rezoning to be at variance with Policy Directive 4.4.2 which requires the LTC to ensure that neither the density nor intensity of land use is increased in areas which are known to have a problem with quality or quantity of the supply of freshwater.

Official Community Plan Bylaw No. 434 (OCP)

Staff analysis of relevant OCP objectives and policies was provided in the preliminary staff report dated March 10, 2014.

Since that time, the North Salt Spring Waterworks District (NSSWD) updated their response to the availability of water resources, indicating no further availability at this time (see referral responses later in this report). Accordingly staff analysis of OCP section C.3.2 “Community Water Systems” has also changed. The rezoning application is no longer clearly in conformity with OCP Community Water Systems objectives or policies. In further detail:

OCP objectives “ensure that the potential water demand of development within community water systems does not exceed the licensed capacity, or the amount of water that can be safely withdrawn from each system's water source.”

OCP policy C.3.2.2.1 directs the LTC to “not make zoning changes in a community water system if the change would mean water could not be supplied (under the existing license) to existing customers. The LTC should not normally make zoning changes if the change would mean water could not also be supplied to vacant or underdeveloped properties already zoned for further development. Should such zoning changes be proposed, the applicant could be encouraged to suggest other water supplies so that the application could be considered. Examples are rainwater catchment, groundwater use or a water conservation program.”

A water conservation program has been proposed which would implement a number of water saving features, including metering, rainwater and grey water re-use for irrigation wherever practical, flow control devices, water saving devices, drought resistant landscaping, and efficient irrigation. The applicant supports these features to be included in a covenant.

OCP Policy C.3.2.2.1 further states that “the Local Trust Committee could make an exception to the above policy within the North Salt Spring Waterworks District to allow community facilities or affordable housing projects to proceed. However such changes should only be made if the Committee is satisfied that the District is likely to receive a sufficiently larger water license.” The NSSWD has indicated that a larger water license is not feasible at this time.

OCP Policy C.3.2.2.2 further acknowledges that affordable housing needed by the community is a priority but again stipulates the need for a larger water license.

OCP Policy C.3.2.2.5 notes that ... “the (LTC) particularly recognized that this Plan (the OCP) could critically affect the NSSWD’s ability to meet future needs and will cooperate with the District to address this issue.”

The subject property is in Development Permit 1: Island Villages. No development may commence without an issued development permit which includes issues of form and character of the site and structures as well as issues of stormwater management.

Land Use / Zoning Bylaw

Current zoning for the subject property is Residential 9 (R9) which would permit up to 5 dwelling units. Proposed zoning is to a variant of Residential 1 (R1(b)) which would increase the permitted density from 2.5 units/hectare to 37 units/hectare, the maximum density recommended within the Official Community Plan. Draft Bylaw No. 478 is included in Appendix 1.

The draft bylaw proposes rezoning which includes:

- not more than 80 affordable housing dwelling units,
- a child day care centre,
- non-commercial outdoor active recreation,
- public service uses,
- agriculture, and
- home based businesses which do not require parking or walk-in clientele.

Special provisions in the proposed bylaw include:

- use of accessory structures for a common kitchen and dining area for residents only,
- a single three storey structure (although the applicant has indicated preference for permitting all structures to be three storeys),
- a landscape screen between the subject property and adjacent lands in the Agricultural Land Reserve, and
- a reduction in parking space requirements from 1.25 parking spaces/unit to 0.75 parking spaces/unit.

Islands Trust Fund:

The subject property is not adjacent to an Islands Trust Fund property or lots with Islands Trust Fund covenants.

RESULTS FROM CIRCULATION

On April 10, 2014 this application was referred for preliminary consideration to the Advisory Planning Commission, the Agricultural Advisory Planning Commission, the Capital Regional District (CRD), the Ministry of Transportation and Infrastructure, the School District #64, and to Salt Spring Island Fire Rescue.

On April 24, 2014 the Advisory Planning Commission (APC) considered the application. The applicant was present and made a presentation. The APC discussed the application and made the following recommendation to the LTC:

It was MOVED and SECONDED that the Salt Spring Island Advisory Planning Commission recommend that Salt Spring Island Local Trust Committee proceed with application SS-RZ-2013.9. CARRIED

On April 24, 2014 the Agricultural Advisory Planning Commission (AAPC) considered the application. It was noted that drainage into agricultural lands does not appear to be an issue. Edge planning options were discussed. Based on discussion, the AAPC made the following recommendation to the LTC:

It was MOVED and SECONDED that the Salt Spring Island Agricultural Advisory Planning Commission recommend that Salt Spring Island Local Trust Committee proceed with application SS-RZ-2013.9 and that the applicant be required to come back to the Agricultural Advisory Planning Commission with recommendations on how best to create a buffer between the agricultural land and the site. CARRIED

On April 28, 2014 the Ministry of Transportation and Infrastructure responded that:

- Details of parking management and regulation long term need to be provided for review
- Upon receipt of official rezoning referral the Ministry's engineering department will be consulted for a more comprehensive assessment of the potential impacts of the development to the intersection of Drake Road and Fulford-Ganges Road
- The Ministry has concerns that the development will require utility upgrades under the travelled portion of the road which they comment is not "overly desirable" due to the increased cost of maintenance. However, this may be unavoidable as neighbouring properties project significantly into the desired right-of-way. MOTI concludes that investigation is needed to ensure the right-of-way is wide enough to suit the intended purpose.

On May 6, 2014, the Ganges Sewer Local Commission (GSLC) recommended approval of the rezoning with the following statements:

- The GSLC recognizes there is sufficient capacity for up to 84 units in the sewer system.
- The GSLC notes that the developer is required to pay the full amount of the capacity sewer charges.

On June 17, 2014, the Salt Spring Island Transportation Commission (SSITC) recommended approval of the rezoning subject to the following conditions:

- The SSITC supports the recommendation of Islands Trust staff that the applicant provide evidence-based rationale to support the significant decrease of 60% required automobile parking.
- The SSITC recommends that the applicant construct a pedestrian pathway along the entire frontage of the property along Drake Road at their cost and that the pathway be built to Capital Regional District specifications.
- The SSITC recommends that a statutory right-of-way be registered in favour of, and in a form acceptable to, the Capital Regional District, for any areas of the pathway along this same frontage that are contained within private property.
- The SSITC recommends the Capital Regional District assume the maintenance and liability upon acceptance of the completed works.

- The SSITC supports the concept of a pilot project that may include electric vehicle charging stations and/or a car sharing program.

On July 28, 2014, the Salt Spring Island Parks and Recreation Commission recommended approval subject to:

- Upgrading the existing pathway, on the statutory right-of-way along the eastern boundary of the subject property.

On November 26, 2014, the North Salt Spring Waterworks District (NSSWD) recommended NOT approving the rezoning for the following reason:

- The NSSWD is not accepting any new demands for service until a thorough review of the hydrology study and water demand budgets are complete. Therefore, at this time, North Salt Spring Waterworks would not accept this development into the district.

The response from the NSSWD reverses the March 26, 2014 response from the NSSWD indicating sufficient capacity to supply the development.

The School District #64 and Salt Spring Island Fire Rescue did not respond to the referral.

RESPONSE TO REFERRAL COMMENTS

Referral comments received suggest referring the draft bylaw, if and when the LTC gives first reading. Early referral revealed issues regarding lack of community water services, parking management, screening from adjacent ALR lands, and roadway and pathway issues. These issues are responded to below. Following these comments is a discussion of the applicants draft Housing Agreement.

Community Water Services

NSSWD will not supply community water at this time. Without water, the proposed rezoning does not meet Islands Trust Policy Directive 4.4.2 and, despite a robust water conservation plan, does not meet OCP policies regarding community water systems. The applicant is acutely aware of this but has proposed continuing with the application to advance funding requirements and in the hope that the NSSWD is able to provide a favourable response after further community and agency consultation or an alternative solution is found.

Parking management

The applicant has provided a rationale for reducing parking requirements from 1.25 stalls per dwelling unit to 0.5 per unit (Appendix 5). Staff note that the parking rationale is completed by the applicant rather than a traffic engineer.

Staff's research into parking demand for affordable housing projects reveals a trend whereby demand for parking for families remains high – especially for families first moving into new affordable housing projects. However, parking demand for seniors or disabled in affordable housing is drastically below traditional parking demand. As the proposed development is a mix of “micro” units targeting low income earners and family units targeting families, staff have reasoned that 0.75 stalls per dwelling unit would be a more reasonable minimum parking requirement.

As the development is proposed to be phased, any change to reduce future parking needs may be achieved through application for a development variance permit, traditionally a non-cumbersome process.

Screening from Adjacent Agricultural Land Reserve

The AAPC has requested the LTC to require the applicant return to the AAPC with recommendations on how best to create a buffer between the agricultural land and the subject property. The draft bylaw proposes a landscape screen be required within 15m of the adjacent property boundaries. Landscape screens are defined as “a visual barrier consisting of natural vegetation, trees, shrubs, wooden fencing or a combination of those elements, broken only by necessary perpendicular access ways for pedestrians and vehicles and serving to screen land uses from abutting land and highways.” The details of the landscape screen would not be required until submission of a Development Permit with landscaping details. Referral to the AAPC at time of LTC considering a Development Permit would meet this recommendation.

Roadway and Pathways

MOTI will provide a more comprehensive assessment of the potential impacts of the development to the intersection of Drake Road and Fulford-Ganges Road at time of referral of a proposed bylaw. It is anticipated that MOTI will require a traffic impact assessment.

The SSITC recommends a pathway be constructed on the subject property adjacent to Drake Road. The subject property and adjacent lots abutting Drake Road have lot lines jutting into Drake Road, developing a pathway on the subject property may be the only feasible way to ensure safe non-vehicle traffic mobility along Drake Road in the area. Staff will recommend the LTC consider pursuing this recommendation as a condition of rezoning approval and recognize that the applicant has redrafted their site plan to accommodate such a pathway.

PARC recommends upgrading the existing pathway on the subject property along the eastern and southern lot lines. The existing pathway is already maintained by PARC while the subject property is owned by the CRD, any upgrades should be negotiated between CRD departments.

Affordable Housing

The applicant has provided a draft Affordable Housing Agreement (Appendix 2). Significant details include the following definitions:

“**Affordable Housing**” means renter-occupied or owner-occupied housing that can be acquired with thirty (30) percent of the median gross income of households (families or individuals) on Salt Spring Island.

“**Qualified Person**” means an individual or individuals who are qualified to own or rent Affordable Housing Units pursuant to this Agreement.

The agreement covenants and agrees that it will not:

- use any of the Units for any purpose other than Affordable Housing;
- rent any of the Units to any person other than a Qualified Person; or
- sell any of the Units to any person other than a Qualified Person.

The agreement has been structured to be treated as a blanket agreement that ensures affordable housing is built in, but with the opportunity to modify or register a different agreement if/when future subdivisions take place, either for subsequent phases or homeowner units.

Housing Agreements should be reviewed by Islands Trust legal services. Consideration of Housing Agreement details by legal services is an extraordinary service and requires direction to draft a cost recovery agreement as per Islands Trust policies [5.6.ii](#) and [5.6.iii](#). As per the respective policies, a Cost Recovery Agreement should be authorized by the LTC, negotiated with the applicant by the Regional Planning Manager, and approved by the Director of Local Planning Services.

NEXT STEPS

The proposal has merit in meeting affordable housing needs as expressed in the Official Community Plan and as demonstrated in the applicant’s community consultations. However, without supply of community water services, the application will have difficulty proceeding and is at variance with community water service policies and the Islands Trust Policy Directive. Regardless, staff provide option for the LTC to consider the applications request to proceed through first reading of a bylaw. Achieving first reading may assist the applicant through their respective needs and allow them to work with the community and NSSWD to possibly prioritize the project for future water provision considerations as per existing OCP policies. Should LTC wish the application to advance while water is being further assessed, it could pursue the following options:

1. THAT the Salt Spring Island Local Trust Committee Bylaw No. 478, cited as “Salt Spring Island Land Use Bylaw, 1999, Amendment No. 2, 2014”, be read a first time.
2. THAT the Salt Spring Island Local Trust Committee **REVIEWS** the Directives Only Policies and determines that Bylaw No. 478 is at variance with the Islands Trust Policy Statement.
3. THAT the Salt Spring Island Local Trust Committee **DIRECTS** staff to enter into a cost recovery agreement with the applicant of application SS-RZ-2013.9 pursuant to Trust Council policy and the Salt Spring Island planning application fees bylaw to request Islands Trust legal counsel review of the draft Affordable Housing Agreement dated March 19, 2015 (161 Drake Road, J.G. Gauthier).

However, staff recommend deferring the application and directing staff to hold the application in abeyance until the fundamental issue of water provision is resolved.

RECOMMENDATION

Based on the above discussion, staff recommend:

1. That the Salt Spring Island Local Trust Committee **HOLDS** application SS-RZ-2013.9 (161 Drake Road, J.G. Gauthier) in abeyance.

