



DEVELOPMENT and PLANNING SERVICES COMMITTEE

April 16, 2018

City of Salmon Arm

Room 100

City Hall, 500 - 2 Avenue NE

8:00 a.m.

Page #	Section	Item#
	1.	<u>CALL TO ORDER</u>
	2.	<u>REVIEW OF THE AGENDA</u>
	3.	<u>DECLARATION OF INTEREST</u>
	4.	<u>PRESENTATION</u> n/a
	5.	<u>REPORTS</u>
1 - 12	5.1	VP-465, Homecraft Construction Ltd. / Onsite Engineering, 6810 Park Hill Road NE – Servicing Variance
13 - 34	5.2	OCP4000-33 / ZON-1107, C.S.R.D. & Mounce Construction Ltd. / Lawson Engineering & Development Services, 4290 – 20 Avenue SE & 2750 – 40 Street SE – IND to INS / P-2 & A-2 to P-4
35 - 70	5.3	2017 City of Salmon Arm Climate Action / Carbon Neutral Progress Survey (CARIP)
	6.	<u>FOR INFORMATION</u> n/a
	7.	<u>IN CAMERA</u> n/a
	8.	<u>LATE ITEM</u> n/a
	9.	<u>ADJOURNMENT</u>

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City of Salmon Arm
Development Services Department Memorandum

TO: Her Worship Mayor Cooper and Council

FROM: Development Services Department

DATE: March 12, 2018

SUBJECT: Development Variance Permit Application No. VP-465
Amended Legal Subdivision 15 of Sec. 31, Tp. 20, R. 9, W6M, KDYD, except Plans 10393 and 21686
6810 Park Hill Road NE
Owner: Wilmark Homes Ltd. / Homecraft Construction Ltd.
Agent: Onsite Engineering Ltd. (Jan van Lindert)

Motion for Consideration

THAT: Development Variance Permit No. VP-465 be issued for Amended Legal Subdivision 15 of Sec. 31, Tp. 20, R. 9, W6M, KDYD, except Plans 10393 and 21686 to vary the provisions of Subdivision and Development Servicing Bylaw No. 4163 as follows:

1. **Section 3.0**

- i) Waive the requirement to upgrade the west side of Park Hill Road NE to the RD-4 standard subject to:
 - a) registration of a Land Title Act, Section 219 covenant on proposed Lot 34, as shown on the attached Appendix 3, prohibiting any further subdivision until the parcel is fully serviced to City standards.

Staff Recommendation

THAT: The Motion for Consideration be adopted.

Proposal

The subject property is located at 6810 Park Hill Road NE. The property is approximately 14 hectares in size and is vacant. The owner has received preliminary approval for a 131 lot residential subdivision and is applying for a variance to Subdivision and Development Servicing Bylaw No. 4163. A location map, ortho photo and sketch plans of the proposed subdivision are attached as Appendices 1 through 3.

Background

The property is designated Medium and Low Density Residential in the Official Community Plan and is zoned R-1 (Single Family Residential) R-4 (Medium Density Residential), R-7 (Large Lot Single Family Residential) and R-9 (Estate Residential). The property is divided by Park Hill Road NE and the portion on the east of the road is currently under application for O.C.P. and zoning amendments which would re-designate it to Low Density Residential and rezone it to R-1 (Single Family Residential) (Files:OCP4000-32 & ZON-1109).

As shown on the attached Appendices, a small triangular portion of the property is located on the west side of Park Hill Road NE. This triangular portion is approximately 0.4 hectare in size and is zoned R-9 (Estate Residential). Under this zoning, this proposed parcel (Lot 34) cannot be further subdivided and its use is limited to one single family dwelling.

At this location, Park Hill Road NE is classified as an Urban Arterial Road requiring an ultimate width of 25.0 metres (12.5 metres from centreline). At the time of subdivision, the applicant is required to ensure that a minimum road dedication of 10.0 metres from centreline is provided and that the road is constructed in accordance with City of Salmon Arm Specification Drawing No. RD-4. A copy of the RD-4 specification drawing is attached as Appendix 4.

The applicant is prepared to construct the east side of Park Hill Road NE to the RD-4 standard and is requesting that the requirement to upgrade the west side be waived. A letter from the applicant's agent is attached as Appendix 5 (Note: references to zoning and O.C.P. amendments in the letter are addressed in the associated Files: OCP4000-32 & ZON-1109)

Site Context:

North: City owned properties zoned P-1 (Park & Recreation) and R-1 (Single Family Residential)
 South: Golf course (Club Shuswap Golf & RV) zoned P-1 and Rural Residential lots zoned A-2 (Rural Holding)
 East: Residential lots zoned R-1 (Single Family Residential)
 West: Residential lot zoned R-9 (Estate Residential) and a Rural Residential lot zoned A-2 (Rural Holding)

Staff have reviewed the proposal and provide the following:

Fire Department

No concerns.

Building Department

No concerns.

Engineering Department

See Appendix 6.

Planning Department

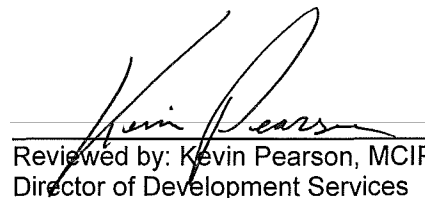
At this location, all of the properties on the west side of Park Hill Road NE are in the Agricultural Land Reserve and, with the exception of this triangular portion of the property, are located outside the Urban Containment Boundary. It is unlikely that these properties will be further subdivided and upgrading only this small section of the road would provide little benefit.

Upgrading the east side of Park Hill Road NE will be undertaken as part of the larger residential subdivision and will include a pedestrian walkway and streetlights. Given the restricted development potential west of Park Hill Road NE, staff support the requested the variance.

Although the parcel cannot be further subdivided under the current R-9 zoning, it is within the Urban Containment Boundary and a future owner could apply for rezoning and subdivision. It is therefore recommended that registration of a covenant prohibiting any further subdivision until the parcel is fully serviced to City standards be a condition of the variance. The covenant will provide notification that the parcel was created without full servicing and the infill servicing exemptions provided in the servicing bylaw would not apply to any future subdivision.



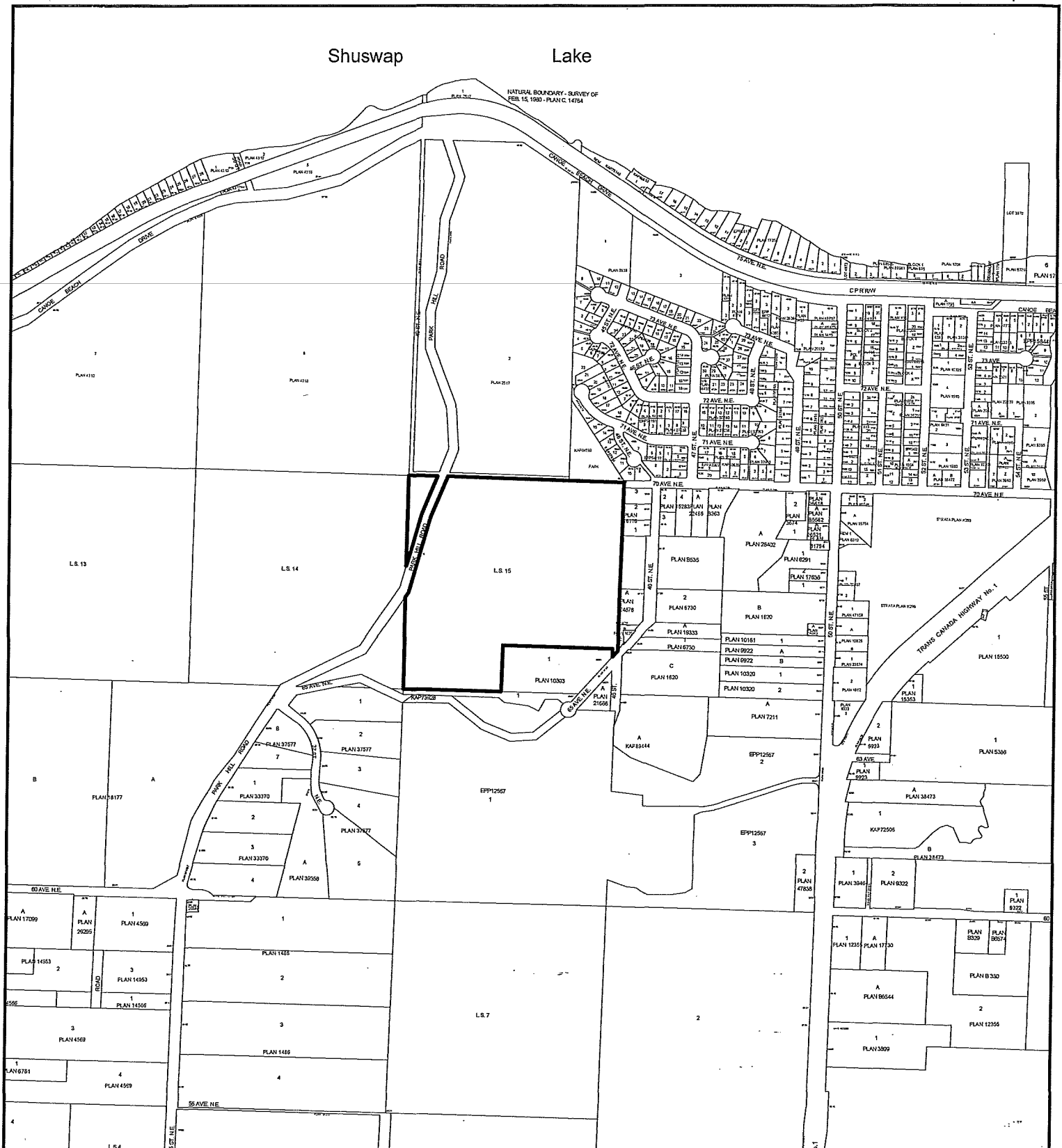
Prepared by: Jon Turlock
Planning & Development Officer



Reviewed by: Kevin Pearson, MCIP
Director of Development Services

Appendices

1. Location map
2. Ortho photo
3. Site plan
4. Owner's letter
5. Engineering Dept. comments



Subject Property

Location Map



Subject Property

Ortho

Lot : 34
4488 m2
**Subject
Property**

Park Hill Road NE

- THE ENTIRE SUBDIVISION COMPRISES OF APPROXIMATELY 130 SINGLE FAMILY FEE SIMPLE LOTS. PHASE 1 COMPRISES OF 34 SINGLE FAMILY FEE SIMPLE LOTS.
- THE LOT DIMENSIONS IN PHASE 1 ARE ACCURATE AND SHOULD NOT SUBSTANTIALLY CHANGE AFTER LEGAL SURVEYING.
- THE LOT DIMENSIONS IN FUTURE PHASES ARE INDICATIVE; NO REPRESENTATION IS MADE FOR DIMENSIONS AND LOT SIZES.
- ARROWS IN ROWS INDICATE TRAFFIC DIRECTION.

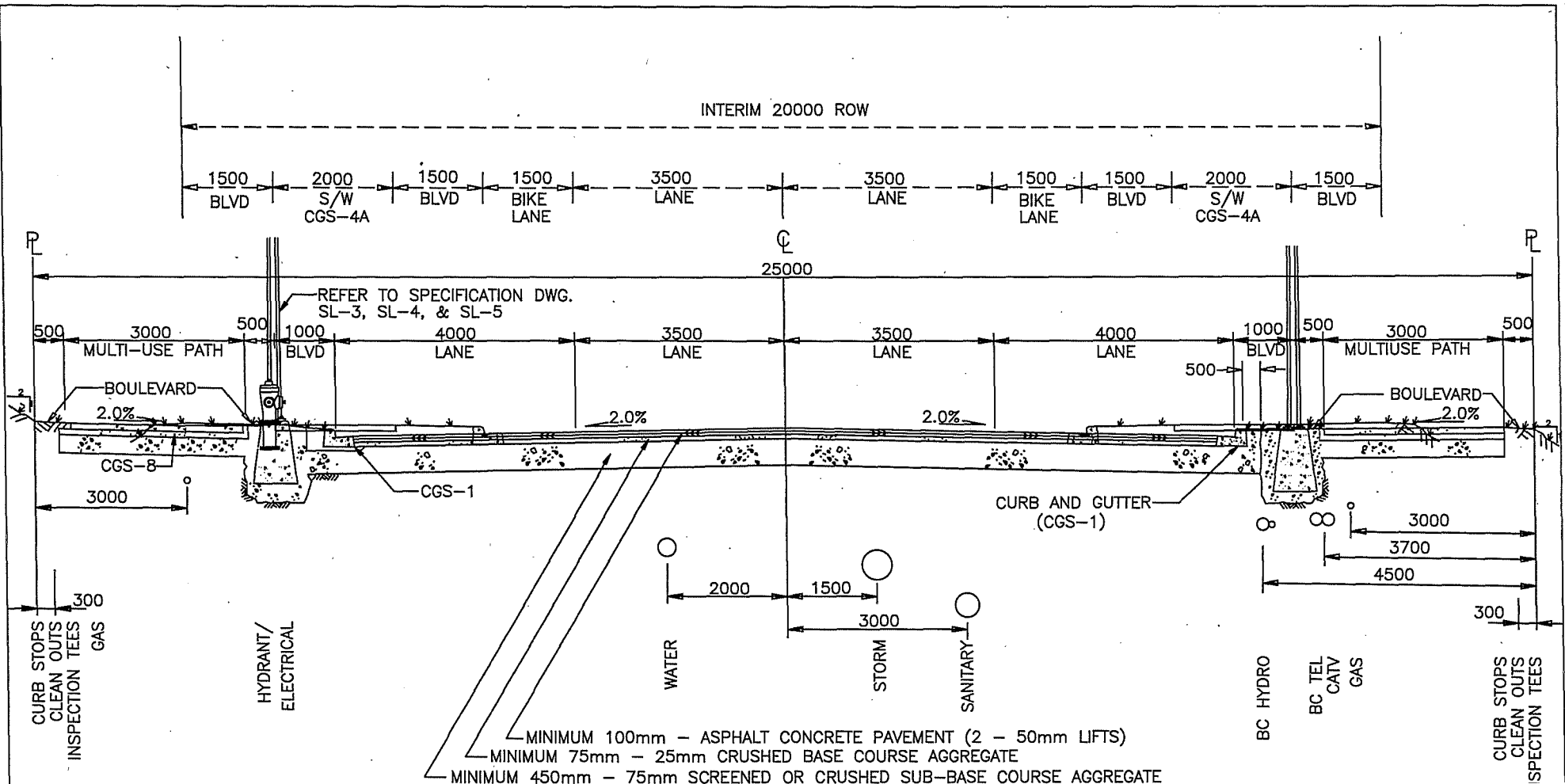
B	03/09/16	RD ISSUED FOR SUBDIVISION APPLICATION, LOT74 REVISED			
A	02/20/18	ISSUED FOR SUBDIVISION APPLICATION			
Hr.	Date	Revision			Dwg. CNA

REFERENCE DRAWINGS

Designed:	JVL
Drawn:	JVL
Checked:	BP
Reviewed:	-
Date:	02-26-2010

WILMARK HOMES
PARK HILL SUBDIVISION
PHASE 1
6810 PARK HILL ROAD

Client Project No.	
Oil Project No.	1644-1
Drawing No.	1644-1-001
Sheet: 1 of 1	Exclusion: A



NOTES:

- 1) All utility appurtenances to be set to designed boulevard grade.
- 2) Boulevards to be graded towards the Roadway (Maximum 5% and Minimum 2%)
- 3) All materials shall be supplied and placed in accordance with schedule B, Part 3.0 and Schedule D, Approved material list.
- 4) Grades in excess of 2H:1V shall be recommended by a geotechnical engineer and approved by the City Engineer.