Respectfully submitted by:

Stefan Cermak

Date

Concurred in by:

Leah Hartley

Date

Appendices

- Appendix 1: Draft Bylaw 478
- Appendix 2: Draft Housing Agreement Dated March 19, 2015
- Appendix 3: Directives Only Checklist
- Appendix 4: Community Information Meeting March 4, 2015 (Applicant Hosted)
- Appendix 5: Preliminary Parking and Traffic Strategy

SALT SPRING ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 478

**A BYLAW TO AMEND “SALT SPRING ISLAND LAND USE BYLAW, 1999,” BEING
BYLAW NO. 355**

The Salt Spring Island Local Trust Committee, being the Trust Committee having jurisdiction in respect of the Salt Spring Island Local Trust Area under the *Islands Trust Act*, enacts as follows:

Salt Spring Island Local Trust Committee Bylaw No. 355, cited as “Salt Spring Island Land Use Bylaw, 1999”, is amended as follows:

- 1. By adding in Subsection 9.9.4 – Exceptions in Particular Locations – a new Residential 1 Zone Variation – R1(b) after Residential Zone Variation R1(a):

“Zone Variation – R1(b)

- (8) Despite all other regulations of this bylaw the only principal uses permitted within lands zoned R1(b) are:
 - (a) Not more than 80 *affordable housing dwelling units*
 - (b) *Non-commercial outdoor active recreation*
 - (c) *Public service uses*
 - (d) *Child day care centre*
 - (e) *Agriculture*
- (9) Home Based Businesses are permitted as an accessory use. Despite Section 3.13 – Home-Based Businesses, only the following occupations, which do not require parking or walk-in clientele, may be conducted as a home based business within lands zoned R1(b):
 - (a) Production of arts, crafts, music, fabric items, jewellery and other comparable products.
 - (b) Sales of products manufactured elsewhere, provided persons employed in the home-based business carry out all distribution of such products offsite.
 - (c) Business and professional offices.
 - (d) *Child day care*, limited to a maximum of two children, exclusive of the operators’ children.
- (10) A common *kitchen* and dining area for residents of the *affordable housing dwelling units* is permitted as an accessory use.
- (11) Despite all other regulations of this bylaw, one *structure* may have a maximum *height* of 11.0 metres, provided that not more than three *storeys* are permitted in the *structure*.
- (12) A *landscape screen* must be provided and maintained within a 15 metre wide *buffer area* of a *lot* line adjoining lands within the Agricultural Land Reserve.

- (13) Despite Part 7 – Parking Regulations - Table 3 – Minimum Number of Parking Spaces for Automobiles, Disabled Parking and Bicycles - the minimum number of *parking spaces* required is 0.75 per *affordable housing dwelling unit*; the number of automobile *parking spaces* which must be designated for use by the disabled is 1 or 1 per 10 units, whichever is greater; the number of bicycle parking spaces is 1 per unit without a garage plus a 6 – space rack.”

And by making such consequential numbering alterations to effect this change.

2. By changing the zoning classification of Lot A, Section 20, North Salt Spring Island, Range 3 East, Cowichan District Plan EPP20136; from Residential 9 – R9 to Residential Zone Variation 1(b) – as shown on Plan No. 1, attached to and forming part of this bylaw, and by making such alterations to Schedule “A” to Bylaw No. 355 as are required to effect this change.
3. This Bylaw may be cited as “Salt Spring Island Land Use Bylaw, 1999, Amendment No. 2, 2014”.

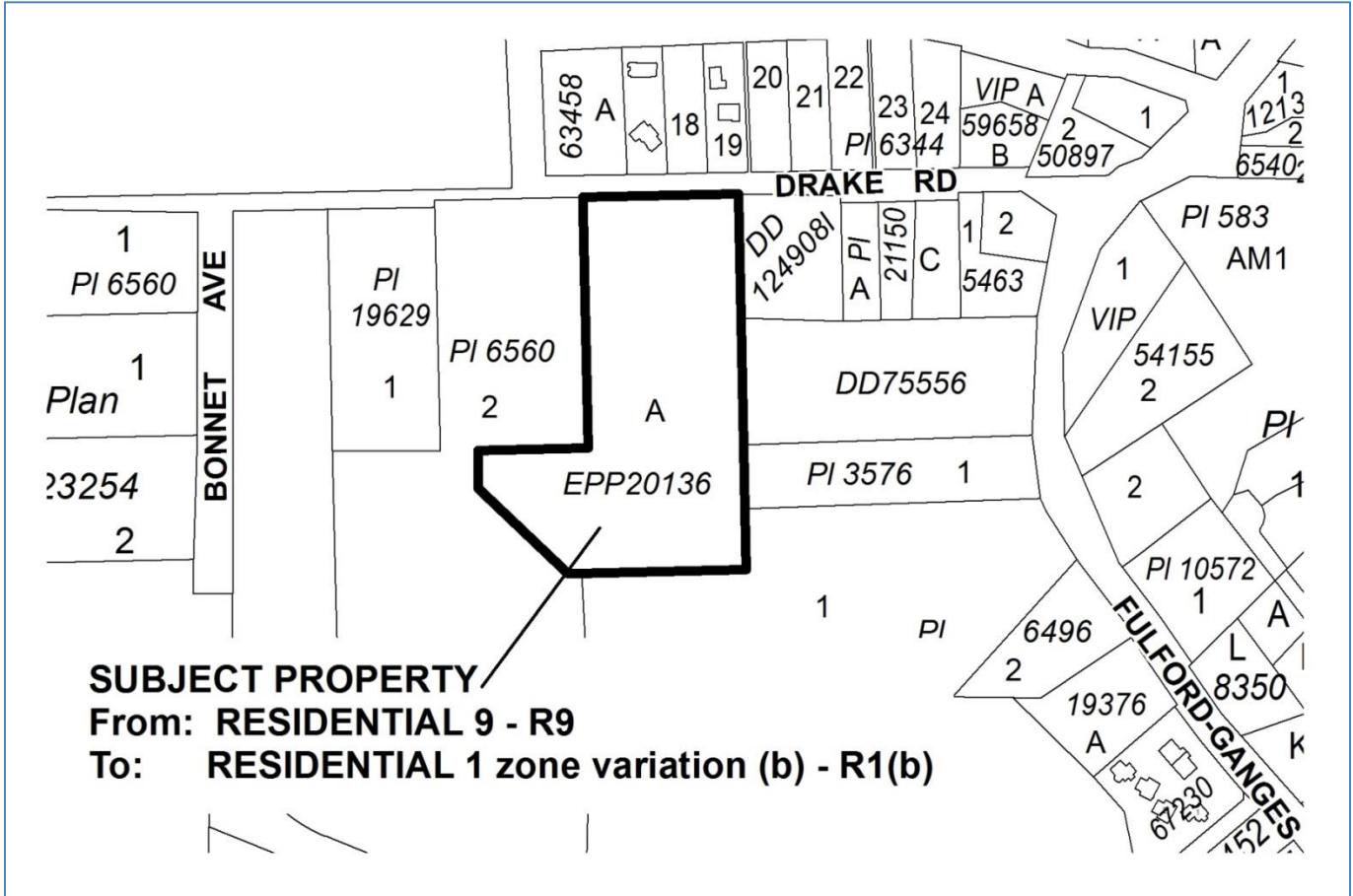
READ A FIRST TIME THIS	DAY OF	, 20__
PUBLIC HEARING HELD THIS	DAY OF	, 20__
READ A SECOND TIME THIS	DAY OF	, 20__
READ A THIRD TIME THIS	DAY OF	, 20__
APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS	DAY OF	, 20__
ADOPTED THIS	DAY OF	, 20__

SECRETARY

CHAIRPERSON

SALT SPRING ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 478

Plan No. 1



TERMS OF INSTRUMENT – PART 2

THIS AGREEMENT dated for reference the ____ day of _____, 2015, is

BETWEEN:

CAPITAL REGIONAL DISTRICT

(the “**Owner**” or “**Transferor**”)

AND:

SALT SPRING ISLAND LOCAL TRUST COMMITTEE

(the “**Islands Trust**” or “**Transferee**”)

RECITALS:

- A. The Owner is the registered owner in fee simple of the Lands described in item 2, Part 1 of this Instrument (the “**Lands**”).
- B. The Owner submitted a rezoning application to the Islands Trust in connection with the Owner’s proposed plan to develop up to 80 affordable housing dwelling units on the Lands (the “**Project**”). The Project may involve up to three phases, and may comprise both renter-occupied housing units and owner-occupied housing units.
- C. By an amendment (Bylaw No. 478) (the “**Rezoning Bylaw**”) to the Spring Island Land Use Bylaw, 1999, Bylaw No.355 (the “**Land Use Bylaw**”), the Islands Trust rezoned the Lands to permit only the following principal uses on the Lands:
 - (i) Not more than 80 affordable housing dwelling units;
 - (ii) Accessory structures (owned by the developer or to-be formed strata corporation) may be used for child day care, meeting space, laundry, common kitchen/dining for residents, office space, storage, and/or crafts production;
 - (iii) non-commercial active outdoor recreation;
 - (iv) public service uses; and
 - (v) agriculture.
- D. The Islands Trust requires that the Owner enter into a covenant with the Islands Trust to be registered against title to the Lands pursuant to s.219 of the *Land Title Act* to restrict the use of any affordable housing dwelling units (“**Units**”) that may be constructed by the Owner on the Lands.

THIS AGREEMENT is evidence that in consideration of the foregoing recitals, the payment of \$1.00 by the Island Trust to the Owner (the receipt of which is acknowledged by the Owner), and the promises exchanged below, the Owner covenants and agrees with the Islands Trust in accordance with s. 219 of the *Land Title Act* as follows:

1. In this Agreement:
 - (a) “**Affordable Housing**” means renter-occupied or owner-occupied housing that can be acquired with thirty (30) percent of the median gross income of households (families or individuals) on Salt Spring Island.
 - (b) “**Qualified Person**” means an individual or individuals who are qualified to own or rent Affordable Housing Units pursuant to this Agreement.
2. The Owner covenants and agrees that it will not:
 - (a) use any of the Units for any purpose other than Affordable Housing;
 - (b) rent any of the Units to any person other than a Qualified Person; or
 - (c) sell any of the Unit to any person other than a Qualified Person.
3. Without limiting the generality of section 2 of this Agreement, if the Owner elects to subdivide the Lands for the purpose of selling one or more Units to qualified Persons, then the Islands Trust and the Owner shall enter into a Housing Agreement and Section 219 Covenant, in accordance with s.219 of the *Land Title Act*, pursuant to which the terms of administration of the sales of the Affordable Housing Units will be managed by the Owner or a third party administrator appointed by the Islands Trust.
4. The Owner and the Islands Trust agree that the enforcement of this Agreement shall be entirely within the discretion of the Islands Trust and that the execution and registration of this Agreement against the title to the Lands shall not be interpreted as creating any duty on the part of the Islands Trust to the Owner or to any other person to enforce any provision or the breach of any provision of this Agreement.
5. Nothing contained or implied herein shall prejudice or affect the rights and powers of the Islands Trust in the exercise of their respective functions under any public or private statutes, bylaws, orders and regulations, all of which may be fully and effectively exercised in relation to the Lands as if the Agreement had not been executed and delivered by the Owner.
6. The Owner agrees to execute all other documents and provide all other assurances necessary to give effect to the covenants contained in this Agreement.
7. The Owner hereby agrees to indemnify and save harmless the Islands Trust and its trustees, officials, officers, employees and agents, from and against any demands, claims, loss, damage, debts, liabilities, obligations, costs, and expenses (including solicitor and own client costs incurred in enforcing the Owner’s obligations under this Agreement) or causes of action which the Islands Trust and its respective trustees, officials, officers, employees and agents, or any of them, may suffer, incur, or be put to, arising whether directly or indirectly, out of a breach of any covenant or condition of this

Agreement by the Owner or its directors, officers, employees or agents, or any other person for whom it is legally responsible.

8. The Owner agrees that damages are not an adequate remedy for the Islands Trust for any breach by the Owner of its obligations under this Agreement and that the Islands Trust is entitled to an order for specific performance or a prohibitory or mandatory injunction to compel performance of the Owner's obligations.
9. No alleged waiver of any breach of this Agreement is effective unless it is an express and specific waiver in writing, which will not operate as a waiver of any other breach of this Agreement.
10. The Owner covenants and agrees for itself, its heirs, executors, successors and assigns, that it will at all times perform and observe the requirements and restrictions hereinbefore set out and they shall be binding upon the Owner as personal covenants only during the period of its respective ownership of any interest in the Lands.
11. The restrictions and covenants herein contained shall be covenants running with the Lands and shall be perpetual, and shall continue to bind all of the Lands when subdivided, and shall be registered in the Land Title Office pursuant to s.219 of the *Land Title Act* as a covenant in favor of the Islands Trust as a charge against the Lands.
12. Wherever the expressions "Owner" and "Islands Trust" are used they shall be construed as meaning the plural, feminine or body corporate or politic where the context or the parties so require.

IN WITNESS WHEREOF the parties hereto hereby acknowledge that this Agreement has been duly executed and delivered by the parties executing Form C (pages 1 and 2) attached hereto.

END OF DOCUMENT



POLICY STATEMENT DIRECTIVES ONLY CHECK LIST

Bylaw and File No:

The following symbols in the table indicate:

- ✓ the bylaw is consistent with the policy from the Policy Statement, or
- ✗ **the bylaw is inconsistent (contrary or at variance) with a policy from the Policy Statement, or**
- N/A** the policy is not applicable.

Part III Policies for Ecosystem Preservation and Protection

CONSISTENT	NO.	DIRECTIVE POLICY
	3.1	Ecosystems
✓	3.1.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and protection of the environmentally sensitive areas and significant natural sites, features and landforms in their planning area.
✓	3.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning, establishment, and maintenance of a network of protected areas that preserve the representative ecosystems of their planning area and maintain their ecological integrity.
N/A	3.1.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the regulation of land use and development to restrict emissions to land, air and water to levels not harmful to humans or other species.
	3.2	Forest Ecosystems
✓	3.2.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of unfragmented forest ecosystems within their local planning areas from potentially adverse impacts of growth, development, and land-use.
	3.3	Freshwater and Wetland Ecosystems and Riparian Zones
N/A	3.3.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means to prevent further loss or degradation of freshwater bodies or watercourses, wetlands and riparian zones and to protect aquatic wildlife.
	3.4	Coastal and Marine Ecosystems
N/A	3.4.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of sensitive coastal areas
N/A	3.4.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for and regulation of development in coastal regions to protect natural coastal processes

PART IV: Policies for the Stewardship of Resources

CONSISTENT	NO.	DIRECTIVE POLICY
	4.1	Agricultural Land
N/A	4.1.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and preservation of agricultural land for current and future use.
✓	4.1.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation, protection, and encouragement of farming, the sustainability of farming, and the relationship of farming to other land uses.
✓	4.1.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of adjacent properties to minimize any adverse affects on agricultural land.
CONSISTENT	NO.	DIRECTIVE POLICY
N/A	4.1.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the design of road systems and servicing corridors to avoid agricultural lands unless the need for roads outweighs agricultural considerations, in which case appropriate mitigation measures shall be required to derive a net benefit to agriculture
N/A	4.1.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address land uses and activities that support the economic viability of farms without compromising the agriculture capability of agricultural land.
N/A	4.1.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the use of Crown lands for agricultural leases.
	4.2	Forests
N/A	4.2.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the need to protect the ecological integrity on a scale of forest stands and landscapes.
N/A	4.2.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the retention of large land holdings and parcel sizes for sustainable forestry use, and the location and construction of roads, and utility and communication corridors to minimize the fragmentation of forests.
N/A	4.2.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of forest ecosystem reserves where no extraction will take place to ensure the preservation of native biological diversity.
	4.3	Wildlife and Vegetation
	4.4	Freshwater Resources
×	4.4.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure neither the density nor intensity of land use is increased in areas which are known to have a problem with the quality or quantity of the supply of freshwater, water quality is maintained, and existing, anticipated and seasonal demands for water are considered and allowed for.
N/A	4.4.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address measures that ensure water use is not to the detriment of in-stream uses
	4.5	Coastal Areas and Marine Shorelands
N/A	4.5.8	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the needs and locations for marine dependent land uses

N/A	4.5.9	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the compatibility of the location, size and nature of marinas with the ecosystems and character of their local planning areas.
N/A	4.5.10	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location of buildings and structures so as to protect public access to, from and along the marine shoreline and minimize impacts on sensitive coastal environments
N/A	4.5.11	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address opportunities for the sharing of facilities such as docks, wharves, floats, jetties, boat houses, board walks and causeways.
	4.6	Soils and Other Resources
N/A	4.6.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of productive soils.

PART V: Policies for Sustainable Communities

CONSISTENT	NO.	DIRECTIVE POLICY
	5.1	Aesthetic Qualities
N/A	5.1.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the protection of views, scenic areas and distinctive features contributing to the overall visual quality and scenic value of the Trust Area.
	5.2	Growth and Development
✓	5.2.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address policies related to the aesthetic, environmental and social impacts of development.
✓	5.2.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address any potential growth rate and strategies for growth management that ensure that land use is compatible with preservation and protection of the environment, natural amenities, resources and community character.
✓	5.2.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address means for achieving efficient use of the land base without exceeding any density limits defined in their official community plans.
N/A	5.2.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of areas hazardous to development, including areas subject to flooding, erosion or slope instability, and strategies to direct development away from such hazards.
	5.3	Transportation and Utilities
N/A	5.3.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of a classification system of rural roadways, including scenic or heritage road designations, in recognition of the object of the Islands Trust.
N/A	5.3.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the impacts of road location, design, construction and systems.
N/A	5.3.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the designation of areas for the landing of emergency helicopters.
✓	5.3.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the development of land use patterns that encourage establishment of bicycle paths and other local and inter-community transportation systems that reduce dependency on private automobile use.

	5.4	Disposal of Waste
N/A	5.4.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of acceptable locations for the disposal of solid waste.

CONSISTENT	NO.	DIRECTIVE POLICY
	5.5	Recreation
N/A	5.5.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the prohibition of destination gaming facilities such as casinos and commercial bingo halls.
N/A	5.5.4	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the location and type of recreational facilities so as not to degrade environmentally sensitive areas, and the designation of locations for marinas, boat launches, docks and anchorages so as not to degrade sensitive marine or coastal areas.
N/A	5.5.5	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification of sites providing safe public access to beaches, the identification and designation of areas of recreational significance, and the designation of locations for community and public boat launches, docks and anchorages.
N/A	5.5.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification and designation of areas for low impact recreational activities and discourage facilities and opportunities for high impact recreational activities.
✓	5.5.7	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the planning for bicycle, pedestrian and equestrian trail systems.
	5.6	Cultural and Natural Heritage
N/A	5.6.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the identification, protection, preservation and enhancement of local heritage.
N/A	5.6.3	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address the preservation and protection of the heritage value and character of historic coastal settlement patterns and remains.
	5.7	Economic Opportunities
N/A	5.7.2	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address economic opportunities that are compatible with conservation of resources and protection of community character.
	5.8	Health and Well-being
✓	5.8.6	Local Trust Committees and Island Municipalities shall, in their official community plans and regulatory bylaws, address their community's current and projected housing requirements and the long-term needs for educational, institutional, community and health-related facilities and services, as well as the cultural and recreational facilities and services.

POLICY STATEMENT COMPLIANCE	
	COMPLIANCE WITH TRUST POLICY
	NOT IN COMPLIANCE WITH TRUST POLICY for the following reasons: The North Salt Spring Waterworks District (NSSWD) is the community water service provider for the subject area. NSSWD has responded to early referral stating that they are not accepting new demands for service at this time due to lack of confirmed supply of potable water.

School District 64 - CRD

Drake Road Community Affordable Housing Development

Stage 2 - Community Communication & Consultation Community Information Meeting 4-March-2015

The Community Information Meeting (CIM) was targeted to the entire community. The primary objective was to meet Islands Trust requirements prior to Local Trust Committee consideration of the draft rezoning bylaw. The secondary objectives were to update the community and neighbours on the status of the project and introduce the electric vehicle car share proposal.

Objectives and Planned Outcomes

- Meet requirements of Islands as part of rezoning process
- Inform community of status of the project
- Inform community of changes made to plan from 60 to 80 units to improve affordability as a result of previous community input
- Inform community of changes made to plan as a result of the referral responses
- Explain the proposed traffic and parking reduction strategy
- Seek input and evaluate interest/acceptance for electric vehicle car share
- Identify concerns and potential opposition (NIMBY)
- Identify non-profit housing providers or others who may wish to collaborate or participate

Information Meeting

The Community Information Meeting (CIM) was held on March 4, 2015 at the Lions Club. The general public was invited through featured ads on the Salt Spring Exchange. Specific efforts were made to ensure participation from non-profit housing providers, the Phoenix School community and neighbours through direct invitations.

The SSI Housing Council was contracted to plan and host the sessions. The format was a mix of presentation, self-guided and guided tours through display materials, an interactive site design exercise and a Q&A session. **Attached 1** for reference are copies of the display materials. A presentation on an electric vehicle car share concept was made by the Transitions Salt Spring Energy Group. **Attached 2** is a copy of the Transitions car share report.

After presentations, participants were requested to complete a survey of their interest in a car share program, as part of the project's transportation/parking reduction strategy.

Attendance and Participation

The project team was successful in attracting a very good turnout to the event, with over 40 participants. There were non-profit housing providers, members of the general public, neighbours and student/staff/parent representatives of the Phoenix School in attendance.

Participation was very strong, both before and after formal presentations. Many community members arrived early and took the opportunity to discuss the project with team members, and many positive and interesting questions were fielded during the Q&A period.


A few concerns were identified (see below), but no opposition to the project was expressed. In fact, feedback was very positive and encouraging, with several participants expressing strong support for the project.

A total of 15 community members responded to the survey about the electric car share concept proposal; feedback was very encouraging as the strong majority indicated a willingness to consider giving up their vehicle if a car share were to be made available. **Attached** is a copy of the survey. Some respondents were not in attendance at the CIM, rather the survey link was re-distributed by those who did attend. We view this to be a good indication of the excitement generated by the car share concept. **Attached 3** is a copy of a summary of the survey results.

Media Coverage

The Driftwood ran an article on the CIM on March 11, 2015, which included results of follow up interviews with Phoenix School and project team representatives. The article was generally quite positive. It did highlight a concern from the Phoenix School about a planned community garden, including some mixed messaging which suggests further communication and consultation work with Phoenix school is required. **Attached 4** is a copy of the article.

Key Messages from Meeting

 Project plans were very well received, with no messaging that would suggest changes to the basic project plans.

During the session, key ideas and concerns from participants were recorded. Most questions were answered easily and seemingly to the satisfaction of the participants. Others we discussed but not fully resolved, for example specifics related to timing, building design, or housing agreements; rather presenters explained that many details would be resolved and decision made as the rezoning process proceeded, funding opportunities arose, and market demand evolves. Participants were satisfied that plans are preliminary, and that many issues remain to be resolved.

No analysis or prioritization of ideas or concerns expressed was undertaken, but rather listed below in order of presentation. Concerns expressed that remain to be resolved or require special attention are identified with a →

Ideas or concerns that arose:

- Consider solar panels on roofs, take care to orient roofs to accommodate
- Try to ensure each unit has sunlight at some point during each day
- Consider including space for artist studios
- Consider geothermal
- Include a good landscaping border between Phoenix School and project
- ◦ Concern expressed about community garden infringing on Phoenix School students' forest area
- Desire for Phoenix School student ongoing involvement in stream restoration
- Need to include vegetable and flower gardens
- Point was made about the need for good management of rental units
- Interest was shown that housing agreements for homeowner units ensure affordability
- Questioning of the need for home ownership
- Need to have some units accessible for those with physical limitations and permit aging in place
- Interest that units be marketed to young and old
- ◦ Concern that environmental sustainability features as described in foundational 2008 concept document could be dropped if not pushed
- Support of concept of diverse population targets
- ◦ Concern about traffic and noise during construction
- ◦ Concern that project will not target those that need affordable housing the most (i.e. those on the street or in Centennial Park).

Thanks to CIM Team Members

- Kisae Petersen, Chas Belknap, Tom Mitchell – SSI Housing Council, CIM sponsor
- Donald Gunn – D. Gunn Designs, site designer
- Kjell Liem – Transitions Salt Spring Energy Group, electric vehicle car share concept
- Nora Layard – assistant facilitator
- Janis Gauthier – JG Consulting Services, project manager

NEXT STEPS

It is recommended that the SD64-CRD Steering Committee direct the consultants to continue with the rezoning process according the current plan, with specific efforts (at the appropriate time) to address concerns identified.

The School District and CRD Welcome You to our Community Information Session

Plans for AFFORDABLE HOUSING on Drake Road

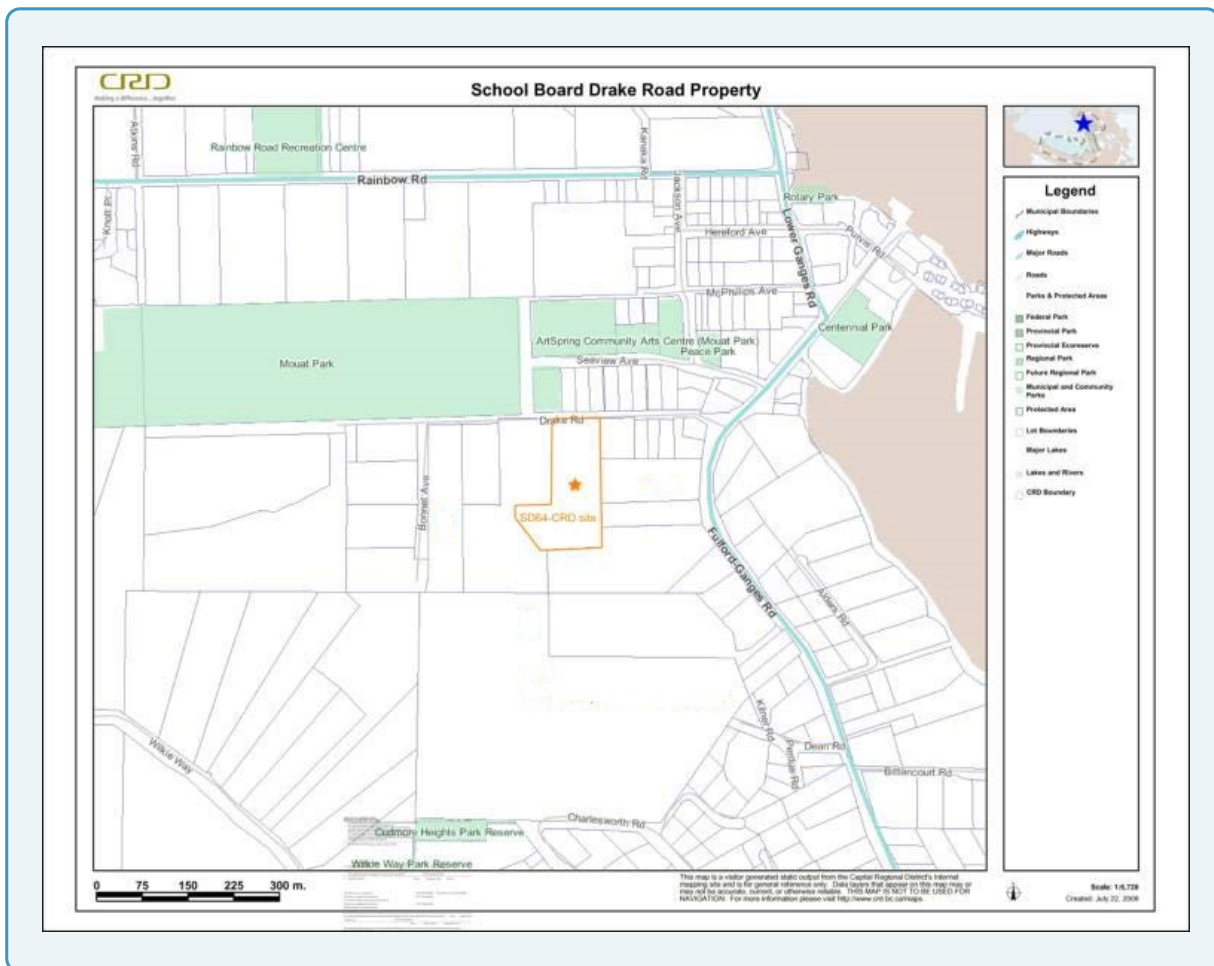
Community Information Session Goals:

To update the community on the status of the project, seek feedback on plans, introduce our car share concept, and identify interested potential residents.