CITY OF SALMON ARM			25m R/W Urban Arterial Road Cross-Section		
No.	Revision	Date	Date	Approved	SPECIFICATION DRAWING No.
A	ISSUED FOR APPROVAL	07/14/16	10-11-2016	<i>[Signature]</i> City Engineer	RD-4

Adopted by Council October 11, 2016

ONSITE

Engineering Ltd.

March 7, 2018

City of Salmon Arm
500 – 2nd Avenue NE
Salmon Arm, BC
V1E 4N2

OEL File #: 1644-1
City File #:

Attn: Salmon Arm Council, Director of Development Services

Re: Proposed rezoning and subdivision of 6810 Park Hill Road legally described as Amended LS 15 of Section 31, Twp 20, R9, W6M, KDYD, except Plans 10393 and 21686

On behalf of our client Wilmark Homes Ltd./Homecraft Construction Ltd. we are applying for the rezoning of the property at 6810 Park Hill Road in Canoe, Salmon Arm, BC. The current zoning is R1, R4 and R7. We're requesting to rezone the entire property to R1.

Further we are applying to amend the Official Community Plan to remove the neighborhood park requirement from the subject site.

Thirdly we are applying to subdivide the property as per the attached plan titled "Proposed Phase I".

Lastly we are applying for a variance with respect to the frontage improvements for Park Hill Road.

History of the site:

The initial start of the development of the site dates back to 2007. Based on the old Subdivision Bylaw a concept road and lot layout was designed. The layout resulted in the rezoning of the site into 3 zones: R1, R4 and R7. The zoning boundaries coincided with the then proposed road centerlines. The development never proceeded to the construction phase.

City Staff recognized that development of the site is complicated due to the presence of moderate to moderately steep slopes on the site. Therefore, to increase development opportunities, the site is designated "Hillside Development Area" in the new Subdivision Bylaw 4163. This designation provides alternate engineering requirements for road right of way width, road surface width, road right of way grading, and allows for single direction vehicle traffic amongst other items. Our client retained Onsite Engineering Ltd. (OEL) to review the new Bylaw and to conceptually design a new road and lot layout based on the new Bylaw. The road and lot layout design has been informally discussed between City Staff and OEL Staff and we agree that the road and lot layout is generally suitable. The new road and lot layout however do not coincide with the existing zoning boundaries and therefore rezoning is required.

Proposed zoning:

The proposed road network consists of a ring road with access to and from Park Hill Road and 3 internal roads with access to and from the ring road. The ring road is a "standard" two-way road (18 metre ROW width). There are 2 internal roads that are narrower roads that only allow one-way traffic (12 metre ROW

North Vancouver
Unit 2 - 252 East 1st
North Vancouver, BC V7L 1B3
Tel: (778) 802-1263
Fax: 1-866-235-6943

Abbotsford
106-2825 Clearbrook Rd
Abbotsford, BC V2T 6S3
Tel: (604) 996-4722
Fax: 1-866-235-6943

Campbell River
1040 Cedar Street
Campbell River, BC V9W 7B2
Tel: (250) 287-9174
Fax: 1-866-235-6943

Salmon Arm
201 – 231 TransCanada Hwy;
Box 2012
Salmon Arm, BC V1E 4R1
Tel: (250) 836-6004

Prince George
3661 15th Avenue
Prince George, BC V2N 1A3
Tel: (250) 562-2252
Fax: 1-866-235-6943

ONSITE Engineering Ltd.

width). The most western internal road and the south internal road are standard two-way traffic roads. Our client is requesting to rezone the entire property to R1.

It is expected that some individual home purchasers will be applying to rezone their property to R8. It is up to future Councils to review and approve individual rezoning request; however, for the one-way roads Staff and the developer agree that R8 zoning would cause too much pressure on the road system, both due to moving traffic and due to parking. Further it is expected that snow clearing will become an issue if excessive parking on the road takes place. Therefore we not only request rezoning of the internal areas serviced by one-way roads to R1 (low density) but also request Council to decide in principle not to allow rezoning of these properties to R8 in the future. This will enhance the attractiveness of the subdivision as a whole.

Official Community Plan:

The Official Community Plan proposes greenways and a neighborhood park on the subject property; however, the OCP is not specific as to where exactly these items are to be situated. This leaves the interpretation to the Approving Officer. The feasibility of the entire subdivision will be strongly affected by the park. In discussions between City Staff and OEL Staff we concluded that cash in lieu for parkland over actual land dedication likely would be supported by City Staff. Our client is in favour of this solution and therefore we request to amend the OCP and remove the neighborhood park requirement from the site. Note that the developer will accommodate and construct greenways as per OCP.

Variances:

The development site fronts Park Hill Road and therefore frontage improvements are required. These requirements are listed in the PLA City File 17.24 dated February 27 2018. On behalf of our clients we apply for one variance.

City Staff and OEL staff agree that the preferred process is to insert the variance application in the rezoning, subdivision, and OCP amendment applications instead of initiating a new variance process after the PLA is issued. Therefore OEL and Engineering Staff have discussed the requirements to be expected as those defined by Bylaw 4163 specification drawing RD-4. Our client's variance request is as follows.

The triangle area west of Park Hill Road is "hooked" to the main site. The client has no intention to subdivide this lot, rather sell it as one individual lot. The lot will be serviced off of the infrastructure that is to be constructed in the northern access road to the subdivision. Since the lot will not be subdivided we request to waive the requirement to upgrade the west side of Park Hill Road to the RD-4 standard.

If you have any questions, please contact us.

Sincerely,

ONSITE ENGINEERING LTD.



J. van Lindert



B. Pellett, P.Eng.

Cc: Wilmark Homes Ltd./Homecraft Construction Ltd.



City of Salmon Arm
Memorandum from the Engineering
and Public Works Department

TO: Kevin Pearson, Director of Development Services
 DATE: 08 March, 2018
 OWNER: **Homecraft Construction Ltd.**, 33677 Arcadian Way, Abbotsford, V2S 7T4
 APPLICANT: Owner
 AGENT: Onsite Engineering (J. Van Lindert), Box 2012, Salmon Arm, BC V1E 4R1
 DATE: September 14, 2017
 SUBJECT: **DEVELOPMENT VARIANCE PERMIT APPLICATION NO. VP-465**
 LEGAL: Amended Legal Subdivision 15 of Section 31, Township 20, Range 9, W6M, KDYD, Except Plans 10393 & 21686
 CIVIC: **3571 – 20 Street NE**
 ASSOCIATED: 17.24
 PREVIOUS: OCP3000-35/ZON-841

Further to the request for variance dated 14 September, 2017 and Onsite Engineering's subsequent letter dated 7 March, 2018; the Engineering Department has thoroughly reviewed the site and offers the following comments and recommendations, relative to the variance requested:


The applicant now requests only one variance to Subdivision & Development Servicing Bylaw No. 4163 (SDSB), Section 4.0:

1. Waive the requirement to upgrade the west side of Park Hill Road to the RD-4 standard.

The subject property is in two parts, hooked across Park Hill Road. All of the proposed development is on the east side of Park Hill Road except a single lot being created on the triangle of land to the west of the road. With the exception of this triangle of land, all other land on the west side of Park Hill Road is outside of the Urban Containment Boundary (UCB) and in the ALR and will therefore be unlikely to ever be developed. Upgrading this small section of the west side of the road would therefore be of little value.

The Engineering Department recommends that the request to waive the requirement to upgrade the west side of Park Hill Road to the RD-4 standard be approved, subject to registration of a covenant on title, preventing further subdivision until full frontage works have been completed.


 Chris Moore
 Engineering Assistant


 Jenn Wilson, P.Eng., LEED® AP
 City Engineer

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City of Salmon Arm

Development Services Department Memorandum

TO: Her Worship Mayor Cooper and Members of Council

DATE: April 10, 2018

SUBJECT: Official Community Plan Amendment Application No. OCP4000-33
Zoning Amendment Application No. 1107

Legal: The West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD & Lot 1, Section 7, Township 20, Range 9, W6M, KDYD, Plan KAP45716

Civic: 4290 – 20 Avenue SE & 2750 – 40 Street SE

Owner: Mounce Construction Ltd. & Columbia-Shuswap Regional District

Applicant: Lawson Services Ltd. & Columbia-Shuswap Regional District

MOTION FOR CONSIDERATION

THAT: A bylaw be prepared for Council's consideration, adoption of which would amend Official Community Plan (OCP) Bylaw No. 4000 as follows:

- 1) Redesignate the West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD (2750 40 Street SE) as shown in Schedule A from IND (Industrial General) to INS (Institutional); and
- 2) Amend OCP Map 14.1 to identify the West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD (2750 40 Street SE) as "CSRD Regional Landfill".

AND THAT: Pursuant to Section 475 of the *Local Government Act*, Council has considered this OCP amendment after appropriate consultation with affected organizations and authorities;

AND THAT: Subsequent to First Reading and Prior to Second Reading, and Pursuant to Section 477 (3) (a) of the *Local Government Act*, Council has considered the proposed OCP amendment in conjunction with:

- 1) The Financial Plans of the City of Salmon Arm;
- 2) The Liquid Waste Management Plan of the City of Salmon Arm;
- 3) The City's Solid Waste Policies (OCP) and the Solid Waste Management Agreement between the City and the Columbia-Shuswap Regional District (CSRD);
- 4) The CSRD's amended 2018 Solid Waste Management Plan; and
- 5) Confirmation of any necessary approvals and/or Permits required by the Ministry of Environment relating to the CSRD's Solid Waste Management Plan Amendment, and any Contaminated Sites Regulation requirements.

AND THAT: A bylaw be prepared for Council's consideration, adoption of which would amend Zoning Bylaw No. 2303 as follows:

- 1) Add "Section 27 – P-4 – Waste Management Zone" as outlined in this report and renumber the remaining sections accordingly; and

- 2) Rezone Lot 1, Section 7, Township 20, Range 9, W6M, KDYD, Plan KAP45716 (4290 20 Avenue SE) from P-2 (Airport Zone) to P-4 (Regional Waste Management Zone).

AND THAT: A bylaw be prepared for Council's consideration, adoption of which would amend Zoning Bylaw No. 2303 as follows:

- 1) Rezone The West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD (2750 40 Street SE) from A-2 (Rural Holding Zone) to P-4 (Regional Waste Management Zone).

AND THAT: The Zoning Amendment Bylaw for The West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD (2750 40 Street SE) receive First Reading only, with Second Reading withheld subject to approval of Second Reading of the associated OCP Amendment Bylaw.

AND THAT: Final Readings of the OCP Amendment Bylaw and the associated Zoning Amendment Bylaw each under consideration for the West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD (2750 40 Street SE) be withheld subject to Public Hearing and approval of Third Readings;

AND FURTHER THAT: Final Reading of the Zoning Amendment Bylaw for Lot 1, Section 7, Township 20, Range 9, W6M, KDYD, Plan KAP45716 (4290 20 Avenue SE) be withheld subject to Public Hearing and approval of Third Reading.

STAFF RECOMMENDATION

It is recommended that the motion for consideration be adopted.

PROPOSAL

The two subject parcels are located to the south-west of the airport: the 20 Avenue parcel contains the CSRD's existing Salmon Arm landfill, while the 40 Street parcel contains a semi-industrial construction staging area with a landfill for demolition materials (Appendix 1 & 2). The purpose of this application is to redesignate and rezone the two parcels to a new P-4 Waste Management Zone to support the CSRD's current and future Salmon Arm Landfill operations. Proposed P-4 regulations are attached (Appendix 3).

A letter of intent and conceptual site plan has been provided by the applicant (Appendix 4).

In order to support the proposed zoning for the 40 Street parcel, an Official Community Plan (OCP) amendment from Industrial to Institutional designation is required (the 20 Avenue parcel is designated Institutional), which would match the designation of the 20 Avenue parcel.

As discussed further, while waste management falls under Provincial jurisdiction as per BC's *Environmental Management Act*, with both existing landfills operating under permit from MOE in non-conformance with current zoning, the proposed rezoning is being considered to offer transparency, conformance, and to clarify municipal policy.

BACKGROUND

The current OCP land use designations are General Industrial and Institutional (Appendix 5), while a zoning map of the immediate area is attached (Appendix 6). The area is generally characterized by transition between rural residential, rural farmland, industrial and institutional uses.

Adjacent OCP land use designations, zoning and current land uses include the following:

	OCP	Zoning	Present Uses
North:	Industrial	A-2 (Rural Holding)	rural residential / farm
East:	Landfill/Airport	P-2 (Airport)	landfill / airport
West:	Acreage Reserve	A-2 (Rural Holding)	road & rural residential
South:	Industrial	M-1 & M-6	general industrial & industrial holding (with accessory residential use)

The present CSRD landfill on 20 Avenue SE has been identified in municipal policy at this location dating back to the City's first OCP adopted in 1979. The CSRD's Salmon Arm landfill was owned and operated by the City of Salmon Arm (previously the District of Salmon Arm), with a transfer of ownership to the CSRD occurring in 1992. The CSRD has proven to be a responsible steward of the site completing many improvements over time to align with evolving standards, including a gas capture system and bird management system.

The 40 Avenue parcel has hosted permitted landfill operations on site dating back to 1993: Mounce Construction Ltd. is authorized to discharge refuse to the ground as a "select waste landfill" through Provincial Permit 11191. Characteristics of the discharge must be equivalent to that of typical demolition, land-clearing, and construction (DLC) debris.

Legislative Authority

Waste management ultimately falls under the jurisdiction of the Provincial government pursuant to BC's *Environmental Management Act*. The Ministry of Environment (MOE) is the Provincial agency with the authority to issue approvals for waste management operations. While local governments are responsible for managing solid waste in their area, ultimately it is beyond the power of a local authority to impose additional obligations in the area of waste management. To some extent, this explains how landfills are currently able to use each subject parcel under an operating certificate issued by the Province (and may do so without expiry into the future), without being directly supported by the Zoning Bylaw.

MOE has established the obligation for proponents to meet a range of requirements for their sites, recently updating their "*BC Landfill Criteria for Municipal Solid Waste*" in June 2016. Additional regulations which currently exist include the *Organic Matter Recycling Regulations of BC* relating to composting operations, as well as the *Recycling Regulation*. These criteria are subject to update as standards progress over time, with operations expected to move towards meeting the new, more stringent criteria. MOE recognizes that while existing landfills are generally included in the recommended practices of these policies, existing landfills may be excluded from some emerging siting and design requirements that are not feasible or implementable.

MOE requires proponents to complete a Solid Waste Management Plan (SWMP), which the CSRD has continually done for their sites. The potential acquisition of the neighbouring 40 Street parcel by the CSRD is considered an alteration to the current solid waste management system of the CSRD by MOE, triggering the need for an SWMP amendment. The CSRD has completed the amendment process which has involved public review and consultation, and has submitted the amendment to MOE for the Minister's approval, as per MOE requirements. Copies have been provided to City Council and staff (executive summary attached as Appendix 7).

As per MOE staff, an amendment to a SWMP requires several phases each with varied timeframes. At this stage, Ministry staff will review the plan and provide the Minister with recommendations. The decision whether to approve the plan rests with the Minister. If the SWMP is approved, a request will be made to the CSRD to apply for related amendments to the operational certificates or permits of the sites affected. A supported outcome is signified by the issuance of operational certificates (or permits).