Please give us your input!

- Talk with us today
- Email the Housing Council at housingcouncil@gmail.com

Drake Road Neighbourhood



Thank you for coming!

The School District and CRD Welcome You to our Information Session

GUIDING PRINCIPLES

What are the values that guide our plans?

Project Vision

We see a healthy, diverse neighbourhood with a mix of housing forms, including rental and homeowner options, in a range of prices based on the needs of our community.

The project should include amenities such as a common laundry or community gardens, or provisions for complementary services such as child day care.

Due consideration will always be given to our neighbours, including the Phoenix School students and staff.

Environmental & Sustainability Values

Strong environmental values will feature prominently in all phases of the project's planning, design and construction.

The starting point for planning decisions will be an assessment of the ecological and biophysical capacity of the site to determine where not to build.

Wherever possible the project should adhere to 'Deep Green' principles of resource and energy efficiency, conservation and preservation, and climate change mitigation and adaptation features.

We will incorporate as many features as possible to make the neighbourhood truly pedestrian friendly.



We will strive to create a neighbourhood that respects and enhances our community.

The School District and CRD Welcome You to our Information Session

GUIDING PRINCIPLES

What are the values that guide our plans?

Community Engagement

We value your community and its concerns, and are committed to meaningful neighbourhood consultation and regular community communication.

We will work hard to coordinate development with neighbouring land owners to contribute to a vibrant, livable neighbourhood that respects its existing rural character.

Economic development and capacity building in the community are important to us. As such, we will make every effort to make use of local professional and trade expertise and services whenever possible.

We will also encourage and facilitate the participation of our local non-profit housing societies and engage with our schools to look for opportunities for students to get involved.

Other Community Objectives

Salt Spring's Official Community Plan articulates many community objectives related to land use, including such things as climate action, growth management, food security, economic development, population diversity, school system strength and ecological integrity.

We look forward to working with the Islands Trust to develop a plan that not only provides affordable housing, but also contributes to these other important community objectives.



We will strive to create a neighbourhood that respects and enhances our community.

The School District and CRD Welcome You to our Information Session

WHY DO WE NEED COMMUNITY AFFORDABLE HOUSING?

Affordable housing is a cornerstone of community sustainability and quality of life.

Salt Spring's Housing Needs Assessment conclusion:

“There is a critical and increasing need for more affordable housing to satisfy Salt Spring's population's most basic requirements. There is a large gap in the supply of homeowner housing that is attainable to the general population. The supply of rental housing is in very short supply, often in poor condition and likewise very expensive, a portion of the supply is only available seasonally. There is an increase in homeless persons, many of which are harder to house because they need additional supports.”

How can this project help meet our housing needs?

One of the GUIDING PRINCIPLES of this project is that its design will be NEEDS BASED, with mixed housing types for both the school population and community at large.

There is the opportunity to build:

- Rental housing for low to moderate income singles and families
- Entry level homeowner housing
- Seniors' or other supported housing



***We want to hear from you.
How can this project best meet the needs of our community?***

Check out Salt Spring's Housing Needs Assessment at www.ssicahs.ca.

The School District and CRD Welcome You to our Information Session

Salt Spring's AFFORDABLE HOUSING STRATEGY

How does this project fit in with our Community Affordable Housing Strategy?

Priorities, goals and objectives for Salt Spring's 2011 Housing Strategy were designed to specifically address key issues and housing gaps identified in the 2009 Housing Needs Assessment. While no project can meet every identified need, we will strive to meet a number of key objectives identified in Salt Spring's strategy.

Affordable Housing Strategy Goals and Objectives

GOAL 1 - Increase the supply and diversity of housing along the whole range of affordable housing needs.

We will work with community stakeholders to build partnerships and create innovative solutions for both homeowner and rental housing according to the varied needs of Salt Spring families.

GOAL 2 - Improve housing and support for our most vulnerable populations.

We will work with non-profit societies to help provide rental housing for lower income singles, families and seniors.

GOAL 3 - Better meet the needs of low to moderate income residents.

We will include a range of rental housing for low to moderate income residents, as well as entry-level homeowner options designed to remain affordable over the long-term.

GOAL 4 - Increase the understanding and support for affordable housing.

We will consult with the community in a meaningful manner.

Check out Salt Spring's Housing Needs Assessment at www.ssicahs.ca.

The School District and CRD Welcome You to our Information Session

ENVIRONMENTAL and ECOLOGICAL VALUES

How will this project meet high environmental standards?

Planning for this project began with an environmental and ecological assessment of the property, undertaken by a team of experts in green building, hydrology, ecosystems and wildlife, forestry, agronomy, architectural design, landscape design and riparian management.

The purpose of this assessment was to evaluate the ecological and biophysical capacity of the site to determine where not to build and how to build in a way that would be environmentally and ecologically responsible. Some key recommendations included:

Ecology and wildlife - protect as much of the mixed woodland as possible, create wetlands and maintain a wildlife corridor.

Surface water - store and filter water coming off the hillside before it enters Ganges Creek, a fish bearing stream.

Food production - develop a market garden or community gardens and include private garden spaces and edible landscapes.

Renewable energy - use energy conservation techniques such as efficient appliances and lighting, passive solar design, solar hot water and ground or air source heat pumps.

Optimized site density - design the project to help retain key plants, protect green-ways and linkages, enhance wetlands, reduce paved surfaces and restrict automobile access.

Climate change mitigation and adaptation - strive for forest and soil retention, energy and water efficiency, passive solar and renewable energy, pedestrian friendly design, food security through edible landscapes and organic gardens, carbon sequestration with forest inter-plantings and rainwater collection.

Target net zero site development - plan for no increase in site run-off, balanced cut/fill for excavation, no trucking of loam, rocks or trees or stumps, minimal carbon release from site work and housing design to use little if any purchased energy.

Connectivity - link existing and future trails and design for ecological connectivity with adjacent green space, local streams and fish habitats.

Car share - work with the community and residents to reduce carbon emissions and provide affordable transportation options.

We will strive to implement as many of these recommendations as we can. Check out the “Drake Road Pre-Development Stage 1 Site and Concept Report” and the Transitions Salt Spring Energy Group “PV for EV car share” report.

The School District and CRD Welcome You to our Information Session

NEIGHBOURHOOD IMPACT

How can we minimize impacts to our Neighbours?

Drake Road is a quiet residential road with a rural character. It has many fine homes, the Phoenix Elementary School, Our Lady of Grace Catholic Church, Salt Spring Day Care, the Lions Club hall and Mouat Park.



Facing east along Drake Road - Site on right, Mouat Park on left.

We realize that neighbours will be concerned about impacts during construction, and acknowledge that this project will result in changes to Drake Road. We commit to meaningful consultations with our Drake Road neighbours. We will do our utmost to address any concerns and to incorporate appropriate solutions into planning and construction.

We wish to collaborate and cooperate with other planned developments in the immediate area, in efforts to ensure we contribute to a cohesive, well planned and family-friendly neighbourhood, and to work together to solve common infrastructure challenges.

Our objectives include creating a design that will fit well into the rural character of the neighbourhood, minimize traffic, properly manage storm water drainage, protect wildlife habitat and green space, and minimize other disturbances.

We want to hear your your ideas on how to minimize impacts.

The School District and CRD Welcome You to our Information Session

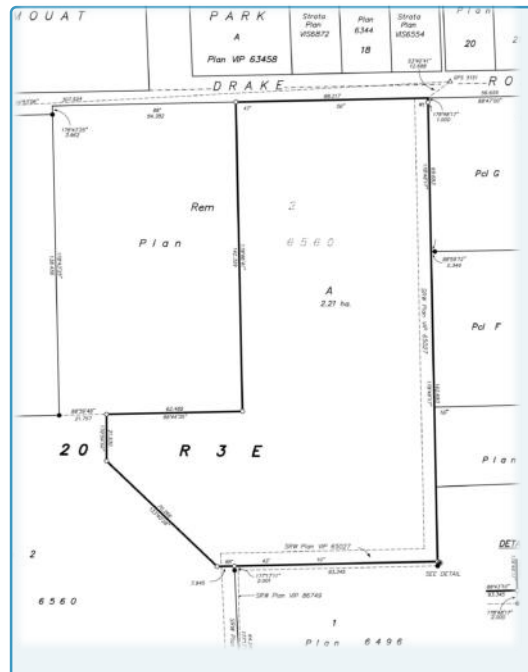
NEIGHBOURHOOD IMPACT

What's next? Other opportunities for input?

This project has been in discussion for many years, and preliminary and conceptual planning were an important part of seeking Ministry of Education approval to build affordable housing on this site. Many design decisions have already been made; many more will be dependent on rezoning requirements, funding availability and conditions, financial feasibility and community input.

What we know now:

- Configuration, outer boundaries and location of the 5.5 acre site. Constraints on the site that will inform housing location (e.g. topography, drainage, and water and sewer line locations).
- Rezoning is underway and has received support from Islands Trust and CRD Advisory Commissions. It has a Ganges Sewer allocation, and is negotiating with NSSWW.
- Our proposal addresses OCP affordability and sustainability objectives and policies, and will meet Ganges Village form & character development permit requirements.
- In order to make the housing truly affordable, we will plan to build up to 80 units.



What remains to be determined:

- The final number of units and their exact location on the site.
- The size and style of units, including any design details.
- The type and location of any common buildings and/or amenities.
- Unit sales prices and rental rates.
- Project partners (e.g. funding agencies, builders/contractors, non-profit societies).

You will have other opportunities for input at upcoming public hearings. And of course we want to hear from you today!

The School District and CRD Welcome You to our Information Session

NEIGHBOURHOOD IMPACT

What's next? Other opportunities for input?

How the planning process works:

Concept Development

Concept development and preliminary feasibility have been completed to secure Ministry of Education, School District 64 and CRD approvals to undertake the project and were designed to include community input received during Community Affordable Housing Strategy process.

Preliminary Planning

Preliminary planning of basic project features is underway to refine feasibility, secure interest from potential funders, get agreement in principle from the Islands Trust, and provide a framework for future community consultations.

Community Information Meetings

This is the second Community Information Meeting designed to update the community on our plans, seek feedback, introduce our car share concept, and identify any potentially interested future residents.

Public Hearings

As part of the rezoning, the Islands Trust will a public hearing to present the plan, get input and ideas, and hear any concerns. These are intended to inform any requirements of the rezoning.

***You will have other opportunities for input at the upcoming Public Hearing.
And of course, we want to hear from you today!***

The School District and CRD Welcome You to our Information Session

POSSIBLE HOUSING STYLES

What will the housing look like?

The project's objective is to provide a mix of affordable homeowner and rental housing. While we envision that there will be a variety of building forms and sizes, there should be some consistency in style that creates an aesthetically pleasing neighbourhood. For affordability purposes and energy efficiency, we will not build single-family homes.

Here are some of the types of buildings we are considering:



Apartments

Apartments have the advantage of a reduced footprint that allows for more green space. Cost savings can also be achieved by sharing many building components with several units (e.g. heating systems), thus improving affordability. Rezoning may permit up to 3 stories.

4-plex or 6-plex

Other multi-unit building forms can often look very much like single family homes and if well designed can provide the same experiences of independence and privacy. Cost savings can also be achieved by sharing building components. Rezoning may permit up to 3 stories.



Regardless of style, all housing will be energy and resource efficient and designed.

PV for EV car share preliminary feasibility study

School District 64 - CRD Drake Rd. Affordable Housing project



Kjell Liem, February 2015
Saltspring Island, BC

On behalf of the

Salt Spring Community Energy Group



Contents

1. Introduction
2. Preliminary concept feasibility for PV for EV station(s)
 - A. Preliminary technical analysis
 - B. Siting
 - C. Concept design for structure and equipment
 - D. Preliminary estimate of ongoing infrastructure maintenance and replacement costs and schedules
 - E. Array/Parking/Charging structure sketch with basic system specs.
 - F. Preliminary cost estimates for structure, equipment and vehicles
3. Preliminary car share feasibility
 - G. List of operators and contact info
 - H. List of organizations and opportunities reviewed
 - I. Detail recommendations
 - J. Preliminary exploratory budget
4. Conclusion
5. Appendix

1. Introduction

The Drake Rd. Affordable Housing Project is an initiative of the Capital Regional District (CRD) and School District 64 (SD 64) to develop a housing project on Salt Spring Island, BC. In August 2013 the Drake Rd. Affordable Housing Project submitted a rezoning proposal to the Islands Trust Committee (LTC). The proposal included a letter from the Transition Salt Spring Community Energy Group (CEG) that expressed interest in exploring Community Energy Project feasibility for the Drake Rd. development. Project suggestions included using solar photovoltaic generation (PV) to offset electric vehicle (EV) charging as well as research into the opportunity for car sharing. As the rezoning proposal requested a reduction in required parking spaces, the LTC directed that planning staff ask for a evidence based rational to support a proposed 60% decrease in required parking. This report explores the concept of PV for EV charging for the Drake Rd. site and car sharing programs as a measure to improve access and affordability and outlines one strategy to reduce the number of parking spaces needed.



2. Preliminary concept feasibility for PV for EV

Solar PV has grown into an economically mature technology that provides a portion of the energy for the electrical grid in some countries. For example, Germany generates 5% of its electricity needs from PV with peak production able to supply over 50% of demand on sunny days. The global PV industry has grown exponentially in the last decade to a \$100 billion dollar a year industry. As equipment manufacturers now compete in an international market the industry has matured to the point where global installation reached 35 gigawatts (GW) in 2014, an astonishing 2 million solar panels are installed every week. The result of this growing demand has meant that the price of PV modules has dropped as much as 80% in the last six years. In some jurisdictions, PV has now met or surpassed “grid parity”, where the cost of solar PV electricity (called the “levelized cost of energy” [LCOE], which is the cost of the system divided by the overall energy production of it’s working life), equals the utility’s retail price. There are a variety of opinions on how close British Columbia is to grid parity, and the forthcoming financial analysis of CEG’s Solar Scholarship project at the Gulf Islands Secondary School will improve our understanding of how close PV installations are to this important price point for community projects on Salt Spring Island.

The urgency of curbing air pollution and climate change by reducing the carbon emissions from automobiles has spurred the development of electric vehicles (EV’s). Many automakers are producing EV’s as production vehicles, among them Nissan, General Motors, Volkswagen, Mitsubishi, BMW and Tesla. In 2014 the number of EV’s on Salt Spring Island grew from under 5 to 27.¹

According to recent research, combining onsite PV electrical generation with EV charging is becoming an effective and popular technology pairing. A study of electric car owners in California showed that 39% of EV owners generate their own electricity from PV systems with another 17% planning on installing similar installations.²

1 Email correspondence with local EV club.

2 <http://energycenter.org/clean-vehicle-rebate-project/vehicle-owner-survey/july-2012-survey>



In British Columbia, the electricity utility BC Hydro offers a Net Metering program which allows customers the option of producing renewable energy for their own use and supplying surplus electricity to the power grid. Excess production will “turn the meter backwards” as the surplus is distributed to nearby utility customers. This surplus energy earns a credit toward the next months consumption. If a customers energy production exceeds their annual consumption, a payment called a Generation Settlement, is earned at the rate of just under \$0.10/kWh and is paid by the utility at the end of the year.

A. Preliminary Technical Analysis

PV

For the PV an initial site assessment was undertaken in mid 2014 at the Drake Rd. site. The Solar Pathfinder site analysis report shows some shading, but over the year the site would produce 91% of the maximum potential energy if there was zero shade.³ This is a good location for a PV array, in summer, when the solar resource is greatest up to 99% of the available solar energy will be captured. Shading will reduce production to slightly less than 75% in December and January, however there is very little energy to capture during the winter, so a loss here has little overall effect. The shading report uses Victoria Airport data as it’s reference and it concludes that a 4kW PV system with 91% solar gain should produce 4,278kWh a year⁴. Natural Resources Canada reports that Ganges receives 1066kWh/kw as opposed to 1080kWh/kw in Sidney where the Victoria Airport is located, so we can reduce our expectation by about 2% for a total of 4,192kWh per year.

It should be noted that technical analysis is preliminary, and no guarantee of actual production. A changing climate brings changes in weather values, and historical models cannot provide perfect future production values. Sighting and landscaping can introduce shade, so detailed planning is necessary for full electricity production.

³ See Appendix G for Solar Assessment

⁴ Natural Resources Canada <http://pv.nrcan.gc.ca/>



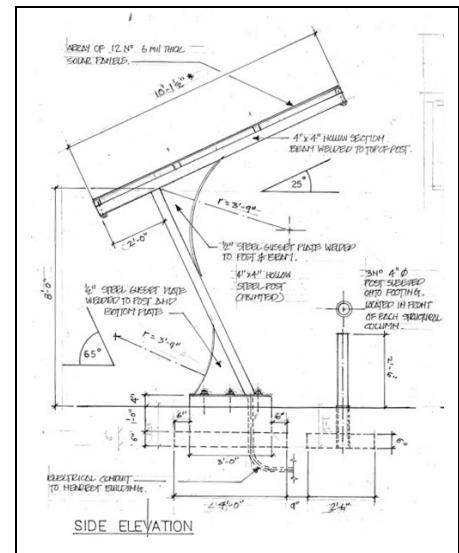
EV Charging Station

The EV charging station would be similar to the charging station installed by Transition Salt Spring in 2014 at the Artspring parking lot. This is a level 2 charging station which requires a dedicated 40amp 240volt circuit. A 2013 Nissan Leaf with a 6.6kW onboard charger can charge 50km per hour of charging, providing a decent on island range in a reasonably short time.⁶

The vehicle: the author would recommend is a 2013 Nissan Leaf. This car has the faster 6.6kW charger mentioned above which would make it more available for use. The Nissan Leaf is the biggest selling electric car in the world, and is the most popular electric vehicle on Salt Spring. The fact that Motorize Direct, the largest dealer of used Leafs, is in nearby Sidney, BC is a big factor in the uptake in this particular model. Buying a used vehicle for car share start ups is a critical strategy, as it takes many years to develop the usage revenue which is needed to pay for the costs of a car share program, including the high depreciation costs of new cars.

B. Siting

Initial discussions of the PV for EV structure discovered two areas of interest. 1) A location next to the parking spaces at phase one was discussed as a potential bus shelter structure subject to local transit planning.⁸ 2) Another location was next to the second phase of the development on the north side of the lane. This location will optimize the solar exposure, and be accessible to both the initial phase of the Drake Rd project, as well as subsequent phases. The location will be included in the updated conceptual site plan drawing. The EV charger(s) would be positioned next to the dedicated parking spot(s).



Conceptual Drawing: Donald Gunn

⁶ <http://motorizevictoria.ca/inventory/electric/> accessed on Feb 20, 2015

⁸ see appendix B for conceptual drawing



C. Concept design for structure and equipment

Parking lot structures that provide shade for vehicles are now available as turnkey packages. However, a structure fabricated out of steel and built on island could employ local professionals: designers and metal fabricators, in particular. Steel structures have tremendous strength and longevity, with little maintenance expense. A timber structure would also be appropriate, depending on costs, and architectural needs.

D. Preliminary estimate of ongoing infrastructure maintenance and replacement costs and schedules

PV Systems are notably robust and require very little maintenance. Panels typically have performance warranties of 25 to 30 year. The panels may need washing, depending on site

conditions (eg: dust from a construction in the area may soil the panels and reduce their performance). Panel washing is not considered absolutely necessary for this part of the world: owing to the amount of rain we receive, which has been found effective in keeping panels clean.

PV for EV Costs and Maintenance

Structure Cost: Steelwork \$7000-\$10,000 Delivery, Installation & Finishing \$2000
4kW PV System: \$15,000 installed
2013 Nissan Leaf \$25,086 inc taxes and fees
Car Charger: Sun Country EV40 \$700 plus approx \$300 for installation.
Structure maintenance after 10yrs: paint \$300
Car charger replacement 10yrs: \$800
PV inverter replacement 15yrs: \$2000
Leaf battery replacement 10yrs: \$5,500

The inverter, which is a major component of a PV system would normally carry a 10 year warranty. So too the car charger.

Consequently, an inverter and car charger replacement fund has been added to the infrastructure maintenance and replacement costs. Car charger replacement \$800, in 10yrs. Inverter replacement \$2000, in 15yrs. Structure maintenance (repaint), \$300 in 10yrs. Overall, under \$250yr would suffice for structure and equipment maintenance.



E. Array/Parking/Charging structure sketch with basic system specs.

4kW PV array with a 4kW SMA inverter. Car charger could be a Sun Country Highway charger. Sun Country Highway recommended the EV40, as it would be capable of delivering the higher charging that a Nissan Leaf is capable of using.

F. Preliminary cost estimates for structure, equipment and vehicles.

For the PV array, equipment and installation was quoted at \$16,000, and \$15,000 from PV installers Home Energy Solutions in Victoria, and Small Planet Energy in Campbell River respectively. For an electric vehicle, I was quoted \$25,086 for a 2013 Leaf on Feb 17, 2015⁹¹⁰. An appropriate charging station was quoted at \$699 from Sun Country Highway.¹¹ For the steelwork structure I got estimates from Ironic Development, and Steve Forbes Welding: \$10,000 from Ironic; and \$6000-\$7000 Steve Forbes, without paint or delivery. I have added \$2000 for delivery, installation, and finishing. Based on these figures I suggest a preliminary budget of \$52,000.

9 See appendix for photo of a Nissan Leaf

10 <http://www.motorizevictoria.ca/inventory/electric> retrieved Feb 17, 2015

11 See appendix for car charging quote



3. Preliminary Car Share Feasibility

The first reference to car sharing in print identifies the Selbstfahrergenossenschaft car share program in a housing cooperative that got underway in Zürich in 1948 –Wikipedia

Understanding contemporary trends in transportation, technology, and mobility patterns, can inform best practices in residential development. Demographic patterns are pointing to a decline in private automobile use. According to the Economist magazine, “All over the rich world ...the share of young households without cars increased from 20% to 28% between 1998 and 2008.”¹³ The younger generation has begun to turn it’s back on vehicle ownership in favor of public transit, and developments like car share programs. This trend has been called “peak car”.

Car sharing programs, companies, and coops belong to a phenomenon called the “sharing economy”, a socio-economic system built around the sharing of human and physical resources, enabled by the rapid expansion of the information and communication technologies. Cars are owned by a company, coop or group, and are used by members or customers on a time-limited basis for a fee. Car share programs have been growing rapidly. Navigant Research projects that global car sharing services revenue will approach \$1 billion in 2013 and grow to \$6.2 billion by 2020.¹⁴

Benefits

- Community car share programs lead to:
- Reduced vehicle ownership
 - Reduced vehicle kilometers travelled
 - Reduced traffic
 - Reduced parking demand
 - Increase in public transportation use
 - Increase in individual and household’s ability to access an automobile
 - Greater mobility
 - More efficient land use¹²

Contemporary transportation strategies –ones that include consideration of energy and carbon emissions planning- can also increase quality of life and affordability. Moving away from fossil fuel use can help develop local resources, and keep dollars on the island. As well, society has an international mandate via several climate accords to leave most fossil fuel reserves in the ground to prevent runaway global warming from carbon emissions.

According to Salt Spring Islands Climate Action Plan V1.0 “on island private automobile use

¹² <http://www.toolkit.bc.ca/tool/community-car-share-program>

¹³ “Seeing the back of the car”. The Economist. 2012-09-22. Retrieved 2014-07-15.

¹⁴ Carsharing Programs: Carsharing Membership and Vehicle Fleets, Personal Vehicle Reduction, and Revenue from Carsharing Services: GlobalMarket Analysis and Forecasts”. Navigant Research 2013-09-01



is the largest direct source of GHG emissions.”¹⁵ A full 36% of our carbon emissions come from on-island transportation.

The growth of available battery electric vehicles (EV’s) and the improvement in the economics of photovoltaic systems provide a clean, low-carbon mechanism that provides energy for transportation. Combining on island energy generation with electric vehicles addresses the largest segment of Salt Spring’s Carbon Emissions and reduces our dependency on imported fossil fuels. There is a significant impact, which enhances our local resiliency and directly and effectively mitigates global warming. This is an opportunity for the island to provide it’s own energy needs; as well as creating clean energy employment, this keeps some of our energy dollars within the community. With the volatility of gasoline and other energy prices, long-term investments into renewable energy are a hedge against rising energy costs.

Three main types of Car Share Organizations (CSO) dominate the North American Market.