This SWMP review process involves direct communication between the CSRD and MOE, and does not involve City staff. City staff will not be providing additional review of the SWMP or CSRD operations with respect to MOE criteria, and City staff are not in a position to debate or clarify applicable MOE criteria with respect to possibly related scientific studies or other sources of information.

Official Community Plan

As noted, presently the OCP land use designations for the subject parcels are for General Industrial (40 Street) and Institutional land use (20 Avenue). Land use designations allow for a wide range of uses, and include some overlap, such as accessory residential use, scrap yards or recycling depots on industrial lands, as well as public use or public utilities. Being part of a regional government managed operation, the regional landfill use is considered to be institutional, as it is currently designated. The Institutional land use designation supports the current landfill use (dating back to Salmon Arm's original 1979 OCP). To avoid any question of interpretation, the applicant has requested an OCP amendment from General Industrial to Institutional for the 40 Street parcel.

In terms of general policy, solid waste is discussed under two sections of the OCP: Section 13 – Utilities and Infrastructure, as well as Section 15 - Community Services. OCP Policy 13.3.35 states that it is a policy of the OCP to: *"continue to use the landfill in the City managed by the CSRD, which is expected to exceed the life of this plan."*

Policy 13.3.36 states that the City will continue to work cooperatively with the CSRD regarding operation and management of the landfill and implementation of the CSRD SWMP. Supportive collaboration with the CSRD could include the consideration of an applicable zone for the CSRD landfill.

Further to OCP Section 13, OCP Policy 15.3.1 of the OCP and the associate Map 14 identifies the current regional landfill as a community service. Staff note that OCP policy 15.3.3 allows for institutional use and zoning to be considered without an amendment to the land use designation. However, as previously noted for transparency and clarity, alignment between the proposed use, Zoning Bylaw, and the OCP land use designation is being proposed by the applicant.

Zoning Bylaw

The Zoning Bylaw presently does not have a zone that permits a landfill as a specific use: the present CSRD Salmon Arm landfill could be considered legally non-conforming with respect to the City's zoning regulations. In terms of landfill operations, local zoning is not of ultimate significance, as previously discussed waste management falls under the ultimate jurisdiction of the provincial government (MOE) pursuant to BC's *Environmental Management Act*. However alignment with local bylaws is ideal. Under OCP policy, an amendment to the zoning bylaw would be supportive of our Regional partner.

The Zoning Bylaw contains the following relevant land use categories and definitions:

Sanitary Landfill – means the deposit resulting from the disposal of solid waste by spreading it in layers and covering it with soil to control vectors, odours and wind blown litter and may include a recycling depot.

Recycling Collection Site – means a site at which the Regional Government Recycling Program provides bins for recyclable products, the scope of which is determined by that government body.

Recycling Depot – means a building or structure in which used material is separated and processed prior to shipment to others who will use those materials to manufacture new products.

The creation of a new P-4 (Regional Waste Management) Zone to support these defined uses would clarify the City's policy regarding these land uses at this location. Proposed P-4 zone regulations are attached (Appendix 3) for reference.

COMMENTS

Ministry of Environment

City staff note that MOE will review the CSRD's proposal in detail relative to their guidelines as previously described in this staff report. With respect to the "contaminated sites" element of the Mounce parcel,

MOE has indicated they are not concerned until such time as landfilling ceases and remediation is required or complete.

Ministry of Transportation and Infrastructure

MOTI considers their interests to be unaffected by this application.

Neskonlith Indian Band

No comments received to date.

Adams Lake Indian Band

No comments received to date.

IHA

No comments received to date.

Engineering Department

No concerns with rezoning. Engineering staff note that the Zoning amendment is advantageous to the City as it protects the long term viability of existing landfill locations. Any relocation of the landfill may have cost implications to the City's Curbside Collection Program.

Comments attached (Appendix 8).

Fire Department

No Fire Department concerns.

Building Department

No concerns with rezoning. Buildings on the 40 Street property were constructed without building permit.

Planning Department

Planning staff support the zoning amendment of the 20 Avenue parcel for the existing Salmon Arm landfill. This use has been clearly supported by OCP policy going back to 1979.

The intended use of subject parcels under application is a continuation of landfill use, albeit at an increased intensity at the 40 Street location (Staff would like to note the difference between the demolition waste - demolition, land-clearing, and construction (DLC) debris - presently deposited and the regional landfill operation). The ultimate intent is to utilize the properties as a single landfill operation under the proposed land use designation and zoning.

Regarding the proposed change to the OCP land use designation for the 40 Street parcel from General Industrial to Institutional with respect to the City's industrial land base, the proposal would result in a small reduction of potential industrial land, with the 20 acre 40 Street parcel being utilized for P-4 zone uses. As the OCP designates a total of 971 acres of industrial land, the amendment of the 20 acre parcel under application would represent a 2% reduction of potential general industrial land should this application move forward. When adopted, the OCP did not designate any new industrial lands, stating that the remaining capacity of designated industrial land would be sufficient. As industrial use has to date been unconstrained by a lack of supply, a reduction of this size is not deemed by staff to be significant.

Furthermore, staff note a range of permitted uses on industrial lands includes several uses potentially complimentary to a landfill, including recycling depot, warehousing, and storage yard. Considering past and current use as well as OCP policy, staff support the proposed OCP amendment for this parcel.

Planning staff support the zoning amendment for the 40 Street parcel, given the amount of land presently designated for industrial use and in support of the CSRD landfill. Furthermore, staff consider the requirements of MOE (should an amended SWMP be accepted) to be significant improvement in reducing potential impacts on adjacent parcels and the area in general relative to what is permitted under the current operating certificate. Over time the CSRD has proven to be a positive custodian of the Salmon Arm landfill parcel. Staff note the various benefits of having a well managed landfill site in close proximity to the population, including reduced fuel cost/use for disposal service (as note by the Engineering Department, the cost of hauling municipal waste materials is the responsibility of the City) and ease of household waste disposal (including yard waste), factors which likely contribute to reduced illegal dumping.

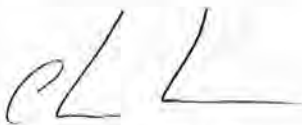
40 Street SE is designated as a "Rural Collector Street" in the OCP. Development would trigger a requirement to upgrade the frontage of 2750 40 Street SE to the RD-8 Rural Collector Standard. At present, 40 Street is 10 metres wide and the CSRD has agreed to dedicate 10 metres to achieve the 20 metre width requirement.

As an additional point of information, staff notes the present Industrial OCP land use designation would directly support rezoning the 40 Street parcel to M-1 – General Industrial. The range of permitted uses could allow for related use by the CSRD which may be operationally beneficial.

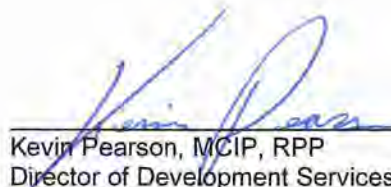
Staff is aware of opposition to this proposal by landowners adjacent to and near the subject parcels. The residential density of the area consists of 14 known residential dwellings within 500 m of the current CSRD landfill site, and 17 dwellings within the same distance to both parcels. A consideration with respect to homes on industrial zoned land is that residences are permitted as an accessory use, meaning that a primary industrial use is needed on a parcel for any accessory residential use to be conforming. Industrial lands are intended for industrial use, with residential use only permitted as an accessory use.

CONCLUSION

OCP policy identifies the landfill and supports working with the CSRD to support its operations. In terms of land use, the landfill use is both historic and present at both locations. This proposal will further enable the responsible management of solid waste within the City. Increasing the capacity of the present Salmon Arm landfill while bringing an existing private landfill under the management of the CSRD are viewed as positive by staff. The proposed OCP amendment of the 40 Street parcel and the P-4 – Waste Management zoning of both subject properties is supported by staff.



Chris Larson, MCP
Planning and Development Officer



Kevin Pearson, MCIP, RPP
Director of Development Services



0 115 230 460 690 920 Meters



Subject Parcels



0 70 140 280 420 560
Meters



Subject Parcels

SECTION 27 - P-4 - INSTITUTIONAL WASTE MANAGEMENT ZONE

Purpose

- 55.1 The P-4 Zone is primarily intended to accommodate the regional landfill operated in accordance with applicable Provincial regulations.

Regulations

- 55.2 On a *parcel zoned P-4*, no *building or structure* shall be constructed, located or altered and no plan of subdivision approved which contravenes the regulations set out in the P-4 Zone or those regulations contained elsewhere in this Bylaw.

Permitted Uses

- 55.3 The following uses and no others are permitted in the P-4 Zone:

- .1 *sanitary landfill* in accordance with Provincial regulations;
- .2 *recycling beverage container return centre*;
- .3 *recycling collection site*;
- .4 *recycling depot* in accordance with Provincial regulations;
- .6 *composting and composting facility* in accordance with Provincial regulations;
- .7 *landfill gas capture* in accordance with Provincial regulations;
- .8 *public use*;
- .9 *private utility*;
- .10 *public utility*; and
- .11 *accessory use*, including *offices*.

Maximum Height of Principal and Accessory Buildings

- 55.4 The maximum *height of principal or accessory buildings* shall be 10.0 metres (62.3 feet).

Minimum Parcel Size or Site Area

- 55.5 The minimum *parcel size or site area* shall be 8.0 hectares (19.8 acres).

Minimum Parcel or Site Width

- 55.6 The minimum *parcel or site width* shall be 400 metres (1,312.3 feet).

Minimum Setback of Principal and Accessory Buildings

- 55.7 The minimum *setback* of all *buildings* associated with waste management operations shall be:

- .1 *Interior parcel line*
 - adjacent to a parcel not zoned
Industrial shall be 50.0 metres (164.1 feet)
 - all other cases shall be 30.0 metres (98.5 feet)
- .2 *Exterior parcel line* shall be 30.0 metres (98.5 feet)

Parking and Loading

- 55.8 Parking and loading shall be required as per Appendix I.

Screening and Landscaping

- 55.9 Screening and Landscaping shall be required as per applicable Provincial requirements.

Appendix 4: Letter of Intent and Conceptual Site Plan



#203 – 270 Hudson Avenue NE
PO Box 106
Salmon Arm, BC V1E 4N2

Monday, January 09, 2017

Kevin Pearson, Approving Officer
City of Salmon Arm
500 2 Avenue NE
Salmon Arm, BC V1E 4N2

RE: Re-Zoning of 2750 40th Street SE Salmon Arm, BC

Attention: Mr. Kevin Pearson

Introduction

Lawson Engineering and Development Services Ltd. (LEDS) was retained by the Columbia Shuswap Regional District (CSRD) to prepare a re-zoning application and necessary documents to facilitate the re-zoning process for the property at 2750 40th Street SE in Salmon Arm (Mounce property). In addition, the CSRD is proposing that the property owned by the CSRD, at 4290 20th Ave SE, be rezoned as a part of this application to better reflect the existing use (CSRD's Salmon Arm landfill).

The key objectives of this proposal are to:

1. Outline the rationale for expanding the landfill to this property;
2. Outline the intended / anticipated short and long-term uses and developments on the land;
3. Identify a conceptual site plan showing the layout of the uses and development;
4. Outline the screening and landscaping proposed for the sites perimeter, where appropriate;
5. Provide background on the Ministry of Environments requirements for a landfill on the property and the steps that have and will be taken to meet these requirements; and
6. Update existing zoning and uses to better reflect current land use activities.

The intent of this proposal is to outline in general terms the objectives above for staff and council review, and not to provide a detailed overview of each objective specifically.

Site History

The site is currently owned by ~~Wayne~~ Mounce of Mounce Construction Ltd. and has been since 2000. This property is currently zone A-2 (Agricultural Zone) where the OCP indicates the property has General Industrial Use Potential. The property is a 20 acre parcel of which approximately 4 – 5 acres are utilized (or have historically been utilized) for a sand pit and have been subsequently backfilled with demolition material. Another 5 acres consists of an active sand pit area and the remaining 10 acres is used for industrial / residential purposes. Landfilling operations have historically taken place in the northern 4-5 acre portion of the property. The landfilling activities are regulated under an operating Permit No. PR11191, which allows 7,500 m³ of compacted waste per calendar year. Although the permit is still active, landfilling ceased in 2015.

The site is currently primarily used as an equipment yard and landfilling site for construction materials. The surrounding area is largely cleared agricultural land, and it borders the west side of the current Salmon Arm landfill operation. There are nearby residential dwellings on agricultural land to the north and south of the property, as well as the municipal airport just east of the Salmon Arm landfill.

Appendix 4: Letter of Intent and Conceptual Site Plan



#203 – 270 Hudson Avenue NE
PO Box 106
Salmon Arm, BC V1E 4N2

Pre-Existing Reports and Monitoring

The CSRD and Mounce Construction began discussions regarding the property purchase in 2015, which resulted in the need to engage the services of two consulting agencies to deliver professional opinions on this property. Sperling Hanson Associates was retained to complete a preliminary site investigation, risk management outlook and feasibility analysis based on the CSRD's interest in the potential purchase of the property.

Western Water Associates Ltd. was retained by Mounce Construction to install a monitoring well on the northern boundary of the property and to provide an overview of groundwater sample results, with a focus on identifying the risk of offsite migration of contaminants. Both reports have been attached to this report.

Landfill Expansion

With the acquisition of this property the CSRD intends to expand on its operation both in terms of service levels and landfilling capacity. The Sperling Hansen Associates report provides a development concept for the CSRD associated with the purchase of this property. However, the CSRD does not wish to restrict themselves in the re-zoning stage to one specific operational plan. The development concept in this report is to provide several options for the CSRD development plans, and they wish to make it clear that this is conceptual and that operational tactics may change during operations. In summary potential uses for this specific parcel of land may include:

- Landfilling;
- Eco-Depo and u-bay style diversion area for public drop off;
- Upgrading of z-block tipping bays for the public including separate bins for MSW;
- The existing office building could provide onsite infrastructure for CSRD landfill staff, front end staff and appropriate employee parking;
- Improved site access for the public and the potential to relocate and upgrade the scale facility;
- Contractor parking area as well as existing large industrial building for maintenance, storage, etc.;
- New composting area that would not sterilize future expansion of the existing landfill;
- Access to additional soil for landfill operational cover.

Short and Long-Term Uses and Development

The Sperling Hanson Report outlines the anticipated lifespan of the current facility and improved lifespan with the acquisition of this property. In general terms the CSRD would intend to phase the development of this site as well.

Upon acquisition the current intention of the CSRD would be to utilize the space for landfilling purposes. The next phase of landfilling at their current site proceeds towards the Mounce property. With this acquisition, the 50m buffer between the CSRD and Mounce property could be eliminated providing further landfill potential for the CSRD landfill site. In the short term, the CSRD would intend to use this old buffer zone and extend into the Mounce property for landfilling.

In time the CSRD may look to utilize the remainder of the Mounce property to provide operational and service improvements to the site. Although timing is not established at this time. The CSRD would in time implement some of the additional uses outlined above to improve the service levels and operational requirements.



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Screening and Landscaping of the Site Perimeter

The screening and landscaping of this site is regulated by the BC Ministry of Environment and the "BC Landfill Criteria for Municipal Solid Waste – Second Edition" published in June of 2016. Section 3.4 of this document outlines the requirements of the "buffer zone" and states:

"The buffer zone between the landfill footprint and the landfill site boundary shall be a minimum of 50m, of which the 30m closest to the landfill site boundary shall be reserved for natural or landscaped screening (berms and/or vegetative screens). Only the 20m buffer closest to the landfill footprint shall be used for access roads, surface water management works, leachate management, landfill gas management and monitoring works, firebreaks, and other ancillary works as required."