- For-profit CSOs are privately held companies.
- Non-profit CSOs are incorporated as tax-exempt organizations.
- Cooperative CSOs are run by members that join by purchasing a “share” in the organization, which essentially acts the same as refundable deposits used by for-profit and non-profit operators.¹⁶

Looking at the long-term cost of ownership electric vehicles can provide cost of ownership savings with reduced maintenance and fuel costs. But car sharing also impacts the rate of vehicle use. According to one study:

Approximately 25% of respondents sold a vehicle, and roughly another 25% of the total sample would have considered obtaining a vehicle, if car sharing disappeared.¹⁷

Car sharing leads to less driving, less emissions, less private vehicle ownership –and consequently- less need for parking infrastructure. However, both electric vehicles and PV systems require significant capital investment. By employing the car share model costs can be shared between multiple users to improve the affordability. This would make the

15 <http://climateactionsaltspring.ca/wp-content/uploads/2011/02/SSI-Climate-Action-Plan-V1.0-full2.pdf> pg 6

16 <http://www.toolkit.bc.ca/tool/community-car-share-program>

17 Adam Millard-Ball, Gail Murray, Jessica ter Schure, Christine Fox, and Jon Burhardt, (2005). Car-Sharing: Where and How it Succeeds. Transit Cooperative Research Program.



benefits of PV electricity generation and low emission EV transportation available to those who would otherwise not be able to afford them.

According to a study by clean technology research firm Navigant Research: “every vehicle employed in a car sharing fleet is credited for taking approximately 5 to 11 vehicles off the road.”¹⁸ This approach can also multiply the environmental benefits by displacing several carbon polluting vehicles from our roads. It can mean less area for parking and more green space.

1. List of operators and contact info

Victoria Car Share	250 995-0265	manager@victoriacarshare.ca	Box 23025, RPO Cook St. Victoria, BC V8V 4Z8
Kootenay Car Share Co-op	250 352-2033	info@carsharecoop.ca	525 Josephine Street, Nelson, BC V1L 1W5
Coast Car Co-op	778 374-3092	info@carsharecoop.ca	P.O. Box 103, Gibsons, BC V0N 1V0
Ogo Car Share	250 469-6617	info@ogocarshare.ca	200 – 1262 St. Paul Street Kelowna, BC V1Y 2C9
Nanaimo Carshare	250 741-4141	NanaimoCarShareInfo@gmail.com	PO Box 287 STN A Nanaimo, BC V9R 5K9
Modo	604 685-1393	info@modo.coop	200 – 470 Granville Street Vancouver, BC V6C 1V5
Murakami Gardens Care Share (Salt Spring Community Services)	250-537-9971	saltspringcommunityservices.ca	268 Fulford-Ganges Rd Salt Spring Island, BC V8K 2K6

H. List of organizations and opportunities examined

Initial email correspondence with **Victoria Car Share** cooperative was very encouraging with a proposal to pursue grant funds for an expansion on Victoria Car Share Co-op (VCS) to the Gulf Islands including Salt Spring was suggested. However, a follow up meeting in Victoria on June 24, 2014 with the VCS executive director Pam Hartling, and director Sarah

¹⁸ Carsharing Programs: Carsharing Membership and Vehicle Fleets, Personal Vehicle Reduction, and Revenue from Carsharing Services: GlobalMarket Analysis and Forecasts”. Navigant Research 2013-09-01



Webb were more circumspect upon the realization of the needs of the Drake Rd. housing development to have priority access to a car. It was suggested that a much larger customer base, and the corresponding operating revenue, would need to come from a wider membership in order to justify the Victoria Car Share interest. A guaranteed revenue of \$1200 per month was suggested a minimum for feasibility for their model. Car Share operations often point to the large gap between the perceived cost of private car ownership, and the actual costs. I've included a couple of calculations of ownership costs in Appendix C.

The co-op is a popular model for developing a community wide car share program as the co-op movement makes an effort to support other co-ops. The **Car Sharing Association** organizes information sharing for Canadian car share programs as a way “to support the sustainability and efficacy of the car sharing industry”¹⁹ At their January AGM, the Victoria Car Share members voted unanimously to amalgamate with **Modo**, the much larger car share co-op based in Vancouver. One very attractive feature of the Car Share Co-op model is the partnerships Co-ops have between them for “roaming” feature where you can use your car share membership to use cars in other communities. Modos offers its operations software free of charge for start up car share co-ops which is a huge benefit. It also partners with developers who usually “purchase the cars to be shared while Modos maintains, insures, and absorbs the liabilities associated with the cars, and administers the car sharing service. Developers may realize cost savings associated with relaxed parking requirements.”²⁰

All car share programs are unique. From luxury performance car share programs in Silicon Valley (Tesla Motors electric vehicles) to urban programs with many hundreds of cars, to rural car share coops with just one vehicle, there is a wide range of operations with many unique parameters. For car share co-ops that exist in rural BC in communities with a population similar or smaller than Saltspring Island, vehicles are not tied to the transportation needs of a housing project, but rather are publically available community wide. The **Kootenay Car Share Co-Operative** stands out as probably the most developed rural car share program anywhere. In a series of telephone conversations with Colleen Matte of Kootenay Car Share Cooperative (starting in the spring of 2014, with a final call on

19 <http://carsharing.org/purpose-goal-and-mission/>

20 <http://www.modos.coop/developers>



February 19, 2015), we discussed rural examples specifically. Colleen shared with me a copy of her Master’s thesis on the social factors of rural car share success. The important factors include a culture of sharing, a local champion who understands the intricacies of the local car culture, a correlation with left leaning political support, and lower than average income.²¹ Interestingly, the lack of access to public transportation options seems to help rural car share programs. For urban car share programs, public transportation helps car share programs by providing alternatives to private car ownership.

The one model that has often been tried, and has often failed, is the developer initiated private car share. This is ironic since the first car share (first mentioned in print, as noted above), the Selbstfahrergenossenschaft car share program in Zurich, was specific to a housing cooperative and this is the model to which the successful **Murakami Gardens car share** belongs. The affordable housing project Murakami Gardens, owned and operated by the not-for-profit Salt Spring and Southern Gulf Islands Community Services Society currently operates Salt Spring Island’s only car share and it appears to meet some of the residents’ transportation needs well. The program was put in place to reduce the need for parking spaces, and evidence to date shows that it works.²³ Currently 9 members participate in the car share program. The facility has 8 parking spots for the 27unit complex with 5 parking spots in use, including the shared car, when I visited. Some residents have chosen not to replace their vehicles when it comes time to retire them, choosing the car share option instead.

Murakami Gardens Care Share

9 car share users/27 unit complex
Approx 14 trips per week
Medical trips priority
Max 12 hours of use/per user/week
Permission of administrator needed for trips over 4hrs in length
Over 90% of trips are less than 10km
Hands-on administration
Resident’s also receive bus passes

21 Colleen Marie Matte, The social Factors that influence the success of rural carshare operations in the Kootenay region of British Columbia, Royal Roads University, summer 2014

23 See appendix A for photo survey



Financial management for this car share is quite informal, based on the administrators understanding of residents needs and situation. Fuel purchases for the car is meant to be on an honor system; however, it's not uncommon for residents to use the car, even for longer trips, and neglect to pay for fuel. In these cases Community Services Society purchases fuel for the car, often by reimbursing the administrator. The car is insured by Community Services as part of it's fleet of vehicles, and maintenance expenses for 2013 were \$1600. Annual mileage numbers for use of the car were not available, though future research may be able to produce some numbers.

I. Programs and report recommendations

The wide variation in car share operations and extraordinary amount of detail that comprises this complex business, makes preliminary assumptions about operating feasibility difficult and impractical. Growing a car share company, or co-op is somewhat like starting a farm -a long-term project that requires vision and flexibility. It's unlikely to reach profitability for many years. I spoke with Karen New, the Information Systems Director²⁶ at Modo, who explained the many challenges and opportunities involved with growing a Car Share Coop. The business planning uses a multi-stage approach with unique business plans for several stages: 1) Purchase 2) Operational Expenses 3) Depreciation Expenses. 4) Profitability. For Modo, this required a vehicle base of 200 cars, and 15yrs. The Victoria Car Share reached the same stage with 23 cars. The Kootenay Car Share exchanged car use credits for many years before being able to fund administration expenses.

Rural Co-op Car share programs typically, with the exception of the Murakami Gardens program, do not lend themselves to meeting the transportation needs of a single housing development. Also, integrating car share cars within existing programs takes a critical mass of users which may not be available within a lower density area. There is an inherent conflict with the location of the home parking spot and vehicle availability. If the vehicle resides somewhere in the community at large it becomes inconvenient to the residents of the housing project. If the community vehicle resides at the housing project it becomes inconvenient to the community at large. Similarly, the often considered demand for a community based truck share would likely not meet the requirements for a reduction in

²⁶ Phone interview February 19, 2015



parking as sought by the Drake Rd project unless transportation to and from the truck was by foot, public transit, or other non car mode.²⁷

After discussions with Car share co-op operators, and the Murakami Gardens car share, my recommendation is a model based on the Murakami Car Share. A local approach was supported by my conversation with Charlotte Argue, a former GISS student who works for the Fraser Basin Council as the assistant manager of Climate Change and Air Quality Program. Charlotte has had extensive experience in electric vehicle and car charging programs, and has been on the board of directors of the MODO co-op for many years.

Initial capital costs may need to come from funds sourced during the housing project financing. The ownership of the vehicle, and the management of car share is born by a third party, be it a transportation co-operative, or a non-profit society, or property manager. Administration costs would require start up funds to ensure the program has support to get itself up and running. Ongoing management is sometimes remunerated in vehicle usage credits, which can be a way the program afford an administrator until such time as car share becomes fully self supporting.

Because of the similarity between housing projects with their close proximity to central conveniences we can assume similar usage patterns. The vast majority of the Murakami car share trips are less than 10 kilometres. Trips beyond 100km, or many back to back trips totalling over 100km, require up to 4hrs of downtime for battery charging. The majority of charging is usually done overnight, with the vehicle being fully charged by morning. To gain most benefit, it would be important for the PV for EV installation to have it's own dedicated electrical service and utility meter. With electric vehicles and a PV offsetting the electricity usage, the fuel costs would be negligible. Should the electric vehicle see high usage, electricity will still likely be charged at the lower tier 1 rates, currently \$.075 kWh. With very high usage, the car share program will have proven successful, and able recover the small energy costs with the usage charges.



Maintenance costs of an EV are minimal, but vehicle and battery replacement funds need to be rolled into program costs. A strategic decision to the timing of the vehicle replacement can reflect future market conditions of electric vehicles, including resale opportunities, and potential government subsidies. (The province of Ontario offers a \$8,500 rebate on new EV's and a shift in market and/or political winds can create more opportunities for affordable EV ownership. In fact the newly release BC 2015 Budget includes some new financial incentives for both electric vehicles and EV Charging installation. If EV leasing becomes as competitive as it is in California, a second vehicle could be added for very little cost.)

Electric vehicle motor efficiency is very high in comparison to the internal combustion engine. The Nissan Leaf, which is the best selling electric car worldwide uses just 0.18kWh per kilometre²⁹, which is just 1.8 cents/km at \$0.10/kWh. Using these numbers a 4kW array would create 23,288 km/yr of electricity energy, which would cover over 2000, 10km trips. This would provide for of an expansion of the fleet, as the program grows given that the Drake Rd project is a multi-phased development. Any surplus of energy would also create revenue that could contribute to the operational expenses of the program however small it may.

As mentioned above, the Murakami car share usage patterns shows most trips, over 90% are less than 10km, which lends itself nicely to electric vehicle use. The short distance of the trips reduces or eliminates the range anxiety issues that are associated with electric vehicles.

There are some other forms of transportation that might be suitable for The Drake Rd. housing development with the thought of affordability and reducing parking pressure by providing shared vehicles. The Neighbourhood Electric Vehicle (NEV) classification is a distinction from the Ministry of Transportation for low speed electric vehicles. These are vehicles that are limited to 40kmh due to their lighter weight and lack of high speed safety testing. They are only permitted to operate on roads with a speed limit less than 40 kmh or in approved NEV zones. However there are NEV zones throughout BC communities

²⁹ This number is an extrapolation of US Department of Energy figures of 29kWh/100miles from the website www.fueleconomy.gov/feg/Find.do?action=sbs&id=33558 accessed on Feb 19, 2014.



including Vancouver, Burnaby, Richmond, Whistler, North Vancouver, Port Coquitlam, Gabriola Island, Campbell River -but not, as yet, Salt Spring Island. Drake road, and the island roads north of the Fulford Ganges/Drake road intersection could potentially become an NEV zone with the exception of Long Harbour road. NEV's typically cost half of regular electric vehicles. An even less expensive form of in town transportation is the electric velomobile or VeloCar. These vehicles do not require a licence, or insurance. They are typically three-wheeled, recumbent bicycles that come with a fairing (a hard shell) for weather protection. The Elf³⁰ is on the market and in it's second version. It retails for \$5,500US. The Elf gets a remarkable 1,800MPG equivalent of gasoline. Vancouverite John Stonier has been pioneering VeloMetro³¹, an urban shared vehicle that is a stylish velomobile. VeloMetro has partnered with the National Research Council of Canada, the Natural Sciences and Engineering Research Council, AutoDesk (an engineering software company) amongst others. Electric bikes electric cargo bikes and regular bikes are also able to be shared in a residential sharing program. Young families can use these vehicles for recreation as well as errands around Ganges. The local bike shop sells electric bikes for \$1500. Outlets for bicycle charging and a bike rack could also be included in the PV for EV charging station.

G. Preliminary exploratory budget

The basic costs can be broken into three categories: Capital Expenses, for purchase of the infrastructure; Operational Expenses; and Depreciation Expenses. As the car share grows, through the multiple phases of the housing development, the business plan and budget would need to revisit these initial categories. For simplicity sake, here is a look at a potential budget.

Capital Expenditures	Operational expenses	Depreciation and Maintenance
\$52,000	\$6000/yr	\$340/yr + car depreciation
PV system \$15,000 Structure Installed \$11,000 Nissan Leaf \$25,000 Charger Installed \$1000	Administration est. 400/m Insurance est. \$100/m	Inverter replacement fund 10 yrs \$1300 Charger replacement fund 10 yrs \$800 Structure maintenance fund 10 yrs \$300

30 www.orgainictransit.com

31 www.velometro.com



Conclusion

Car sharing is a growing service, becoming an increasingly popular form of transportation especially for younger drivers. Electric vehicles are also becoming very popular, with a significant uptake on Salt Spring Island recently. The costs of solar PV have fallen in recent years, making for cost effective energy in many places. The Drake Rd. project is a good location for a PV array. Investing in PV to offset the electricity an electric vehicle uses is facilitated with BC Hydro's Net metering program.

PV for EV can help lower our carbon emissions, as well as keep some of our energy dollars on the island to enhance a local, resilient economy. Local governments have an important role to play due to the influence they have over land use and transportation. For example, the City of Vancouver has a parking by-law that allows developers to reduce parking for every car share car.³²³³

A car share can help make resident's transportation needs more affordable by reducing or eliminating the need to own a private automobile, as well as a parking space. The upfront capital investment for an electric car, a 4kW PV installation, and a charging station is estimated at \$52,000. An administration fund of \$6000 to cover the first year of operation would also be recommended.

There are many versions of car share programs in BC. The one most appropriate to the Drake Rd. Affordable Housing Project is the Murakami Gardens Car Share. This car share is proving to work well, with an average of 14 trips per week. A photo survey of the parking situation at Murakami Gardens shows a limited need for parking spaces.

Some other transportation options for shorter trips include NEV's, electric velomobiles, electric bikes and cargo bikes, and regular bikes. These vehicles have a smaller environmental footprint than electric cars, and cost less to buy and operate. These vehicles can also be shared.

32 See appendix D for relevant OCP objectives



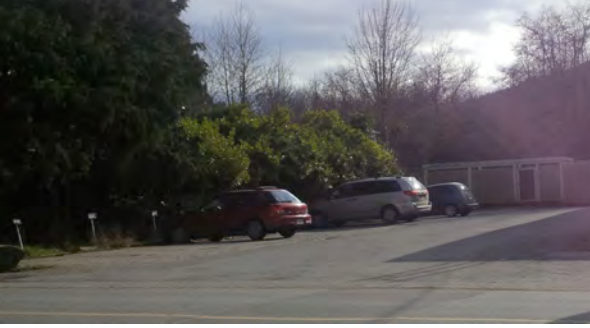

31 <http://www.toolkit.bc.ca/tool/community-car-share-program>



APPENDIX

Appendix A

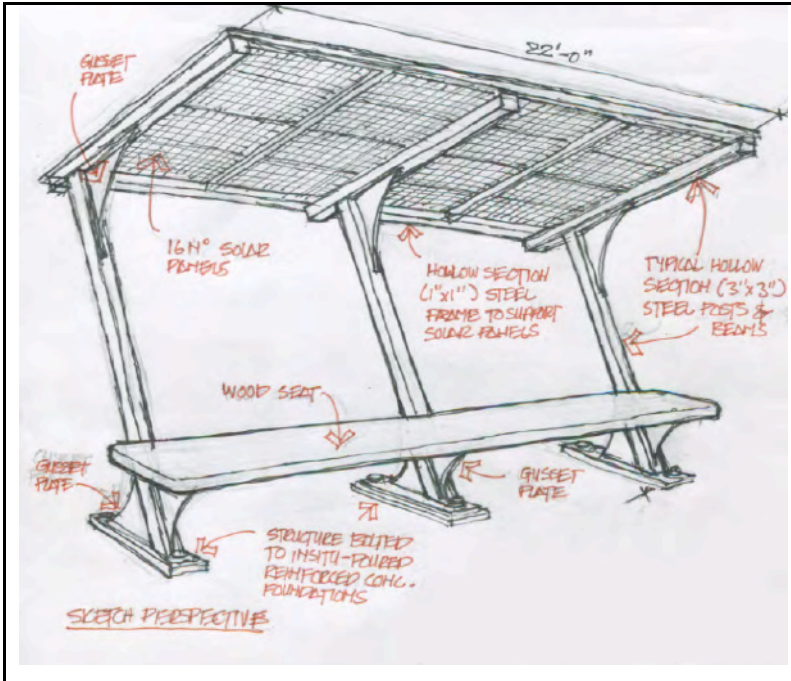
Murikami Gardens Parking Survey 9 parking spaces/21 units

	
Five cars, one staff van: Monday July 14, 2014 4pm	One car: Wed Feb 11, 2015 11:38am
	
Three cars: Sat Feb 14, 2015 1:13pm	Four cars: Tues Feb 17 7:04pm



Appendix B

PV Bus Shelter Concept: Donald Gunn Design



Appendix C

Private vehicle cost of ownership data

CAA Driving Cost 2013 – based on the Honda Civic LX 2013

Km driven	Annual operating	Annual ownership	Total cost	Cost per km per year
12,000	\$1,743.60	\$6,214.20	\$7,957.80	\$0.66

And,

Kjell Liem's 2001 Mazda Truck= \$4941 from www.modo.coop/calculator/owning



Appendix D

Salt Spring Island OCP Objectives

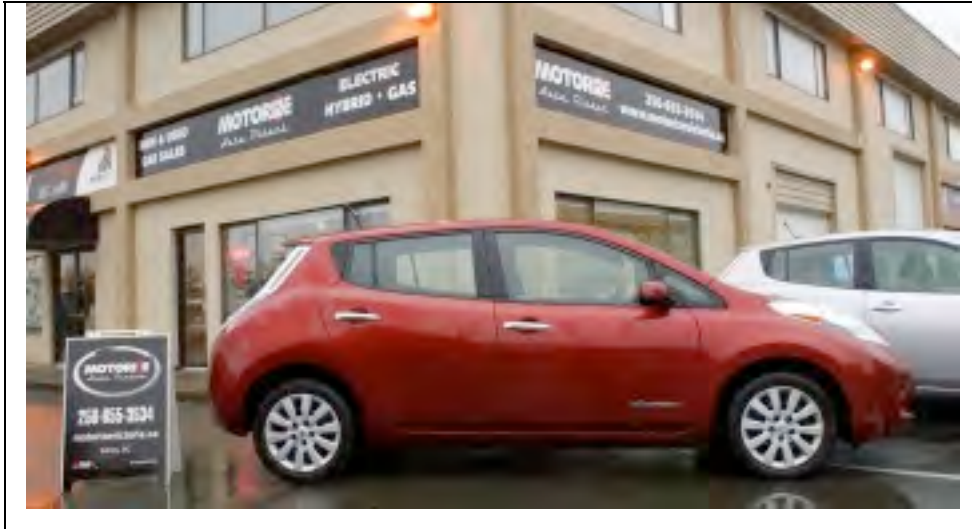
Official Community Plan A.6.1 OBJECTIVES

A.6.1.1 To consider the impacts of climate change as a central factor in land use decision making.
A.6.1.2 To establish the importance of energy efficiency, energy security, greenhouse gas emissions reduction, and carbon cycling in land use, site planning, building design and transportation.
A.6.1.3 To promote the use of renewable energy and the development of renewable energy sources.
A.6.1.4 To work with other agencies, stakeholders and the community to achieve energy conservation and emissions reduction goals.
A.6.1.5 To support actions to minimize greenhouse gas emissions and to adapt to the impacts of climate change in land use decision-making.
A.6.1.6 To recognize the importance of our forested lands in removing carbon dioxide from the atmosphere.



Appendix E

2013 Nissan Leaf



Appendix F



Truck available for rental at Salt Spring Gas: Feb 14, 2015



Appendix G

Solar Pathfinder report.

Report Name	DrakeRoadFirstLookMay2014
Report Date	08/05/2014 04:29:23
Declination	16d 43m
Location	Lat/Long specified
Lat/Long	48.8 / -123.45
Weather Station Site Distance	Victoria Int'l, BC, Elevation: 62 Feet, (48.650/-123.433) 10 Miles
Report Type	PV
Array Type	Fixed Angle
Tilt Angle Ideal Tilt Angle	20.00 deg 48.80 deg
Azimuth	180.00 deg
Ideal Azimuth	180.00 deg
Electric Cost	0.1 (\$/kWh)
Panel Make	Canadian Solar
Panel Model	CS5P-250M
Panel Count	16
DC Rate (per panel)	250.0 Watts
Unshaded Percent	95.3 %
STC System Size DC System Size	4.00 kW 3.81 kW
AC System Size	3.05 kW
Inverter Make	SMA America
Inverter Model Inverter Count	SB4000US (240V) 1
Derate Method	System Setting
DC to AC Derate Factor	0.800
Layout Configuration	Custom
Layout Point Count	1



Solar Obstruction Data (Part 1 of 2)					
Month	Unshaded % of Ideal Site Azimuth=180 Tilt=48.8	Actual Shaded Solar Radiation Azimuth=180.0 Tilt=20.0 kWh/m•	Actual Shaded AC Energy (kWh)Azimuth=1 80.00 Tilt=20.00	Actual Unshaded AC Energy (kWh)Azimuth=1 80.0 Tilt=20.00	Ideal Unshaded AC Energy (kWh)Azimuth=1 80.0 Tilt=48.80
January	75.08%	0.91	82.18	105.00	148.00
February	86.43%	1.96	169.99	192.00	240.00
March	96.20%	3.16	308.90	318.00	341.00
April	98.78%	4.60	426.69	429.00	423.00
May	99.08%	6.02	568.20	569.00	513.00
June	98.50%	5.61	509.20	511.00	443.00
July	98.89%	6.39	586.04	588.00	521.00
August	98.86%	6.08	561.94	564.00	543.00
September	97.78%	4.56	412.00	416.00	451.00
October	89.45%	2.51	234.44	253.00	304.00
November	78.40%	1.37	123.93	149.00	201.00
December	72.51%	0.84	76.43	96.00	150.00
Totals	90.83%	43.99	4,059.93	4,190.00	4,278.00
	Unweighted	Effect: 93.53%			
	Yearly Avg	Sun Hrs: 3.67			

Solar Obstruction Data (Part 2 of 2)	
Month	PV Solar Cost Savings^{0.1} (\$/kWh)
January	\$8.22
February	\$17.00
March	\$30.89
April	\$42.67
May	\$56.82
June	\$50.92
July	\$58.60
August	\$56.19
September	\$41.20
October	\$23.44
November	\$12.39
December	\$7.64
Totals	\$405.99



Salt Spring Community Energy Group: Drake Rd. Car Share Questionnaire

We are exploring the possibility of a solar powered electric vehicle car share for the Drake Rd. Affordable Housing Project. This questionnaire is intended to gauge potential community interest. Your information will stay anonymous, and identifying information will not be shared.

* Required

Are you interested in potentially residing at the Drake Rd. Housing Development? *

Yes

No

Maybe

Other:

If yes, would you probably?

Rent an apartment or townhouse

Buy an apartment or townhouse

Do you or anyone in your household own a car?

Yes

No

If yes, how many vehicles need parking spots?

If yes, how much did you pay for your car(s)?

How important is it that Salt Spring explores low carbon transportation alternatives?

Not important really

Important

Very Important

What is your annual household income?

This help us gauge the affordability of the housing and carshare and the information will be kept strictly confidential.

How well informed are you about how carshare works?

- Not informed
- Somewhat informed
- Informed

How much do you spend to own and operate your vehicle(s) on an annual basis?**Would you ever consider giving up your car if you could participate in an electric vehicle careshare?**

- Yes
- No
- Not sure

Would you be interested in helping organize and promote a local carshare program?

- Yes
- No
- Maybe

What would you be willing to spend for use of a car?

- Under \$50/month
- \$50-\$75/month
- \$75-\$150/month
- \$150+/month

Would you like to stay informed about this transportation initiative?