This requirement restricts the landfill potential of this site and provides the neighboring properties with a requirement that protects and likely improves the integrity of their property. In addition to the "buffer zone" outlined above, landfill security fencing is required to discourage unauthorized access to the facility. This security fencing is required around the entire perimeter of the operational footprint of the landfill.

Regulatory Agency Requirements

Further to the screening and landscaping requirements outlined above, the BC Ministry of Environment also provides requirements for additional nuisance controls. Apart from local government nuisance bylaws, the BC Landfill Criteria for Municipal Solid Waste outlines nuisance control measures for:

- Dust Control
- Noise Control
- Litter Control
- Odour Control

A complaint response procedure is required to be developed and posted on-site for responding to any nuisance complaints.

Through this rezoning process the CSR Contaminated Sites Process is triggered which would require a Certificate of Compliance. When a local government receives an application for subdivision, zoning, development, demolition of a structure or soil removal, a site profile is generally required of those sites that were used for any commercial or industrial activities. A site profile is a four-page information form that details the following: past and current industrial/commercial uses; waste disposal activities; legal/regulatory actions or constraints; and any areas of potential concern for a particular site. Based on this site profile, if a director suspects that a site may be contaminated or contains substances that may cause or threaten to cause adverse effects on human health or the environment, the director may order the owner of the site to prepare, at their expense, a preliminary or detailed site investigation. If the site is deemed contaminated, a director may issue a remediation order. Once the director is satisfied that the site has been remediated, or that the site is not contaminated the director can issue a "certificate of compliance".

Conclusions

With the acquisition of the Mounce Property the CSRSD could potentially add a significant amount of service life to the current landfill location. The increase in potential long-term landfilling capacity within the Mounce property and added to the current landfill site would be a significant advantage to both the CSRSD and the City of Salmon Arm. If the CSRSD were to take over the Mounce property the environmental monitoring requirements of the BC MOE would be significantly increased. Furthermore, the strict guidelines around buffering zones, landscaping and site operations would further improve the esthetic appeal from neighboring lands. Finally, rezoning the existing Salmon Arm landfill is a house keeping

Appendix 4: Letter of Intent and Conceptual Site Plan



#203 – 270 Hudson Avenue NE
PO Box 106
Salmon Arm, BC V1E 4N2

measure to reflect current use.

It is for this reason that we are applying for the rezoning of the land from the current A-2 zoning to a new M-Zone identified as a "Landfill – Waste Management Zone". The details of this specific zoning will be presented by the City of Salmon Arm staff.

We trust that this assessment satisfies your present requirements. Should you have any questions or comments, please contact our office at your convenience.

Best Regards,

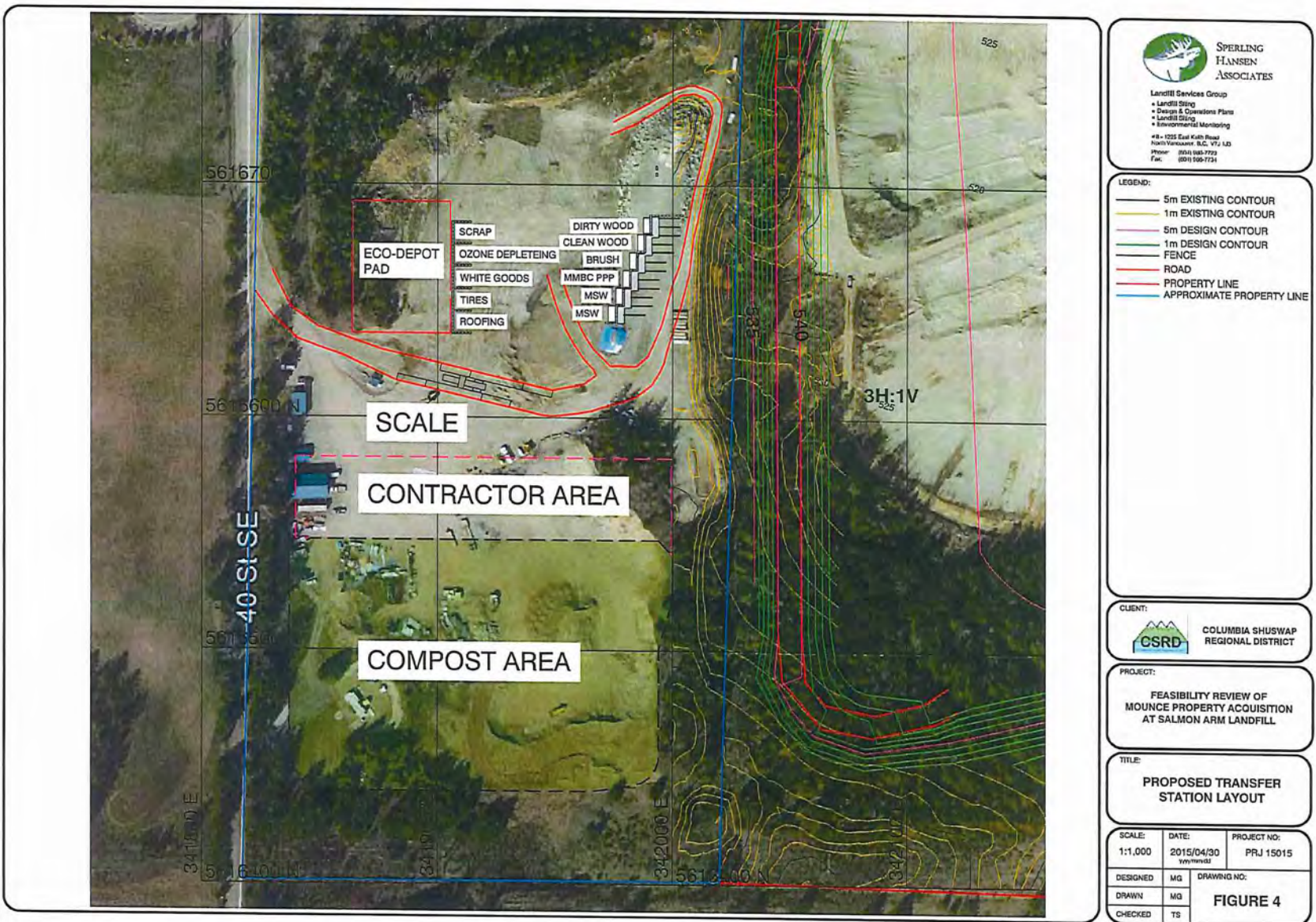
Lawson Engineering and Development Services Ltd.

A handwritten signature in black ink, appearing to read "BLM", is written over a faint, larger signature.

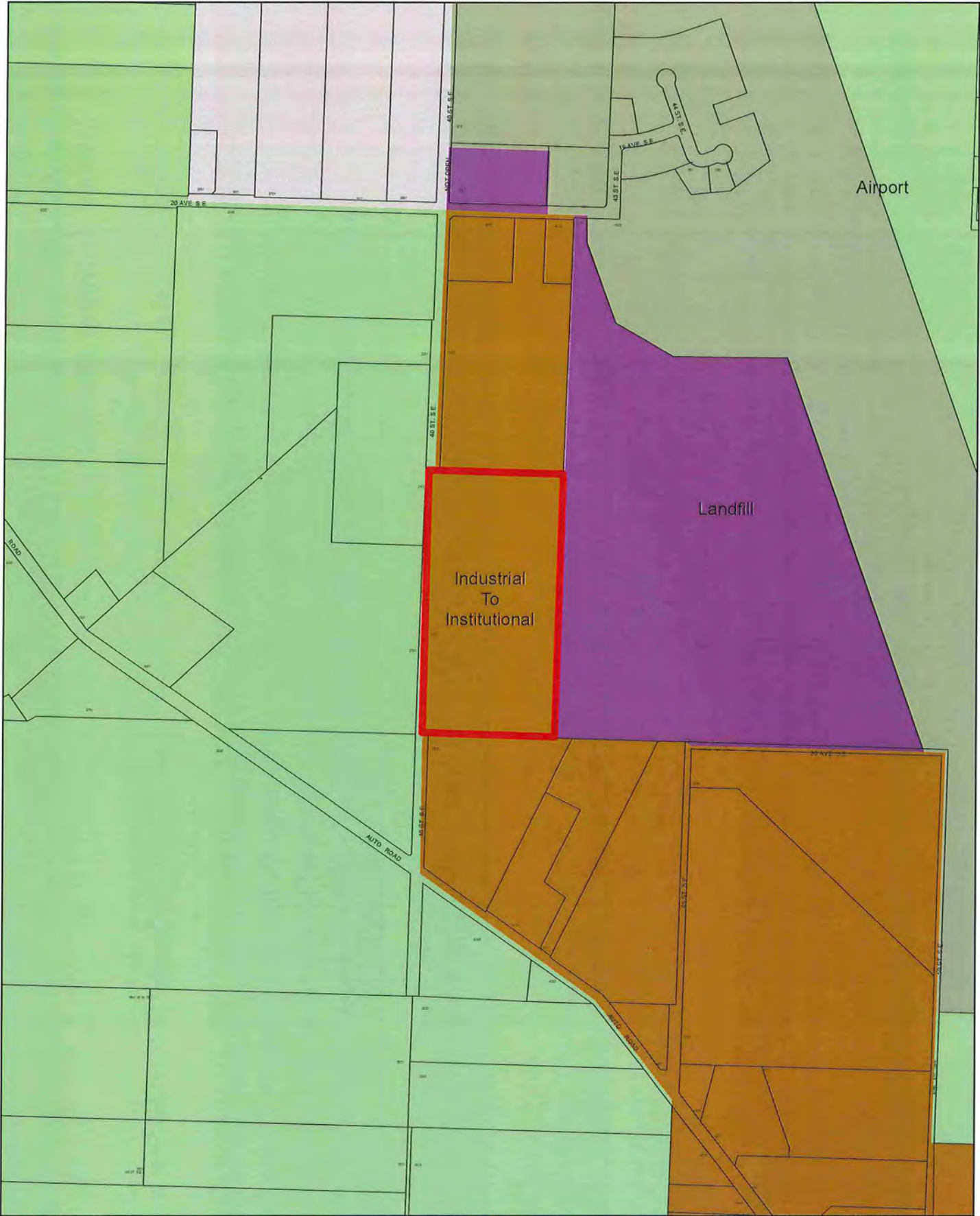
Blake Lawson, P.Eng
Project Engineer
blake@lawsondevelopments.com

Attachments:

- *Sperling Hansen Associates – Mounce Property (2750 – 40th Street SE Salmon Arm, BC) Economic Analysis*
- *Western Water Associates Ltd. – Well Drilling and Completion Report: Mounce Construction Site WPN 40121*



Appendix 4: Letter of Intent and Conceptual Site Plan



0 30 60 120 180 240 Meters

Subject Parcel

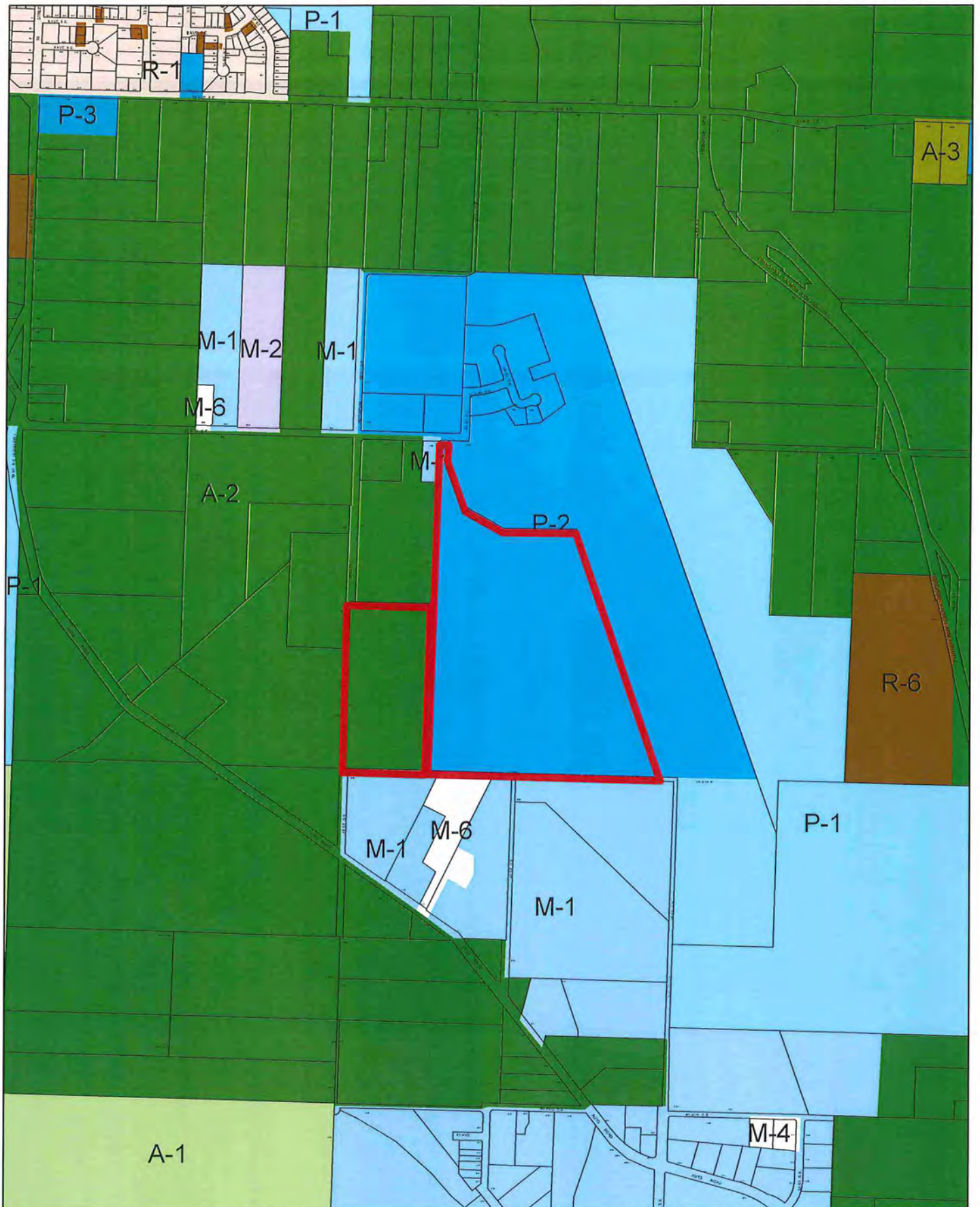
Institutional

Industrial - General

Acreage Reserve

Industrial - Airside

Industrial - Light



0 115 230 460 690 920 Meters



Subject Parcels

Executive Summary

The Columbia Shuswap Regional District (CSRD) Board has authorized the CSRD to enter into a Purchase Agreement with Mounce Construction Ltd. for a 20-acre parcel of land located at 2750 40 Street NE in Salmon Arm, BC (subject property). The subject property acquisition represents a rare opportunity to obtain land for future landfilling needs adjacent to an active landfill, especially in consideration of the subject property being land that is currently permitted as a private landfill for waste management purposes. The approval to purchase, which facilitates the future expansion of the Salmon Arm Landfill site, is conditional on the subject property being successfully rezoned to comply with the City of Salmon Arm's Official Community Plan (OCP) and Ministry of Environment (MoE) requirements related to a Solid Waste Management Plan (SWMP) amendment. The acquisition deadline, as defined in the purchase agreement, is June 30, 2018.