Please leave your name, phone number, and email

Comments:

DRAKE ROAD AFFORDABLE HOUSING -ELECTRIC CAR SHARE INTERESTE SURVEY - March 2015												
	Are you interested in potentially residing at the Drake Rd. Housing Development?	If yes, would you probably?	Do you or anyone in your household own a car?	If yes, how many vehicles need parking spots?	If yes, how much did you pay for your car(s)?	How important is it that Salt Spring explores low carbon transportation alternatives?	How well informed are you about how carshare works?	How much do you spend to own and operate your vehicle(s) on an annual basis?	Would you ever consider giving up your car if you could participate in an electric vehicle careshare?	Would you be interested in helping organize and promote a local carshare program?	What would you be willing to spend for use of a car?	Comments:
1	Maybe	Buy an apartment or	Yes	1	\$20,000	very important	Somewhat informed	\$4,000	Yes	Maybe	\$75-\$150/month	
2	No		Yes	3	Cash	very important	Informed	Unsure.	yes, not sure	No		
3	No		Yes	2		very important	Informed	\$1,000 (electric)	Not sure	No		Not interested in participating but keen to promote electric cars and car-share programs.
4	No		Yes	1	30,000	very important	Informed	2,000	Yes	No	\$150+/month	
5	Yes	Buy an apartment or	Yes	1	17000	very important	Informed	7000	Yes	Maybe	\$150+/month	Not sure the carshare has to be for an electric vehicle. The economics for the number of kms driven probably don't justify it.
6	Maybe	Rent an apartment or	Yes	1	\$2,000	very important	Informed	\$4,500	Yes	No	\$150+/month	
7	No		Yes	3	000+\$15,000	very important	Somewhat informed	don't know (lots)	Yes	Maybe	\$75-\$150/month	
8	interested in		Yes	Two	\$30,000	very important	Informed	\$3,000	Yes	Yes	Under \$50/month	just the Drake road project if made available to other housing projects in the Ganges area. In conjunction with other off island
9	Maybe	Rent an apartment or	Yes	1	\$10,000 (used)	very important	Somewhat informed	no idea	Yes	Maybe		- it would depend on the details of the services and car availability and me figuring out things like what would it cost if I had to rent a
10	No		Yes	2	16,000	very important	Somewhat informed	3000	Yes	Maybe	\$150+/month	the future... (2-5 years) I could see us revert to being a one car family, but car share as well for a second vehicle.
11	No		Yes	2	40,000	very important	Somewhat informed	1800	No	No		
12	Yes	Rent an apartment or	Yes	1	\$5,000.00	very important	Somewhat informed	\$3,800.00	No	Maybe	\$75-\$150/month	I thank you for doing this. I am very interested in renting when the townhouses are complete.
13	Maybe	Rent an apartment or	Yes	1	1000	very important	Informed	4180	Yes	Yes	\$50-\$75/month	I thank you! This is great! I was a member of the Vancouver car coop in 2008 and it worked well for me. Electric would be great!
14	No		Yes	1	15,000	very important	Somewhat informed	5000	Not sure	Yes	Under \$50/month	work well for those extra times we need a second, so usage would likely be minimal - doing a pay-per-use type of option might work
15	No		Yes	0		very important	Somewhat informed	1900	Yes	No	\$50-\$75/month	vesuvius Ferry to work, would need to know how this work to see if this would be a viable option for us.
16	No		Yes	2	\$13,000	very important	Informed	\$3,000 (combined)	Not sure	Maybe	\$75-\$150/month	
17	No		Yes	2	\$8,500	very important	Somewhat informed	\$2,500	No	No	Under \$50/month	upset people if the car is left in a low standard, we all live differently. Also I could own a vehicle for the same cost as what you are

AFFORDABLE HOUSING

Design plan progresses for Drake Road housing plot

Impacts of parking and construction discussed

BY ELIZABETH NOLAN
DRIFTWOOD STAFF

Future neighbours of an affordable housing complex planned for Drake Road had a chance to see updated plans and add their input during a presentation held at Lions Hall on Wednesday, March 4.

Project manager Janis Gauthier and site designer Donald Gunn were on hand to give the public the latest word on the mixed housing development, which aims to create 80 units of rental and for-purchase homes in three construction phases. The Capital Regional District is overseeing the project on land donated for the purpose by School Dis-

trict 64.

"I think it went very well. I was impressed by the turnout — the attendance was the highest yet for one of these meetings — and there were lots of good questions," Gauthier said Monday.

Among those who attended were Sue McKenzie, principal of Phoenix Elementary School, and four intermediate students armed with a list of questions about the project. Casi Little, Olivia Watkin and Sarah Watkin said Monday that although they had to leave the meeting before the question and answer period, most of the topics they wanted to learn about came up naturally during the presentation.

Top student concerns included whether their involvement would be possible in the project design and construction, whether

research was done into endangered species on site, where the added vehicles would park, and what would be done to ensure privacy for students and residents. A question from two parents who attended from the school's parent advisory committee related to plans for a community garden, which is no longer part of the immediate proposal.

"I think the feeling in the room was that it was generally positive," McKenzie said. "It was mentioned a lot that they are aware of the impact on the school and they're concerned by that, so that was a thread that ran through."

Students will play a role in the plans for water management as stewards of the stream that runs out of three holding ponds proposed for the upper site. There are no plans to touch the wooded

area immediately behind the school.

"They are aware that our kids use the forest so they're not going to mess with the part that we use," Little said.

"I think the feeling in the room was that it was generally positive."

SUE MCKENZIE
Phoenix Elementary School principal

Water provision is one area of concern, as North Salt Spring Waterworks had issued the project an allotment but then put a moratorium on all new hook-ups last year. McKenzie also noted that Phoe-

nix school's water pressure is so low that turning on the outdoor hose makes water inaccessible inside the school building. Rainwater catchment and wells are possible solutions for the housing complex.

"That's one of our challenges we have to overcome, and it's one that absolutely has to be in place," Gauthier said, adding she's confident a good solution will be found.

Concerns from neighbouring residents include the extra traffic and noise during construction and added congestion afterwards. As meeting participants heard, the current idea is to provide just 40 parking spaces for 80 units, perhaps with an extra fee attached. An innovative car-sharing plan presented by Transition Salt Spring's Community Energy Group could

see a solar-powered charging station and electric vehicle installed on site as part of the construction design.

"The idea is to encourage people to give up their cars, and if there's a reasonably priced electric vehicle car-share, we're hoping that we'll make a big dent in regular vehicle use," Gauthier said.

An application to increase the density from the 60 units originally planned up to 80 units has been brought to Salt Spring's Local Trust Committee. Gauthier said project coordinators are hoping to have the details ready to start the next step in that process at the April 16 LTC meeting.

The most optimistic date for phase one construction is spring 2016 if all design work, approvals, and financing can be accomplished, Gauthier said.

School District 64 - CRD

Drake Road Community Affordable Housing Development

PRELIMINARY PARKING & TRAFFIC STRATEGY

The plans for the Drake Road affordable housing project include a number of traffic and parking strategies designed to create a pedestrian-friendly community, help reduce residents' carbon footprints, minimize the land area devoted to parking, influence residents choices by providing transportation options, and to justify a requested reduction in parking ratio.

The project is planning for 40 automobile parking spaces for 80 units, which represents 40% of the normally required number of stalls. The purpose of this preliminary strategy is to provide a rationale to the Islands Trust for the requested parking ratio.

Key elements of the strategy

A transportation demand management strategy has been designed to encourage residents to accept lower automobile ownership rates and reduce single-occupant vehicle travel by providing other options. The strategy includes several demand management features designed to help reduce automobile usage and on-site parking requirement, while taking care that this will not result in neighbourhood nuisance through street parking.

Key elements of the strategy planned include:

1. Electric vehicle car share program (including electric bikes and/or scooters)
2. Walking paths to town and public transit
3. Parking management
4. Reduced usage typically experienced in affordable housing projects
5. Covered secure bicycle storage
6. Bus passes
7. Plan B reserved areas for future parking

1. ELECTRIC VEHICLE CAR SHARE PROGRAM

The project team is working with Transitions Salt Spring Energy Group (TSSEG) to develop a proposed solar charged, electric vehicle car share pilot program for the Drake Road affordable housing project. **Attached 1** is a copy TSSEG's preliminary feasibility report on the concept.

The report demonstrates technical feasibility of the PV-EV proposal, and provides preliminary design and capital costs for the equipment and infrastructure. The research identified a very wide variation in program types and scales, as well as a range of operating models and uptake; none were solar powered. All available models had unique program structures and pricing designed to meet the specific needs and abilities of the participants and the community, suggesting a program for Drake Road should be crafted specifically to meet needs and preferences of future residents.

In order to test interest and acceptance of potential residents, the concept was presented at the March 2015 Community Information Meeting (CIM). Response during and after the presentation was favourable, and participants were requested to answer a short survey online afterwards.

As of March 13th (9 days after the CIM), 17 of the ~42 participants had completed the survey (40%, a very good response rate). Results of the survey likewise indicated good support for the car share, and a strong willingness to consider giving up an owned vehicle if an electric car share was available.

Key findings of the survey include:

- 35% of respondents are either interested or may be interested in living at the Drake Rd. project
- 100% currently own vehicles
- Almost half (47%) indicated the need for one parking space for their vehicle
- Over one third (35%) indicate the need for two parking spaces
- On average, respondents would require approximately 1.5 parking spots for their existing vehicles
- 16/17 (over 94%) agreed that it was important for SSI to explore low carbon transportation options
- 65% reported that they would consider giving up their car if they could participate in an electric vehicle care share, (18% replied 'no', 18% replied 'not sure')

We recognize that this is a small survey sample and that more works needs to be undertaken to plan this initiative and encourage potential residents to participate. However, results were very encouraging, including the identification of at least 3 people who may be willing to help organize and promote this type of initiative.

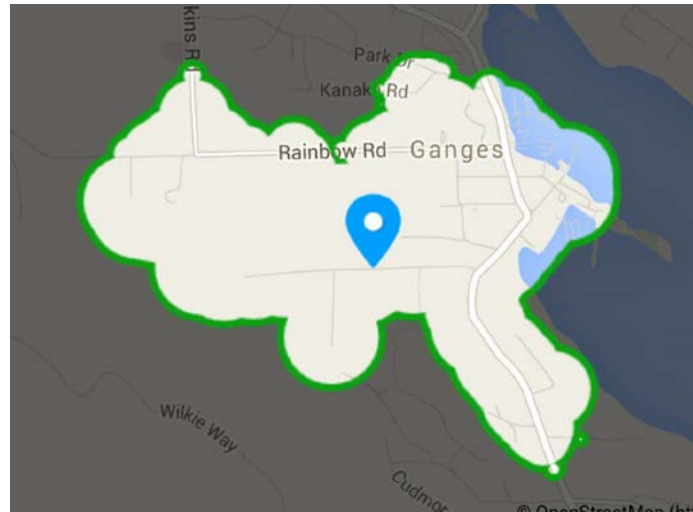
While producing only a rudimentary and very preliminary estimate, extrapolating these findings to the planned 80 units at Drake Road could potentially have the following impact on usage and parking requirements:

Average spots required	1.5
Total for 80 units	120
Reduce 65%	<u>-78</u>
Net spots required	42

It is our intention to continue to promote this concept, and encourage and facilitate implementation through funding the construction of the charging station, the purchase of an electric bicycle and/or scooter, and the purchase (or subsidize of the purchase) of one electric vehicle.

2. WALKING PATHS TO TOWN AND PUBLIC TRANSIT

The project is directly across from Mouat Park, which has well maintained and easily accessible walking paths into Ganges. Walking to Artspring, for example, takes around 5 minutes. All banking, shopping and services in downtown are available within a 10-15 minute walk. According to the Walkscore application (www.walkscore.com) below is the area around the Drake Road project that is easily walkable within 15 minutes.



Walkable within 15 minutes

The project plans to construct internal walking paths within the project itself to encourage and facilitate walking up to Drake Road and on through to the Ganges core. We plan likewise to complete a walking path along the site frontages, as requested by the CRD advisory committees. Early discussions have taken place with a neighbouring property owner for walking path easement access directly through to Fulford-Ganges Road; it should be noted that this is in the early discussion stages and no commitment has been made.

3. PARKING MANAGEMENT

It is intended that parking available will be provided on a first-come, first-serve basis with access unbundled from rental rates and/or strata fees. Parking pricing has yet to be determined, but is expected to be in the \$50/month range to encourage lower parking demand.

A mechanism planned for the rental units, is a selection criteria that (all else being equal) gives priority to applications who do not own a vehicle and commit to not purchase one while residing in the project. We are exploring the ability to apply similar techniques for homeowner units, and the ability of a strata corporation to manage and enforce this type of restriction.

4. REDUCED USAGE TYPICALLY EXPERIENCED IN AFFORDABLE HOUSING PROJECTS

Automobile ownership is very expensive. The TSSEG report estimates ownership costs average annual ownership costs ranging from \$5,000 to \$8,000 for a modest vehicle (including amortized cost of vehicle, insurance, maintenance, and fuel). This ranges from \$417-\$667 per month, an affordability challenge for lower income residents which can contribute to housing affordability problems.

While a formal engineered parking study has not been undertaken, most report a general understanding that lower income residents typically have lower vehicle ownership rates and higher usage rates of public transit due to affordability issues.

Recent research published from the Puget Sound region in Washington State attempts to quantify reduced automobile usage for lower income residents, estimating a 27% reduction in use for those earning less than median income. An even lower usage rate is reported locally on Salt Spring for Murakami Gardens, which is targeted to low income renters. Murakami Gardens has the advantage of a resident car share program, also contributing to its success with a reduced parking ratio of 8 spots/27 units (0.29 per unit). Please see the TSSEG report for details and results of the Murakami Garden car share program; it is our understanding that the full 8 spots are seldom all in use.

5. COVERED SECURE BICYCLE STORAGE

Included in each phase of the project will be sufficient covered, lockable parking for resident bicycles and scooters (amounts required remain to be determined).

6. BUS PASSES

This site is ideally located for residents to take advantage of public transit, with stops in all directions a short walk from the project. We plan to encourage and reward the use of public transit, as well as to introduce public transit to those not currently using it, by providing a one-year bus pass to all new residents. Signage will be installed and bus schedules posted and available in all common areas to reinforce the convenience and suitability of this transportation option.

7. PLAN B RESERVED AREAS FOR FUTURE PARKING

We are confident that we have sufficient tools to discourage single-vehicle ownership and encourage more energy efficient and less polluting transportation options to justify the requested parking reduction.

We are also committed to being good neighbours, by not creating any nuisance on Drake Road through vehicle parking if our transportation and parking strategies are not as successful as we anticipate. To provide assurance to neighbours and to the Islands Trust, we will commit to reserve space on the site (currently dedicated to green space) to construct additional parking spaces should the need arise.