Since the CSRD does not currently face challenges related to “finding more landfill space” the CSRD’s SWMP provides little guidance on matters related to land acquisition. The CSRD has therefore developed an amendment to the SWMP that enabled broad scale community consultation and feedback with respect to the purchase of the subject property as well as to request community guidance related to future waste-related land acquisition opportunities. The SWMP amendment process focused on the elements necessary to satisfy broad and sufficient consultation required to receive the endorsement of the MoE.

For the purposes of developing a SWMP amendment for the acquisition of the subject property as well as the establishment of guiding principles to consider for future acquisition opportunities, the CSRD has undertaken a comprehensive consultation process. To support decision making and the development of the amendment, the CSRD engaged in public consultation using the same strategies undertaken when the 2014 SWMP review was conducted in 2014, including:

- Ongoing input and commentary from the CSRD’s Plan Monitoring Advisory Committee (PMAC);
- A series of four open house sessions in each member municipality (Salmon Arm, Sicamous, Revelstoke and Golden), and;
- An online or e-survey to gain additional input from the entire Solid Waste Management Plan area.

The Plan Amendment will be appended to the 2014 SWMP and is drafted in a manner that is consistent with the existing SWMP document and the province’s *A Guide to Solid Waste Management Planning* document. This report concludes with a concise proposed amendment to be appended to the 2014 SWMP.

The approval of the SWMP amendment will initiate an application for an OCP amendment with the City of Salmon Arm and will result in an additional consultation process specific to the City of Salmon Arm’s OCP and zoning approval processes. Development of the SWMP amendment and the related stakeholder consultation is also intended to support the OCP amendment process.

The stakeholder consultation undertaken to amend the SWMP related to the development of guidance and criteria on future property acquisitions in the CSRD resulted in a level of confusion by some respondents related to the CSRD evaluation criteria and the MoE Landfill Criteria. Several public comments registered as part of the consultation process suggested that the MoE requirements for landfill criteria should be adhered to in its entirety and the CSRD should not develop their own separate criteria. The consultation efforts related to the development of criteria proposed by the CSRD was never intended as an attempt to reinvent existing MoE Landfill Criteria but were proposed to assist in decision-making and priority rating related to future property acquisition for waste management purposes given the significance of the expenditure and impact on the community.

Appendix 7: SWMP Amendment Executive Summary

The CSRD can correct this perception by providing additional detail to the public about how the CSRD criteria relates to the application of MoE Landfill Criteria to property acquisition, and that post-purchase there will be direct engagement with the MoE regarding updates of permits and the site Design and Operation Plan (D & O Plan).

The CSRD recognizes the Ministry of Environment's "Landfill Criteria" as being the guidance document for siting new landfills or expanding existing ones: The CSRD's interest in the proposed land acquisition is an opportunity to also explore broader considerations for future land acquisition opportunities.

Overall, results from the community consultation revealed a moderate level of support for the acquisition of the subject property as well as guidance around proposed criteria, although some divisions were evident in the community over these issues. These divisions generally aligned with the physical or geographical proximity to the site, whereas those residing closest to the subject property were the most vocally opposed to the acquisition and criteria. These results emphasize a continuing obligation by the CSRD to be transparent in their decision making and to address concerns expressed by neighbours related to the acquisition and future management of the site. The consultation process has resulted in the confirmation and prioritization of a number of criteria that should be considered for land acquisitions. These criteria have been incorporated into the proposed SWMP amendment.



City of Salmon Arm
**Memorandum from the Engineering
 and Public Works Department**

To: Kevin Pearson, Director of Development Services
 Date: December 18, 2017
 Prepared by: Darin Gerow, Engineering Assistant
 Subject: **Official Community Plan Amendment Application No. OCP4000-33E**
 Civic: 2750 – 40 Street SE
 Legal: The West ½ of Legal Subdivision 2 of Section 7, Township 20, Range 9, W6M, KDYD
 Owner: Mounce Construction Ltd., Box 814, Salmon Arm, BC, V1E 4N9
 Applicant: Columbia Shuswap Regional District, Box 978, Salmon Arm, BC, V1E 4N9

Further to your referral dated December 14, 2017, we provide the following servicing information. **The following comments and servicing requirements are not conditions for OCP amendment; however, these comments are provided as a courtesy in advance of any development proceeding to the next stages:**

Engineering Department does not have any concerns related to the OCP Amendment and recommends that they be granted

General:

1. Full municipal services are required as noted herein. Notwithstanding the comments contained in this referral, it is the applicant's responsibility to ensure these standards are met.
2. Comments provided below reflect the best available information. Detailed engineering data, or other information not available at this time, may change the contents of these comments.
3. Development properties to be serviced by electrical and telecommunications wiring.
4. Properties under the control and jurisdiction of the municipality shall be reinstated to City of Salmon Arm satisfaction.
5. Owner/developer will be responsible for all costs incurred by the City of Salmon Arm during construction and inspections. This amount may be required prior to construction. Contact City Engineering Department for further clarification.
6. Erosion and Sediment Control measures will be required as per Subdivision and Development Servicing Bylaw No. 4163 – Schedule B, Part 1, Section 3.1. ESC Plans to be approved by the City of Salmon Arm.
7. The applicant will be required to submit for City review and approval a detailed site servicing/lot grading plan for all on-site (private) work. This plan will show such items as

Official Community Plan Amendment Application No. OCP4000-33E
 CSRD
 Page 2

parking lot design, underground utility locations, pipe sizes, pipe elevations, pipe grades, catchbasin(s), control/containment of surface water, contours (as required), lot/corner elevations, impact on adjacent properties, etc.

8. The applicant will be required to submit for City review and approval an engineered design (plan/profile) for any off-site improvements or works within City owned lands. Design must be prepared and submitted by a qualified professional engineer. Refer to the sections below for more information. The applicant is requested to contact the Engineering Department should additional information be required. Securities equal to 125% of the estimated off-site servicing costs will be required as a condition of development.

Roads/Access:

1. 40 Street SE on the subject property's west boundary is designated as a Rural Collector Street within the Industrial Development Area, requiring an ultimate road right of way dedication of 20.0 meters (10.0 meters on either side of road centerline). Based on review of existing records, 10.0 meters of road dedication is required (to be confirmed by BCLS).

40 Street SE is currently constructed to an interim gravel Rural Local Road standard. Upgrading to the Industrial Area Road Standard will be required (RD-6A). Upgrades may include, but are not limited to road widening and construction, asphalt paving, shouldering, ditching, and boulevard construction.

2. Accesses shall be approved by City Engineer prior to construction.
3. All boulevards shall be graded towards roadway at minimum 2.0 %.

Water:

1. The site fronts a 200mm diameter watermain (Zone 5) along 40 Street. Minimum watermain size within The Industrial Development Area is 250mm diameter. Upgrading all fronting watermain to 250mm diameter will be required, or as required in the paragraph below.

City of Salmon Arm is proposing to install a supply 'trunk main' along 40 Street frontage in the near future. Owner/developer is required to upgrade/install this watermain at the diameter provided by the City. City of Salmon Arm will enter into a cost share with the owner/developer and will cover pipe material costs over 250mm diameter.

2. The available fire flows are not satisfactory according to the 2011 Water Study (Opus Dayton Knight 2012). Owner/developers authorized Engineer is to complete a flow test on the closes fire hydrant to confirm the existing watermain servicing the property is adequately sized to provide fire flows (Industrial requirement of 225 l/s with 20 psi residual pressure). Should fire flows be inadequate, a water system upgrade will be required to achieve these fire flows. Owner/developer will be responsible for all associated costs.
3. Fire hydrant spacing shall meet the Industrial Area spacing of 90 meters. It appears that two (2) fire hydrants will be required along the property frontage.

Appendix 8: Engineering Comments

Official Community Plan Amendment Application No. OCP4000-33E
CSRD
Page 3

4. Fire protection requirements to be confirmed with the Building and Fire Departments.
5. The property shall be serviced by single metered water service connection (as per Specification Drawings No. W-12) adequately sized to satisfy the servicing requirements for the proposed use. Our records show the property is currently serviced with a metered 50mm diameter service from 40 Street SE. All unused services shall be terminated at the main. Water meters, if required, will be provided by the City at the owner/developers cost

Sanitary Sewer:

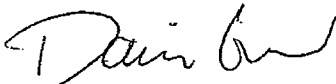
1. The subject property does not front on a City sanitary sewer main. Subject to the required approvals from Interior Health Authority, a private on-site disposal system will be required.

Drainage:

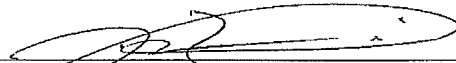
1. The subject property does not front on an enclosed storm sewer system. Site drainage is by overland and ditch draining systems. Drainage issues related to a development to be addressed at time of building permit.

Geotechnical:

1. A geotechnical report in accordance with the Engineering Departments Geotechnical Study Terms of Reference Category A (Building Foundation and Site Drainage) and Category B (Pavement Structural Design) is required.



Darin Gerow, AScT
Engineering Assistant



Rob Nieuwenhuizen, AScT
Director of Engineering & Public Works



City of Salmon Arm

Development Services Department Memorandum

To: Her Worship Mayor Cooper and Members of Council

Date: April 4, 2018

Subject: 2017 City of Salmon Arm Carbon Neutral Progress Survey

RECOMMENDATION

THAT: The 2017 City of Salmon Arm Climate Action/Carbon Neutral Progress Survey indicate the City is eligible for recognition from the Green Communities Committee as a 'Level 3 – Accelerating Progress' local government and that the City will not be carbon neutral for the 2017 reporting year;

AND FURTHER THAT: The 2017 City of Salmon Arm Climate Action/Carbon Neutral Progress Survey, attached as Appendix 1 in the Development Services Department memorandum dated April 4, 2018, be received as information.

INTRODUCTION

The purpose of this report is to present the 2017 City of Salmon Arm *Climate Action/Carbon Neutral Progress Survey* to Council for information to fulfill the public reporting requirements of the City's application for the annual provincial Climate Action Revenue Incentive Program (CARIP) grant. The 2017 *Climate Action/Carbon Neutral Progress Survey* is attached as Appendix 1. To complete the *Climate Action/Carbon Neutral Progress Survey* due for submission on June 1, 2018, the City will need to identify within this survey whether or not it intends to be carbon neutral for the 2017 reporting year or to continue with an option discussed below.

BACKGROUND

The CARIP program currently requires the submission of a *Climate Action/Carbon Neutral Progress Survey*. The survey will be posted on the City's website and provided to the Province in support of the City's application for the annual CARIP grant. In order to complete the reporting process and ensure that the City is eligible for the CARIP grant, this survey must be completed and made public prior to the June 1, 2018 deadline. The proposed 2017 Salmon Arm *Climate Action/Carbon Neutral Progress Survey* is attached as Appendix 1 for Council's consideration. As attached the proposed *Climate Action/Carbon Neutral Progress Survey* indicates to the Province that: (1) it is the 'final' report; (2) the City will not be carbon neutral for the 2017 reporting year; and (3) the City suggests recognition at the 'Level 3 – Accelerating Progress' level with the Green Communities Committee.

British Columbia Climate Action Charter

The City's Official Community Plan (OCP) provides overall direction towards creating a more efficient community, with policies of "urban containment" guiding decisions on land use proposals and subdivision. Along with the majority of other local governments in the province, in 2008 the City voluntarily signed the B.C. Climate Action Charter, a non-legally binding agreement between the provincial government, the Union of British Columbia Municipalities (UBCM) and local governments that acknowledges that climate change is a reality and establishes a number of goals to address the issue going forward. Of particular relevance to local governments is the agreement to achieve the following goals:

1. *Being carbon neutral in respect of their operations by 2012;*
2. *Measuring and reporting on their community's greenhouse gas emissions profile; and*
3. *Creating complete, compact, more energy efficient communities.*

While operations have not been carbon neutral for previous reporting years, the City has been annually measuring and reporting on emissions, and has completed several projects to improve efficiency.

Climate Action Reserve

The City of Salmon Arm has been claiming a carbon tax rebate via CARIP since 2008, considered conditional on directing these funds towards expenditures that will reduce greenhouse gas emissions. The funds received have been placed in a Climate Action Reserve which has directly financed various projects such as the SASCU Rec Centre and Arena upgrades (boilers, hot water tanks, heat exchangers, and LED lighting). This Climate Action Reserve fund (estimated balance is \$62,000 following budgeted 2018 expenditures towards hybrid fleet vehicles and arena projects) can support projects that allow the City to continue making progress towards carbon neutrality. The current CARIP rebate application is expected to be approximately \$50,000 for the 2017 reporting year.

2008 Energy and Greenhouse Gas Emissions Study

In October of 2008 the City received the City of Salmon Arm Energy and Greenhouse Gas Emissions Study completed by Urban Systems, providing a description of initiatives that the City could undertake to reduce emissions and energy consumption and how the Climate Action Reserve may be best directed. Over time, the City has acted on several of these recommendations as guidance for initiatives funded by the Climate Action Reserve.

2010 Facility Reports

In June 2010, following the broad direction of the City of Salmon Arm Energy and Greenhouse Gas Emissions Study, four specific facility energy studies were completed to analyze the public works building, recreation centre, arena, and RCMP building, the City's largest producers of GHG emissions (the arena and rec centre produce roughly 40% of the City's emissions). Following the specific recommendations of the facility reports provides further guidance for future projects and improvements.

Climate Action Revenue Incentive Program Grant Reporting

As a signatory to the Charter, the City is eligible to apply for the annual CARIP grant equal to the amount spent by the City on Carbon Tax each year. CARIP grants to the City are allocated to a reserve account for future GHG emissions reduction projects and/or potentially for the purchase of carbon offset credits to achieve carbon neutrality. The City has been required to report publicly on its progress in reducing and managing both corporate and community-wide GHG emissions since 2010 and previous Salmon Arm Climate Action Reports are available on the City's website.

Corporate Emissions Inventory

A corporate emissions inventory tracks energy consumption (e.g. natural gas, electricity, gasoline, diesel and propane) from corporate operations and quantifies the corresponding GHG emissions. The service areas and required scope of a corporate emissions inventory are defined by several guidance documents produced by the Green Communities Committee – a partnership between the provincial government and the UBCM – and the Ministry of Environment. The City's corporate emissions inventory was prepared by staff using these guidance documents, which are available on the BC Climate Action Toolkit website at www.toolkit.bc.ca. A summary of the City's 2017 inventory is shown below:

Table 1. Summary of the 2017 City of Salmon Arm Corporate Emissions Inventory

Service Area	Emissions (tonnes CO₂e)
Administration and Governance	74.57
Drinking, Storm and Waste Water	451.26
Solid Waste Collection, Transportation and Diversion	115
Roads and Traffic Operations	415.59
Arts, Recreation, Parks and Cultural Services	932.53
Fire Protection	111.55
Total	2100.5

* For context, 2016 total was 1878.9 while the 2015 total was 1,866.3 tonnes

A detailed multi-department analysis could accurately explain the annual variation in emissions. In general, changes can be correlated to weather (including snowfall and temperature), capital works projects, demand from new programs (such as residential food waste collection or the new Montebello building), and fluctuating service demands. Staff note that temperatures through the first half of 2017 were roughly 5 degrees colder on average, which is a significant factor in emissions related to heating.

Carbon Neutrality

The City's corporate operations produced a total of 2,100.5 tonnes CO₂e in 2017, meaning that in order to be carbon neutral, the City would need to purchase 2,100.5 carbon offset credits from a provider of certified offsets. The cost per carbon offset credit depends on the provider and there is no guarantee that such funds would support the implementation of projects within that local government's jurisdiction.

The primary carbon offset source is the Climate Investment Branch of the Ministry of Environment's Climate Action Secretariat, which invests in projects that meet defined eligibility criteria. While the CSRD has offered carbon offset credits to their member municipalities (from their gas collection system at the Salmon Arm landfill) in the past, this is no longer an option due to their current arrangement with the Province. Past quotes for carbon offset credits have ranged from \$16.00 to \$25.00 per tonne. To offset 2,100.5 tonnes CO₂e to become carbon neutral for the 2017 reporting year would cost in the range of \$33,000.00 to \$53,000.00 (not including associated administrative costs). For neutrality under the CARIP program, carbon offset credits would need to be purchased prior to June 1, 2018, the deadline for completing the *Carbon Neutral Progress Survey*. For the reporting years up to and including 2016, the City has not opted to purchase offset credits to achieve carbon neutrality.

Climate Action Recognition Program

Local governments are not required to be carbon neutral for the 2017 reporting year and are still eligible for the CARIP grant based on continued measurement and reporting. The CARIP program now provides three levels of recognition for local governments that will not be carbon neutral: "1 - Demonstrating Progress", "2 - Measuring", and "3 - Accelerating Progress". These options are provided as it is understood that it may be difficult for some local governments to be carbon neutral, and furthermore, that local governments may be undertaking projects that have the effect of reducing emissions that are difficult to quantify, but none-the-less important (e.g. constructing sidewalks, improving pedestrian spaces and alternative transportation options, smart growth policy).

The City has been measuring and publicly reporting on emissions for several years now through our Corporate Emissions Inventory. CARIP's "Measuring" category recognizes local governments that are both completing relevant emission-reduction projects and measuring emissions. While the City chose the 'measuring' option for the 2016 reporting year, the CARIP program awarded the City with Level 3 recognition: "Accelerating Progress". As such, and in consideration of the range of projects listed below, staff recommends that "Accelerating Progress" is again the appropriate recognition for the City.

Projects completed in 2017 and potential future actions planned include:

2017 projects: Refrigeration upgrades at Shaw Centre Arena;
Pool pump upgrade (variable frequency drive);
Civic building/City Hall atrium LED lighting upgrades;
Airport LED lighting project (south);
Residential yard waste pick-up (bi-annual);
Blackburn Park improvements (life trail);
Sidewalk install (520 m by City);
New Canoe Beach Crosswalk installed;
Bicycle Route enhancement (1 km of sharrow painting); and
Greenway network enhancement (7,775 m new trails created).

Future projects: Efficient Arena Flood Technology;
Solar project research;
Water Conservation policy and Water metering cost benefit analysis;
Tree planting (Shuswap Memorial Cemetery);
LED street lighting projects (Shuswap Street revitalizations);
Airport lighting project (north);

Hybrid / EV fleet vehicle(s);
Continued residential yard waste pick-up (bi-annual);
Ongoing greenways network enhancements; and
Various sidewalk projects (460 m proposed for 2018).

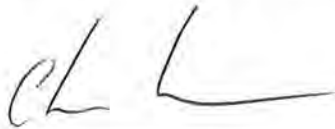
Context: CARIP Results

The CARIP "Summary Report on Local Government Climate Actions 2016" is attached as Appendix 2. A total of 45 out of 187 participating local governments (regional and municipal) were carbon neutral for the 2016 reporting year (there are 189 local governments in BC). The majority of participating local governments were not carbon neutral, including Salmon Arm: 142 participating local governments were not carbon neutral in 2016, representing 76% of 2016 CARIP participants.

Staff annually monitor CARIP reports from comparable communities and have observed a somewhat predictable trend where communities with the coldest climates show relatively high emissions, while those in warmer climates report lower emissions. Of the carbon neutral communities, approximately one-third achieve carbon neutrality through their own actions (primarily landfill gas capture or through organic recycling programs), while approximately two-thirds purchase offsets (note that while the City contributes to the CSRD's landfill gas capture, the CSRD maintains associated carbon credits). The attached 2016 Summary Report details recent initiatives undertaken by local governments.

CONCLUSION

Staff recommend that the 2017 City of Salmon Arm *Climate Action/Carbon Neutral Progress Survey* indicate that the City is eligible for recognition at 'Level 3 – Accelerating Progress' with the Green Communities Committee and intends to continue making progress towards carbon neutrality. The 2017 *Climate Action/Carbon Neutral Progress Survey* will be placed on the City's website to fulfill the public reporting requirements of the City's application for the annual CARIP grant.



Prepared by: Chris Larson, MCP
Planning and Development Officer



Reviewed by: Kevin Pearson, MCIP, RPP
Director of Development Services

Survey Template

For the 2017 CARIP Climate Action/Carbon Neutral Progress Survey

Local governments are required to submit the *2017 CARIP Climate Action/Carbon Neutral Progress Survey* on or before June 1, 2018.

Use Template to Collect Information

In response to local government input, this Survey Template has been created to assist with collecting information for the *2017 CARIP Climate Action/Carbon Neutral Progress Survey*, and follows the same structure as the survey.

Responses entered into this Template can be cut and pasted into the online survey. The survey asks for up to five actions in each category, and there is a place in the survey to report additional actions if desired. In this Template, simply add more lines to the tables to report more than five actions.

Use Template to Assist with Reporting

Local governments are also required to publicly report the information submitted in the *2017 CARIP Climate Action/Carbon Neutral Progress Survey*. There is no ability for survey respondents to generate a report of survey responses, in turn:

- A PDF copy of your survey responses will be sent to you once your completed survey has been submitted.
- Given that it is challenging to edit the PDF document, you are encouraged to use your populated version of this Template, or your own, to report your CARIP results publicly.
- You may also choose to create a report in another format that contains the information submitted in the 2017 CARIP Climate Action/Carbon Neutral Progress Survey.

Further information on CARIP can be found on the [Ministry of Municipal Affairs and Housing website](#).

The Government of BC will not collect, use, or disclose personal information using SurveyMonkey®. Please be aware however that IP addresses are collected by SurveyMonkey® itself, and these IP addresses and other information collected will be stored on SurveyMonkey®'s servers located outside of Canada. Please do not provide any third-party information (i.e. refer to others) in your responses to the survey.

Climate Action Revenue Incentive (CARIP) Public Report for 2017

Local Government:

City of Salmon Arm

Report Submitted by:

Name: Chris Larson

Role: Planning & Development Officer

Email: clarson@salmonarm.ca

Phone: 250-803-4000



Date: April 29, 2018

The City of Salmon Arm has completed the 2017 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2017 and proposed for 2018 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

2017 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, centred) plays an especially important role in energy and GHG reduction.

Community-Wide Actions Taken in 2017	
	As per OCP policy, continued use of the Urban Containment Boundary to support long-term growth.
	As per OCP policy, strive to protect ALR lands, forested hillsides, foreshore areas and watercourses.
	As supported by OCP and Greenways Strategy enhance and continued development of greenways, active transportation network.
Community-Wide Actions Proposed for 2018	
	As per OCP policy, continued use of the Urban Containment Boundary to support long-term growth.
	As per OCP policy, strive to protect ALR lands, forested hillsides, foreshore areas and watercourses.
	As supported by OCP and Greenways Strategy enhance and continued development of greenways, active transportation network.

Corporate Actions Taken in 2017	
	Set aside funds in climate action reserve.
Corporate Actions Proposed for 2018	
	Continue to set aside funds in climate action reserve for projects that will improve efficiency.

Broad Planning		
What is (are) your current GHG reduction target(s)?	OCP Section 4.6: 6% reduction by 2020	
Are you familiar with your community's community energy and emissions inventory (e.g. CEEI or another inventory)?		Yes

What plans, policies or guidelines govern the implementation of climate mitigation in your community?	
• Community Energy and Emissions (CEE) Plan	No
• Community- Wide Climate Action Plan	No
• Integrated Community Sustainability Plan	No
• Official Community Plan (OCP)	Yes
• Regional Growth Strategy (RGS)	No
• Do not have a plan	No
• Other:	No
Does your local government have a corporate GHG reduction plan?	Yes

2017 BUILDING AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Community-Wide Actions Taken in 2017	
Community-Wide Actions Proposed for 2018	

Corporate Actions Taken in 2017	
	Refrigeration system upgrades at Arena
	Pool pump upgrade
	Civic building energy efficient retrofits - LED lighting
	LED airport lighting project
Corporate Actions Proposed for 2018	
	LED street lighting projects
	LED airport lighting project (north)
	Efficient Arena Flooding Project

Building and Lighting

The Province has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code--a part of the BC Building Code--supports that effort

Is your local government aware of the BC Energy Step Cost?	No
Is your local government implementing the BC Energy Step Code?	No

2017 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Community-Wide Actions Taken in 2017
Community-Wide Actions Proposed for 2018

Corporate Actions Taken in 2017
Corporate Actions Proposed for 2018
Solar Project Research

Energy Generation	
Is your local government developing, or constructing:	
• A district energy system	No
• A renewable energy system	No
Is your local government operating:	
• A district energy system	No
• A renewable energy system	No
Is your local government connected to a district energy system that is operated by another energy provider?	No
Are you aware of the Integrated Resource Recovery guidance page on the BC Climate Action Toolkit ?	Yes
Are you familiar with the 2017 " List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments "?	Yes

2017 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

Greenspace/Natural Resource Protection refers to the creation of parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites as well as the protection of wetlands, waterways and other naturally occurring features.

Community-Wide Actions Taken in 2017	
Community-Wide Actions Proposed for 2018	

Corporate Actions Taken in 2017	
	Blackburn Park improvements (Life Trail).
	Canoe Beach Park enhancements.
	Klahani Park improvements.
Corporate Actions Proposed for 2018	
	Continued Park improvements, implementing Blackburn, Klanhahi and Canoe Beach park plans.
	Tree Planting at Shuswap Memorial Cemetery.

Greenspace	
Does your local government have urban forest policies, plans or programs?	Yes
Does your local government have policies, plans or programs to support local food production?	Yes

2017 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Community-Wide Actions Taken in 2017	
	Continued residential recycling pick-up.
	Residential yard waste pick-up (bi-annual).

Community-Wide Actions Proposed for 2018	
	Continued residential recycling pick-up.
	Continued residential yard waste pick-up (bi-annual).

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

Solid Waste	
Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Does your local government have organics reduction/diversion policies, plans or programs?	Yes

2017 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency, emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.

Community -Wide Actions Taken in 2017	
	Greenway network enhancement (7,775 m new trails created).
	New sidewalk installed (520 m by City).
	Canoe Connector Trail and associated crosswalk installation.
	Bicycle Route enhancement (1 km of sharrows painted).
Community-Wide Actions Proposed for 2018	
	Various sidewalk projects.
	Greenways network enhancements (trail maintenance and construction).

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	

Transportation	
Does your local government have policies, plans or programs to support:	
• Walking	Yes
• Cycling	Yes
• Transit Use	Yes
• Electric Vehicle Use	Yes
• Other (please specify)	No
Does your local government have a transportation demand management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behavior)?	No
Does your local government integrate its transportation and land use planning?	Yes

2017 WATER AND WASTEWATER ACTIONS

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces greenhouse gas emissions.

Community-Wide Actions Taken in 2017	
	Annual sprinkler restrictions.
	Require installation of water meters on new development.
Community-Wide Actions Proposed for 2018	
	Continued annual sprinkler restrictions.
	Continue to require installation of water meters on new development.
	Develop Water Conservation policy.
	Water metering cost-benefit analysis.

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2018	
	Continue exploring Water and Wastewater System efficiency upgrades.

Water Conservation	
Does your local government have water conservation policies, plans or programs?	Yes

2017 CLIMATE CHANGE ADAPTATION ACTIONS

This section of the CARIP survey is designed to collect information related to the types of climate impacts local governments are experiencing and how they are being addressed.

Please identify the THREE climate impacts that are most relevant to your Local Government.	
<ul style="list-style-type: none"> Increased temperatures increasing wildfire activity Increased temperatures affecting air quality Extreme weather events contributing to urban and overland flooding 	
Other: Decreased average temperatures increasing winter burdens	

In 2017 has your local government addressed the impacts of a changing climate using any of the following?	
Risk and Vulnerability Assessments	Yes
Risk Reduction Strategies	Yes
Emergency response planning	Yes
Asset management	Yes
Natural/Eco asset management strategies	Yes
Infrastructure upgrades (e.g. storm water system upgrades)	Yes
Beach Nourishment projects	No
Economic diversification initiatives	Yes
Strategic and financial planning	Yes
Cross-department working groups	Yes
OCP policy changes	Yes
Changes to zoning and other bylaws and regulations	Yes
Incentives for property owner (e.g. reducing storm water run-off)	Yes
Public education and awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes
Other:	

Climate Change Adaptation Actions Taken in 2017	
Please elaborate on key actions and/or partnerships your local government has engaged in to prepare for, and adapt to a changing climate. Add links to key documents and information where appropriate.	
Climate Change Adaptation Actions Proposed for 2018	
	Wildfire mitigation research
	Solar feasibility research

	For more information please contact:

The following are key resources that may be helpful to your local government in identifying climate impacts, as well as, strategies, actions and funding to deal with them. For those resources that you have used, please indicate whether they were useful in advancing your work in climate change adaptation?	
Indicators of Climate Change for British Columbia, 2016 Plan2Adapt Climate Projections for Metro Vancouver Climate Projections for the Capital Region Climate Projections for the Cowichan Valley Regional District Province of BC's BC Adapts Video Series Preparing for Climate Change: An Implementation Guide for Local Governments The Public Infrastructure and Engineering Vulnerability Committee's (PIEVC) protocol Sea Level Rise Primer BC Regional Adaptation Collaborative Webinars www.ReTooling.ca Water Balance Model The Water Conservation Calculator Funding: National Disaster Mitigation Program (NDMP) Community Emergency Preparedness Fund (CEPF) Municipalities for Climate Innovation Program (MCIP) Climate Adaptation Partner Grants (FCM) Infrastructure Planning Grants (MAH) Federal Gas Tax Fund	Useful Useful Not Useful Not Useful Not Useful Haven't Used Useful Haven't Used Not Useful Haven't Used Useful Haven't Used Haven't Used Useful Useful Useful Useful Useful Useful
Other:	

2017 OTHER CLIMATE ACTIONS

Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Community-Wide Actions Taken in 2017	
Community-Wide Actions Proposed for 2017	

Corporate Actions Taken in 2017	
Corporate Actions Proposed for 2017	

Other	
Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ?	No
Have you used CLIC?	No

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative Corporate and/or Community-Wide GHG reduction and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to repeat an action that has already been listed.

Projects included here may be featured as success stories on the B.C. Climate Action Toolkit and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Communities that have conducted innovative initiatives may want to consider raising their profile through applications to [CEA's Climate and Energy Action Awards](#), [UBCM Climate and Energy Action Award](#), [FCM Sustainable Communities Awards](#) or through submissions to [FCM's National Measures Report](#).

Community-Wide Action
For more information contact:
Corporate Action
For more information contact:

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below.

Mitigation

Programs and Funding

As a member municipality of the CSRD, the City of Salmon Arm contributes to regional climate actions, with the most relevant being the CSRD's gas capture at the Salmon Arm landfill.

Adaptation

Programs and Funding

2017 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the Climate Action Charter. Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the B.C. Climate Action Toolkit website, especially the [Becoming Carbon Neutral: A Guide for Local Governments in British Columbia](#).

Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for greenhouse gas (GHG) emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.

Reporting Emissions

Did you measure your local government's corporate GHG emissions in 2017?	Yes
If your local government measured 2017 corporate GHG emissions, please report the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from services delivered <u>directly</u> by your local government:	1131.93
If your local government measured 2017 corporate GHG emissions, please report	968.57

the number of corporate GHG emissions (in tonnes of carbon dioxide equivalent) from <u>contracted</u> services:	
TOTAL A: CORPORATE GHG EMISSIONS FOR 2017	2,100.5 tCO₂e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2017 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

If applicable, please report the 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 1 GHG Reduction Projects:

OPTION 1 PROJECTS	REDUCTIONS
Energy Efficient Retrofits	
Solar Thermal	
Household Organic Waste Composting	
Low Emission Vehicles	
Avoided Forest Conversion	
TOTAL B: REDUCTIONS FROM OPTION 1 PROJECTS FOR 2017	tCO₂e

If applicable, please report the names and 2017 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO₂e)) being claimed from Option 2 GHG Reduction Projects:

OPTION 2 PROJECT NAME	REDUCTIONS
TOTAL C: REDUCTIONS FROM OPTION 2 PROJECTS FOR 2017	tCO₂e

If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO₂e)) from an offset provider for the 2017 reporting year:

(NOTE: DO NOT INCLUDE ANY FUNDS THAT MAY BE SET ASIDE IN A CLIMATE ACTION RESERVE FUND)

OFFSET PROVIDER NAME	OFFSETS
TOTAL D: OFFSETS PURCHASED FOR 2017	tCO₂e

TOTAL REDUCTIONS AND OFFSETS FOR 2017 (Total B+C+D) = 0 tCO₂e

Corporate GHG Emissions Balance for 2017

Your local government's Corporate GHG Emissions Balance is the difference between total corporate GHG emissions (direct + contracted emissions) and the GHG emissions reduced through GCC Option 1 and Option 2 projects and/or the purchase of offsets.

CORPORATE GHG EMISSIONS BALANCE FOR 2017 = (A – (B+C+D)) = 2,100.5 tCO₂e

**If your Corporate GHG Emissions Balance is negative or zero,
your local government is carbon neutral.
CONGRATULATIONS!**

If applicable, please record any emissions reductions you will be carrying over for future years and the source of the emissions reductions, including the year they were earned (E.g., Organics diversion, 2016 100 tCO₂e).

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS

BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR	tCO₂e

Carbon Neutral Reporting	
Does your local government have a climate reserve fund or something similar?	Yes

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee (GCC) Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: for local governments who demonstrate progress on fulfilling one or more of their Charter commitments

Level 2 – Measuring GHG Emissions: for local governments that achieve level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community's energy and emissions inventory (i.e. CEEL)

Level 3 – Accelerating Progress on Charter Commitments: for those local governments who have achieved level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (i.e. through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: for local governments who achieve carbon neutrality in the reporting year.

For purposes of Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:
<ul style="list-style-type: none"> Refrigeration system upgrades at Shaw Centre Arena

- Pool pump upgrade (variable frequency drive)
- Civic building/City Hall atrium LED lighting upgrades
- Airport LED lighting project (south)

Based on your local government's 2017 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

<input type="checkbox"/>	Level 1 – Demonstrating Progress on Charter Commitments	
<input type="checkbox"/>	Level 2 – Measuring GHG Emissions	
<input checked="" type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	X
<input type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	
<input type="checkbox"/>	Not Sure	

Summary Report on LOCAL GOVERNMENT CLIMATE ACTIONS 2016



CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

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Introduction

The Climate Action Revenue Incentive Program (CARIP) is a conditional grant program that provides funding to local governments who have signed on to the B.C. Climate Action Charter (Charter). Under the B.C. Climate Action Charter, local government signatories commit to take actions to become carbon neutral in their corporate operations and reduce community-wide emissions by creating more complete, compact and energy-efficient rural and urban communities. Since 2007, increasing numbers of B.C. local governments have signed on to the Charter, demonstrating their leadership in addressing climate change.

The CARIP grant is equal to 100% of the carbon tax that eligible local governments have directly paid in a given year. To be eligible for the CARIP grant, local governments are required to report publicly on their plans and progress toward meeting their corporate and community-wide climate action goals and submit a survey of their actions to the Province.

In 2017, the tenth anniversary of the Charter, all 187 signatory local governments submitted CARIP reports, demonstrating significant commitment to taking climate action. Through their role in land use, transportation, waste, water, energy, and other infrastructure and service provision, many local governments are demonstrating leadership and applying innovative approaches to reducing emissions and adapting to climate change.

2016 CARIP Report Snapshot

Local Governments Reporting: **187**
 Local Governments Measuring: **147**
 Carbon Neutral Local Governments: **45**

The 2016 CARIP Summary Report

This year's annual report showcases the continued progress of B.C. local governments by highlighting some of the achievements and experiences of small, medium and large local governments.

The 2016 CARIP Summary Report includes:

- *updates on the carbon neutral progress and status of reporting local governments;*
- *highlights of actions taken in small, medium and large communities; and*
- *hyperlinked list of funding sources and programs reported by local governments.*

45 Local Governments achieved carbon neutrality in 2016

Ashcroft	Mount Waddington RD
Capital RD	Nanaimo RD
Central Saanich	North Cowichan
Coldstream	Oak Bay
Columbia Shuswap RD	Oliver
Comox	Osoyoos
Comox Valley RD	Parksville
Cowichan Valley RD	Pemberton
Cumberland	Penticton
Dawson Creek	Pitt Meadows
Delta	Richmond
Duncan	Sidney
East Kootenay RD	Sooke
Fort St. James	Squamish-Lillooet RD
Granisle	Thompson-Nicola RD
Highlands	Tofino
Islands Trust	Vancouver
Keremeos	Vanderhoof
Ladysmith	Victoria
Langley Township	View Royal
Lantzville	West Vancouver
Logan Lake	Whistler
	White Rock

Carbon Neutral Local Government

With all 187 Climate Action Charter signatories submitting CARIP surveys this year, the 2016 CARIP results provide the most complete picture to date on the progress made by local governments on their carbon neutral commitments under the Charter.

Of the 147 local governments that measured their corporate greenhouse gas (GHG) emissions in the 2016 CARIP reporting year, 45 achieved carbon neutral status. Appendix A lists the carbon neutral status of each reporting B.C. local government.

The number of corporate GHG emissions generated by local governments in 2016 was 256,769 tonnes, an increase of 16,803 tonnes compared to 2015. This increase may be partly attributable to the number of larger local governments measuring corporate emissions in 2016 as well as an increase in contracted service reporting.

In 2016, local governments claimed 123,514 tonnes of GHG emission reductions and offsets to balance their corporate footprint. This is a decrease from the number of emission reductions claimed by local governments in 2016 compared to 2015. One likely reason for this is the impact of the Landfill Gas Management Regulation on local governments' ability to use landfill gas capture as an Option 2 reduction project.¹

Of the total emissions reductions and offsets claimed, 110,421 tonnes were achieved through Green Communities Committee (GCC) Option 1 and Option 2 projects.² In 2016, Household Organic Waste Composting was the most common Option 1 project and Biocover Methane Reduction replaced Landfill Methane Gas Capture as the most common Option 2 project. Local governments chose to purchase 13,093 tonnes worth of offsets in 2016, slightly fewer than the 13,505 tonnes purchased in 2015.

See Appendix B for details of corporate emissions reported through CARIP between 2012 and 2016.

In addition to balancing and offsetting corporate emissions, about 50% of local governments reported contributing to their own climate action reserve funds.

¹ As a result of the Landfill Gas Management Regulation, starting in the 2016 CARIP reporting year, local governments that had undertaken Option 2 landfill gas capture projects for landfills subject to the regulation were no longer able to claim GHG emissions reduction credits on the first 75% of emissions captured.

² Option 1 and Option 2 projects under the Carbon Neutral Framework are designed to help local governments balance their corporate GHG emissions. For more information, see Chapter 2 of *Becoming Carbon Neutral: Guidebook for B.C. Local Governments*.

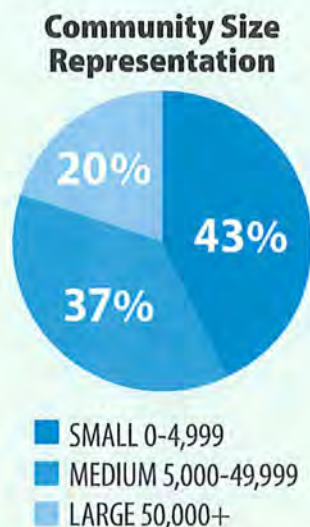
Corporate and Community-Wide Actions

Since the CARIP program was initiated in 2010, the number of local government corporate and community-wide climate action plans and other plans supporting climate change mitigation have been steadily increasing.

In 2016, close to 55% of CARIP respondents reported having corporate GHG reduction plans in place while approximately 93% of CARIP respondents indicated having some type of plan in place to support climate mitigation on a community-wide scale. Since 2015, there has been an increase in the percentage of local governments reporting that they have Energy and Emissions Plans, Integrated Community Sustainability Plans, Community Wide Action Plans and Official Community Plans supporting climate action.

TYPE OF PLAN	DEGREE OF USE - 2016	DEGREE OF USE - 2015
Energy and Emissions Plan	46%	42%
Integrated Community Sustainability Plan	39%	32%
Community-Wide Action Plan	32%	21%
OCP	91%	83%
Other (eg. RGS)	37%	38%

For this year's CARIP summary report we continue to highlight actions from a number of small, medium and large communities.



The Small Community Experience (0-4,999)

Corporate Actions

In small communities, the majority of corporate actions were reported in the building and lighting, greenspace, and water and wastewater categories. As in past years, there was a strong focus on upgrading streetlights and lighting to LEDs in buildings owned by local governments. As well, the use of solar energy also appears to be increasing each year, with projects ranging from smaller scale installations such as Sun Peaks Resort's solar lighting on trails to larger installations of solar panels on buildings as described in more detail below.

Climate Action Highlights

In 2016, four communities in the North Coast Regional District had grid-tied solar panels installed on five public buildings across the islands:

- A 40.28-kilowatt installation on the roof of the Queen Charlotte Municipal building will generate, on average, 35,000 kilowatt hours (kWh) per year, an 80% savings of that building's annual consumption of electricity.

Appendix 2: 2016 Summary



Photo courtesy of Village of Queen Charlotte

- A 50.35-kilowatt installation on the roof of the George Brown Recreation Centre in Skidegate will generate, on average, 46,000 kWh per year, which is expected to almost cover the building's entire annual electrical requirements.
- A 42.4-kilowatt installation on the roof of the Multiplex Building in Port Clements, with a battery backup system for support in a power outage, will generate about 36,000 kilowatts hours per year, a 45% annual savings of the electricity consumed by the building.
- A 16.96-kilowatt installation on the roof of the Masset Municipal Airport (with a battery backup).
- A 25.44-kilowatt installation on the roof of the Public Works building in Masset will generate, on average, 37,500 kWh per year, an annual savings of approximately 65% of the building's electrical requirements.

The entire installation will save an average of 154,500 kilowatts of power per year. In the past, over 50% of the electric consumed by these buildings has been diesel-generated.

88% of CARIP respondents identify having water conservation plans or policies in place.

37% of CARIP respondents report having urban forest policies, plans or programs. 66% report having policies, plans or programs to support local food production.

As in past years, many local government actions have focussed on supporting GHG reductions related to transportation. Walking and cycling continue to be key areas of attention. Improving transit service is also a priority and the focus on electric vehicles has increased.

About 18% of CARIP respondents indicate being engaged in transportation demand management. In large communities (100,000+), where congestion is most acute, 43% of local governments report having transportation demand management strategies in place.

Community-Wide Actions

As in past years, greenspace actions to preserve parkland and forest as well as supporting local food production have been significant areas of interest for small communities in the realm of community-wide climate action. Transportation and water and wastewater are also key areas of focus. Respondents demonstrated continued efforts to develop biking and pedestrian paths as well as improve transit service. For example, the District of Elkford has developed a "Commuter Bicycle Transportation Plan" to support cyclists by identifying commuter bicycle routes and recommending priorities for commuter bicycle infrastructure improvements.

MODE OF TRANSPORTATION	% OF LGS REPORTING ACTIONS
Walking	79
Cycling	75
Transit	65
Electric Vehicles	54

Climate Action Highlights

Increasing the compactness, completeness and connectedness of land uses is an effective means of reducing per household community emissions related to transportation and energy consumption. For example, the Fraser Valley Regional District (FVRD) is exploring the creation of a secondary suites policy as a means of encouraging more compact residential development options in eight of its rural and remote areas. As part of the review of its secondary suites policy, the FVRD held public hearings in 2016 and found that the majority of

respondents to their online survey (58%) would support secondary suites in their neighbourhood.

Through their CARIP reports, small communities are also demonstrating an increase in the number of projects that are driven and supported by local community organizations. On Bowen Island, a strong community partnership effort between the North Growth Foundation, Clean Energy Canada, Solar Now, the Great Climate Race, the Community Energy Association, the Bowen Island Community Foundation and the Knick Knack Nook (Bowen Island's re-use-it store) resulted in the installation of 30 solar panels on the roof of the Bowen Island Community School. The solar panels will produce enough energy to power an average sized house on Bowen Island, offsetting the school's energy costs. The panels were designed to be visible to the students, families and passersby as a means of highlighting the potential of solar energy generation. Data about how much energy the panels are producing is also collected and displayed in the school library, providing opportunities to connect to science and environmental curricula.



Photo courtesy of Bowen Island

The Medium-sized Community Experience (5,000- 49,999)

Corporate Actions

The majority of corporate actions undertaken by medium-sized communities fall into the building and lighting, transportation, and water and wastewater categories. A number of building retrofits were reported, including the incorporation of a range of energy-efficiency components such as LED lighting, low water use toilets, geo-exchange heating and cooling, energy-efficient HVAC system, and high-efficiency building envelope, into the Osoyoos fire hall.

Climate Action Highlights

In 2016, the Town of Ladysmith completed Phase III of its upgrade to the Town's wastewater treatment plant with energy efficiency in mind. The construction of a secondary treatment facility, which removes dissolved and fine organic material via biological processes, will allow the plant to serve a population of 17,200 and ensure Ladysmith's wastewater effluent will meet all relevant provincial and federal discharge regulations. The innovative design uses equipment that requires relatively little space, substantially limiting its environmental footprint. The design also incorporates solar photovoltaic panels, low-energy fixtures and a reclaimed water system.

Central Saanich has created the ReAction Program using funding received through the CARIP program. This program provides financial incentives to community groups leasing District-owned buildings. These groups are eligible

About 53% of CARIP respondents report having organics collections programs in place. Over 70% of medium-sized and large communities report operating such programs.

Appendix 2: 2016 Summary

for two phases of funding: Phase 1 funds up to 90% of the costs of an energy audit, and Phase 2 funds up to 90%, to a maximum of \$3,000, to undertake building upgrades that improve energy efficiency and/or reduce GHG emissions. In 2016, funding for energy audits was received by three groups: the Lawn Bowls Club, Central Saanich Senior Club, and the Lions Club. The Lawn Bowls Club also took advantage of Phase 2 funding to improve insulation in the clubhouse.

Community-Wide Actions

In 2016, the majority of community-wide actions reported by medium-sized communities occurred in the greenspace, waste and wastewater, and transportation categories. A number of communities identified actions related to supporting and encouraging walking, biking and transit use. For example, through the public engagement component of their transportation planning process, the City of Vernon discovered that many residents felt they would cycle more frequently if they felt secure on the roads. As part of their commitment to making cycling safer, Vernon has subsequently installed signage and pavement marking to support cycling.

Climate Action Highlights



Photo courtesy of City of Kimberley

The City of Kimberley completed its first full year of operation of the SunMine solar electricity facility in 2016. The project has allowed the community to utilize reclaimed brownfields and make use of existing transmission infrastructure. The facility was completed in 2015 and started commercial operation on June 22nd of that year, producing up to one megawatt of electricity at peak production times, enough to power about 250 homes. To date, the project has been able to offset 1770.8 tonnes of CO₂, 6.4 tonnes of SO₂ and 2.5 tonnes of NO_x. The City is seeking partnerships to expand the project to produce 15 megawatts at peak production.

Large Community Experience (50,000+)

Corporate Actions

Large communities reported the highest number of actions in the building and lighting category, with significant efforts to improve energy efficiency in corporate facilities. For example, Richmond completed energy efficiency upgrades at City Hall, the Steveston Community Centre, its fire halls, and other corporate facilities that are expected to reduce energy use by approximately 1.3 GWh, an amount that is equal to the annual energy use of 30 single family homes in the city. In Prince George, the City upgraded to LED lights in a number of locations including:

- City Hall 3rd floor (expected 5500 kWh reduction annually)
- 18th Ave Yard exterior lights (expected 10,000 kWh reduction annually)
- Aquatic Centre (expected 300,000 kWh reduction annually)
- Civic Centre (expected 400,000 kWh reduction annually)

Climate Action Highlights

In 2016, several local governments in Metro Vancouver introduced staff incentives to encourage alternatives to single occupancy vehicle commuting:

- Metro Vancouver updated its Employee Transit Commuter Program to partially subsidize Translink Compass transit passes.
- The District of Maple Ridge installed showers and bike-storage facilities in several of its office buildings.
- The City of Coquitlam implemented its Employee Sustainable Commute Program including reinstating a 25% transit pass subsidy, providing ride-matching, and introducing a program that provides eligible staff with a ride home in the event of a personal emergency or unexpected overtime.

The City of West Kelowna is committed to becoming carbon neutral in its corporate operations and reaching its target to reduce community-wide emissions by 33% in 2020 and 80% in 2050. Accomplishments from past years include the incorporation of a geothermal heating system into the Royal LePage Place arena, construction of a LEED-certified RCMP detachment building, and adoption of a carriage house policy and bylaw to promote densification. The City took further action in 2016 by adopting a Pedestrian and Bicycle Plan to prioritize improvements to West Kelowna's active transport network and convert 200 of the City's 1,750 street lights to LEDs.

In 2016, the Vancouver City Council approved the Renewable Energy Strategy for City-Owned Buildings, which established targets of 100% renewable energy use and 100% GHG reduction by 2040. Actions taken in the last 10 years to support the achievement of energy reductions in city-owned buildings include a \$16-million investment in energy retrofits and optimization projects, resulting in \$2 million per year in energy cost savings and 5,500 tonnes of annual GHG reductions. Through these and other actions, to date Vancouver

48% of CARIP respondents indicate having a corporate GHG reduction plan. Respondents who indicated having a Climate Action Reserve Fund were more likely (66%) to report having a corporate GHG reduction plan in place.

About 23% of CARIP respondents report being in the process of developing or constructing a district energy or renewable energy system, about 34% report operating one, and 5% report being connected to a district energy system being operated by another provider.

Appendix 2: 2016 Summary

has achieved a 23% reduction in GHG emissions in City-owned buildings from 2007 levels. Currently, approximately 60 energy retrofit and optimization projects are underway. These are expected to move the City further towards achieving its renewable energy goals. This includes work to complete the design of a replacement fire-hall facility in 2017, a new structure that will meet the Passive House standard. On completion, Vancouver would be the first city in North America to achieve this standard for a fire hall.

Community-Wide Actions



Photo courtesy of District of Saanich

Large communities reported the highest number of actions in the transportation and solid waste categories. Transportation actions continue to include education programs in schools, expanding car share programs, and support for electric vehicles (EV). For example, the District of Saanich reports that the EV fast charging stations at a local mall had approximately 2,200 individual charging sessions in 2016 with sessions averaging 15-25 minutes. This equates to approximately 31 full days of non-stop use throughout the year and saves approximately 10 tonnes CO₂e per year from the energy used at this charging station.

Climate Action Highlights



Photo courtesy of City of Victoria

In May 2016, the Victoria City Council approved an All Ages and Abilities (AAA) cycling network which, when completed, will consist of over 24 kilometres of enhanced bicycle infrastructure. The goal is to encourage more people to bicycle by establishing a comfortable, connected, convenient and safe cycling environment. Current efforts focus on building 5.4 km of protected bike lanes in the downtown core by the end of 2018. This initial investment is targeted where there is the highest demand for active transportation infrastructure and there are opportunities to improve safety and support ease of transportation in an area with a rapidly growing population. The intention is that every neighbourhood and village centre will be connected to the network by 2022, helping to make cycling an attractive, affordable, and climate-friendly transportation option for all residents.

Saanich and the Capital Regional District continued to support the provincial Oil to Heat Pump Incentive Program by providing local top up incentives of \$300 to the \$1,700 provided by the Province under the program. This, combined with effective public outreach, resulted in Saanich receiving the highest number of program participants in B.C. in 2016. In 2016, 90 homes registered for Saanich's top-up rebates to convert heating oil tanks to Air Source Heat Pumps. This resulted in potential emissions reductions of 720 tonnes CO₂e per year (up to 8 tonnes per property).



Photo courtesy of District of Saanich

Adaptation

The 2016 reporting year was the second year that local governments were asked to report on climate adaptation actions. It is evident from the responses received that community attention to climate change adaptation is increasing across B.C. More than 130 local governments reported actions related to climate change adaptation. These related to a variety of climate impact areas including: drought, wildfire, food security, sea level, storm events and changing temperatures. In total, 62% of CARIP respondents reported considering climate adaptation in asset management, 57% identified that they have been engaging in public education and raising awareness, and 50% identified that they have made land-use policy changes. Many local governments also indicated that they have been using the resources "Plan2Adapt" and "Preparing for Climate Change – An Implementation Guide for Local Governments in BC".

Adaptation Action Highlights

- *The Village of Lumby has been increasing public awareness of a changing climate and possible risks and vulnerabilities through their quarterly newsletter and interactive neighbourhood programs.*
- *A number of communities in the Fraser Valley participated in the development of an Agriculture and Climate Change Regional Adaptation Strategy.*
- *The Regional District of Nanaimo commenced the first phase of an assessment of coastal areas that may be impacted by sea level rise. The data was collected using Light Detection and Ranging (LiDAR) for coastal areas below 40-metre elevations.*
- *In West Kelowna, Council approved the purchase of a fire weather station to monitor conditions in the microclimatic region and agreed to provide access to the BC Wildfire Service to expand forest fire prevention efforts.*
- *The District of Squamish, in partnership with the Squamish Lillooet Regional District, the Squamish Nation and BC Hydro, developed a "SquamishAlert" emergency notification system that enables the district to communicate important information in the event of an emergency.*

Appendix 2: 2016 Summary

- *Surrey launched its Coastal Flood Adaptation Strategy to explore options and preferred strategies to adapt to local climate impacts, including sea level rise in coastal floodplain areas. Technical sea level and flood risk studies previously conducted are being used to inform adaptation options.*
- *The District of Saanich, through their Communities in Harvest program, is engaging and supporting residents in backyard food growing with the goal of enhancing food security.*
- *Kamloops cleared areas affected by pine beetle and tussock moth to reduce fire hazards.*
- *The Comox Valley Regional District is promoting the use of the water balance model to evaluate the impacts of land development activities on the ability of nature to provide rainwater management services.*

Partner Organizations

As in previous CARIP reporting years, local governments have identified many partner organizations that have played a role in assisting them with implementing actions to support their climate mitigation and adaptation goals. Each year the CARIP summary report highlights one partner out of the list of partners generated from the CARIP surveys.

In 2016 the partner organization referenced most frequently by survey respondents was BC Hydro. For over 20 years BC Hydro has been supporting local government climate mitigation efforts by helping them to improve their energy efficiency and reduce their GHGs by providing expertise, education and financial incentives. Through their Sustainable Communities program, for example, funds and resources are available for a number of initiatives including: developing community energy and emissions plans, including energy and emissions reduction measures in neighborhood scale plans (e.g. local area plans) or community scale plans (e.g. official community plans, regional growth strategies) and hiring community energy managers and co-op students/interns to support climate planning and plan implementation. B.C. communities have also taken advantage of and promoted BC Hydro's Community ReGreening program and home renovations rebates program.

List of Partners Identified in CARIP Reports

BC Hydro Sustainable Communities	TD Friends of the Environment Foundation	Real Estate Foundation
BC Hydro Power Smart		Partnership for Water Sustainability
Climate Smart Business	Columbia Basin Trust	Vancouver Foundation
Pembina Institute (Green Building Leaders)	Bike BC	Interior Health Authority
Fortis BC	Rotary Club	Pacific Institute for Climate Solutions
Bike to Work BC	BC Healthy Communities	Pacific Climate Impacts Consortium
Carpool.ca	Tree Canada	Quality Urban Energy Systems of Tomorrow
Plug in BC	Northern Development Trust	BC Sustainable Energy Association
Community Energy Association	Cariboo Chilcotin Conservation Society	VanCity
E3 Fleets	Fraser Basin Council	RBC Blue Water
Solar Hot Water Ready Regulation (BC Gov)	Investment Agricultural Foundation of BC	Municipal Natural Assets Initiative
FCM Green Municipal Fund	Community Energy Leadership Program	National Wetland Conservation Fund
	Woodstove Exchange Program	

Conclusion

As demonstrated by the 100% participation of Charter signatories in the CARIP program this year, and the extensive mitigation and adaptation actions reported in 2016, local governments are clearly committed to reducing their corporate and community-wide GHG emissions and addressing the impact of climate change.

The number of local governments measuring corporate emissions has increased to 147, with 45 reporting carbon neutral status. Approximately 93% of CARIP respondents reported having a plan in place to support community-wide climate mitigation. As indicated in the Climate Action Highlights sections of this report, innovative projects are being implemented by all sizes of communities, from supporting cycling to advancing solar energy capture projects. The adaptation actions reported further demonstrate an understanding of the need to address the changes that are, and will continue to be, experienced as a result of climate change.

More information on the CARIP program and CARIP Summary Reports from past years can be found on the [Ministry of Municipal Affairs and Housing](#) website.

APPENDIX A

2016 Carbon Neutral Status of Reporting B.C. Local Governments

CARBON NEUTRAL				
Ashcroft	Dawson Creek	Ladysmith	Osoyoos	Thompson-Nicola RD
Capital RD	Delta	Langley, Township	Parksville	Tofino
Central Saanich	Duncan	Lantzville	Pemberton	Vancouver
Coldstream	East Kootenay RD	Logan Lake	Penticton	Vanderhoof
Columbia Shuswap Regional District	Fort St. James	Mount Waddington Regional District	Pitt Meadows	Victoria
Comox	Granisle	Nanaimo RD	Richmond	View Royal
Comox Valley RD	Highlands	North Cowichan	Sidney	West Vancouver
Cowichan Valley RD	Islands Trust	Oak Bay	Sooke	Whistler
Cumberland	Keremeos	Oliver	Squamish-Lillooet RD	White Rock

ACCELERATING PROGRESS ON CHARTER COMMITMENTS				
Abbotsford	Fernie	Langford	Okanagan- Similkameen RD	Salmon Arm
Alert Bay	Fort St. John	Langley, City	Peace River RD	Slocan
Armstrong	Fraser-Fort George RD	Lumby	Port Alberni	Smithers
Burnaby	Fruitvale	Maple Ridge	Port Alice	Spallumcheen
Bulkley-Nechako RD	Gold River	Masset	Port Coquitlam	Sparwood
Campbell River	Golden	Metchosin	Port Hardy	Squamish
Central Kootenay RD	Grand Forks	Metro Vancouver RD	Port McNeill	Strathcona RD
Clearwater	Houston	Midway	Port Moody	Summerland
Colwood	Invermere	Mission	Prince George	Surrey
Coquitlam	Kamloops	Montrose	Qualicum Beach	Taylor
Courtenay	Kelowna	Nanaimo	Radium Hot Springs	Trail
Cranbrook	Kimberley	New Westminster	Revelstoke	Valemount
Creston	Kitimat-Stikine RD	North Saanich	Rosland	Vernon
Elkford	Kootenay Boundary Regional District	North Vancouver, City	Saanich	Wells
Esquimalt	Lake Country	North Vancouver, District	Salmo	West Kelowna

MEASURING GHG EMISSIONS				
100 Mile House	Enderby	Kitimat	Northern Rockies Regional	Terrace
Cariboo RD	Fraser Valley RD	Mackenzie	Powell River RD	Tumbler Ridge
Central Okanagan RD	Gibsons	Merritt	Port Clements	Ucluelet
Chetwynd	Greenwood	Nelson	Quesnel	Williams Lake
Chilliwack	Harrison Hot Springs	New Denver	Sunshine Coast RD	
Clinton	Hudson's Hope	North Okanagan RD		

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DEMONSTRATING PROGRESS ON CHARTER COMMITMENTS

Alberni-Clayoquot RD	Castlegar	Lake Cowichan	Peachland	Sechelt
Anmore	Central Coast RD	Lillooet	Port Edward	Sicamous
Barriere	Chase	Lions Bay	Pouce Coupe	Silverton
Belcarra	Fraser Lake	Lytton	Powell River	Stewart
Bowen Island	Hazelton	McBride	Prince Rupert	Sun Peaks
Burns Lake	Hope	Nakusp	Princeton	Tahsis
Cache Creek	Kaslo	New Hazelton	Queen Charlotte	Telkwa
Canal Flats	Kent	North Coast RD	Sayward	Warfield

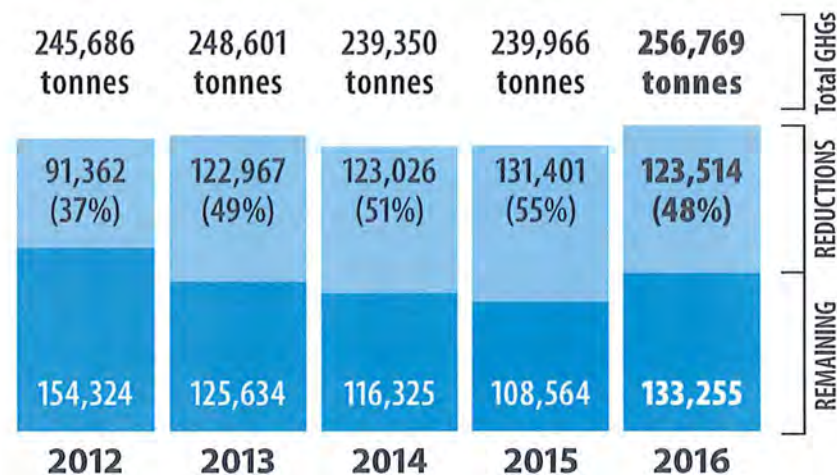
APPENDIX B

The following table and bar graph present corporate emission reductions claimed toward carbon neutral status.³

For further information, please contact IRPB@gov.bc.ca.

CORPORATE EMISSIONS REPORTED THROUGH CARIP, 2012-2016

	Number of LGs Measuring	Emission Reductions Claimed toward CN Status (tonnes)	Remaining Corporate Emissions (tonnes)	Total Corporate Emissions (tonnes)
2012	144	91,362	154,324	245,686
2013	157	122,967	125,634	248,601
2014	142	123,026	116,325	239,350
2015	146	131,401	108,564	239,966
2016	147	123,514	133,255	256,769



³ These figures do not include carryover amounts (i.e. the amounts that can be carried over to the following year from reductions over and above the amount required to be carbon neutral). Carryover amounts were included in emission reductions reported in previous years' CARIP Summary Reports.



CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM