DISTRICT OF SUMMERLAND

SUMMERLAND SOLAR ARRAY

STAGE 1 PRELIMINARY SITE INVESTIGATION

JANUARY 17, 2020

CONFIDENTIAL

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January 17, 2020

CONFIDENTIAL

District of Summerland
13211 Henry Avenue
Summerland, BC V0H 1Z0

Attention: Ms. Tami Rothery, Sustainability / Alternative Energy Coordinator

Subject: Stage 1 Preliminary Site Investigation
13500 Prairie Valley Road, 12591 Morrow Avenue, and Ottley Avenue Future Road Right-of-Way

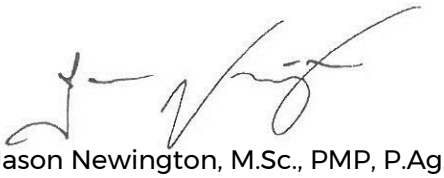
Dear Madam:

WSP Canada Inc. is pleased to submit a PDF copy of the Stage 1 Preliminary Site Investigation report for the above-referenced property.

We trust that the enclosed report meets your current requirements. If you have any questions regarding this project, the enclosed reports, or our services, please do not hesitate to call the undersigned at (778) 796-0107.

Thank you for utilizing our professional services. We look forward to serving your future environmental and engineering needs.

Kind regards,



Jason Newington, M.Sc., PMP, P.Ag., EP
Project Manager

Encl. Stage 1 Preliminary Site Investigation

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No environmental site assessment or investigation can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a site. Performance of a standardized environmental site assessment protocol is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the Site, given reasonable limits of time and cost.

This report was prepared by WSP Canada Inc. (WSP) for the account of the District of Summerland in accordance with the professional services agreement. The disclosure of any information contained in this report is the sole responsibility of the intended recipient. The material in it reflects WSP's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. This limitations statement is considered part of this report.

The original of the technology-based document sent herewith has been authenticated and will be retained by WSP for a minimum of ten years. Since the file transmitted is now out of WSP's control and its integrity can no longer be ensured, no guarantee may be given with regards to any modifications made to this document.

EXECUTIVE SUMMARY

The District of Summerland (DoS and the "Client"), retained WSP Canada Inc. (WSP) to conduct a Stage 1 Preliminary Site Investigation (PSI) for the properties located on 13500 Prairie Valley Road (Lot 2, Plan KAP8353 DL 2543; PID 009-833-722), 12591 Morrow Avenue (Lot 18, Plan KAP 182, DL 2543, except plan 13580 KAP60859 KAP72843; PID 012-646-695), and a future road right-of-way at Ottley Avenue (PID 012-646-717, no other legal information) in Summerland, British Columbia (henceforth referred to as "the Site").

WSP understands that the Stage 1 PSI is required by the Client for due diligence purposes prior to the redevelopment of the Site into a solar array facility. This report has not been completed with the intention to submit to the BC Ministry of Environment & Climate Change Strategy (ENV) at this time.

This Stage 1 PSI report has been prepared in general accordance with the Canadian Mortgage Housing Corporation (CMHC) and Canadian Standards Association (CSA) guidelines and general requirements of the BC *Environmental Management Act* (EMA), Contaminated Sites Regulation (CSR) and associated protocols, procedures and guidelines.

SITE LOCATION

The Site is comprised of three legally titled lots located southwest of downtown Summerland. The Site is approximately 25.7 acres (10.4 hectares) in size and is accessed via Prairie Valley Road.

The Site is primarily undeveloped land with a gravel haul road running from the southwest corner to the center and several walking/bike trails throughout. The remainder of the Site is either bare land or forested with a previously excavated gravel pit in the center of the lot. The land is currently unoccupied.

The Site is bounded to the south and east by forest, agricultural, and residential land. The Site is bounded to the north by forest and residential properties and to the west by residential and agricultural properties.

SITE HISTORY

According to the DoS, the project site was historically a public works yard and storage area operating from 1910 to circa 1970. Known historical activities at the Site included gravel crushing, cutting and bevelling of asbestos-cement pipes and electrical equipment storage.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECS)

From the information gathered during this investigation, four (4) on-Site and no off-Site APECs were identified. Information for the APECs are summarized in the following table:

Summary of Identified APECs and PCOCs

APEC NO.	APEC DESCRIPTION	REGULATED PCOCS IN SOIL AND GROUNDWATER	REGULATED PCOCS IN VAPOUR	RISK RATING*
APEC #1 (on-Site)	Area of historical transformer storage in the southeast portion of the Site where PCB's were historically emptied onto unpaved, permeable ground surface. Area was also used for storage of various items/materials including ACM pipes.	PCBs, screening for: BTEX/VPH, LEPH/HEPH/PAHs, asbestos, metals	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC # 2 (on-Site)	The haul road and unpaved parking area located south of the haul road were historically used as a mixing and storage area for crush and oil mixture.	BTEX/VPH, LEPH/HEPH/PAHs, metals	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC #3 (on-Site)	Area of copper pipe and miscellaneous metal parts storage above the flatland storage in the east portion of the Site.	Metals, screening for: BTEX/VPH, LEPH/HEPH/PAHs	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC #4 (on-Site)	Central flatland storage area used for a laydown area/storage of various steel pipes, concrete, crush, etc.	Metals, screening for: BTEX/VPH, LEPH/HEPH/PAHs	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate

Notes:

* Relative scale indicating potential for contamination to be present at the Site
- High - Evidence of actual significant contamination
- Moderate - Inferred potential significant contamination or evidence of minor contamination
- Low to Moderate - Inferred potential minor contamination
- Low - No inferred contamination

BTEX - Benzene, toluene, ethylbenzene, xylenes in soil groundwater and in vapour
VPH - Volatile petroleum hydrocarbons in soil and groundwater
VPH_v - Volatile petroleum hydrocarbons in vapour
VOC - Volatile organic compounds in soil and groundwater
VOC_v - Volatile organic compounds in vapour
LEPH - Light extractable petroleum hydrocarbons
HEPH - Heavy extractable petroleum hydrocarbons
PAHs - Polycyclic aromatic hydrocarbons

CONCLUSIONS

From information gathered during this assessment, WSP concludes the following:

- A review of aerial photographs indicates that the Site consisted of undeveloped land circa 1938 to circa 1949. Circa 1949 to 2007, the Site was used as a gravel extraction pit and as a storage area for pipes and various construction materials. The haul road leading to the gravel pit area was constructed circa 1951 and was paved circa 1963. Circa 2007 to 2018 the Site remained relatively unchanged, with vegetation regrowth visible throughout the Site.
- A review of the historical aerial photographs indicates that the surrounding properties to the south and west appeared to be primarily agricultural and residential land circa 1938 until present. The land to the east remained mostly undeveloped until circa 1949 when land was used for agricultural expansion. Circa 1974 the agriculture land to the east had been fully developed. Circa

1987 until present there was significant expansion of residential properties to the east. The property to the north remained undeveloped until circa 1987 when Sunset Place and Summergate Drive were constructed. Circa 1993 the residences along these roads were built. The properties to the north have since then remained relatively unchanged.

- Based on our historical records review, interview information and Site reconnaissance, four (4) on-Site APECs have been identified for the Site.

RECOMMENDATIONS

Based on the reviewed information and current Site conditions, a sub-surface investigation in the form of a Stage 2 Preliminary Site Investigation in the area of identified APECs is recommended at the Site.

WSP's further recommendations are as follows:

- General housekeeping throughout the site including removal of various debris piles and disposal of the stored miscellaneous pipes.
    - Depending on the content of the debris piles, hazardous materials sampling of debris and transformer/pipe materials may be required prior to disposal.
- If any environmentally suspect fill material is encountered onsite during any future redevelopment activities, such fill should be characterized prior to disposal offsite or at a permitted facility.
- In the future, if any abandoned underground storage tanks (USTs) are encountered at the Site, such USTs should be decommissioned in accordance with the requirements of the BC Fire Code. A qualified environmental consultant should be retained to document any UST removal activities along with the characterization and disposal of any environmentally suspect material.

This executive summary is intended to be read in conjunction with and is subject to the same limitations as the remainder of the report.

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1 INTRODUCTION

The District of Summerland (the Client), retained WSP Canada Inc. (WSP) to conduct a Stage 1 Preliminary Site Investigation (PSI) for the properties located on 13500 Prairie Valley Road (Lot 2, Plan KAP8353 DL 2543; PID 009-833-722), 12591 Morrow Avenue (Lot 18, Plan KAP 182, DL 2543, except plan 13580 KAP60859 KAP72843; PID 012-646-695), and PID 012-646-717, KAP 182 REM Lot 18 in Summerland, British Columbia (henceforth referred to as "the Site").

WSP understands that the Stage 1 PSI is required by the Client for due diligence purposes prior to the redevelopment of the Site into a solar array facility. This report has not been completed with the intention to submit to the BC Ministry of Environment & Climate Change Strategy (ENV) at this time. The Site location is provided on Figure 1 – Appendix A.

This Stage 1 PSI report has been prepared in general accordance with the Canadian Mortgage Housing Corporation (CMHC) and Canadian Standards Association (CSA) guidelines and general requirements of the BC Environmental Management Act (EMA), Contaminated Sites Regulation (CSR) and associated protocols, procedures and guidelines.

2 STAGE 1 PSI PROCEDURE

2.1 OBJECTIVE

A Stage 1 PSI consists of evaluating and reporting the existing and historical information collected through a historical records search and review, a Site reconnaissance and interviews with individuals knowledgeable about the Site. A Stage 1 PSI may assist in reducing uncertainty about the likelihood of potential environmental liability and may provide a basis for further investigation of the Site.

The purpose of the Stage 1 PSI was to complete a review of the historical and current activities (as per the scope stated in the Section 2.3), conditions of the Site and to provide the client with an evaluation of known and potential areas of environmental concern (APEC) at the Site as well as identify potential contaminants of concern (PCOCs) at any identified APECs.

2.2 LEGAL REQUIREMENTS

To WSP's knowledge, at the time of preparation of this report, there was no outstanding request or order from the BC ENV for the submission of a Site Profile or for investigation or remediation reports regarding the Site. Also, to the best of our knowledge there were no outstanding court orders or administrative requirements from the District of Summerland with respect to historical or current onsite activities.

2.3 SCOPE OF WORK

WSP's Stage 1 PSI scope of work included the following:

- Conduct historical records search and review, which included: reviewing fire insurance plans (if available), aerial photographs, criss-cross or city directories, historical and current land titles, municipal records, BC Assessment Authority and BC ENV records with respect to environmental

concerns associated with the Site or surrounding properties that could potentially affect the environmental condition of the Site;

- Complete a Site and surrounding area reconnaissance and interviewing persons knowledgeable about past and present activities on the Site and surrounding properties. Items addressed included: chemical storage and handling, underground and aboveground storage tanks (USTs and ASTs), non-hazardous and hazardous wastes, air and water discharges, and dumping/landfilling activities;
- Identify potential source(s) of environmental impacts due to historical and current land uses, activities, events or practices at the Site and surrounding properties; and
- Prepare a report outlining the findings of the investigation and providing conclusions and recommendations.

Note: A Stage 1 PSI does not include sampling or analysis of air, soil, groundwater, surface water or sediment/biota or a hazardous building materials survey.

2.4 REGULATORY FRAMEWORK

In British Columbia, a Stage 1 PSI is conducted to meet the requirements of the currently applicable provincial EMA and the CSR. Detailed background information regarding the EMA and the CSR is included in Appendix F.

2.5 METHODOLOGY

The following table provides a summary of the sources of historical records that were accessed during this investigation.

Table 2-1 Sources of Historical Records

ITEM	SOURCE	YEARS / REMARKS
Land Titles	Land Title and Survey Authority	1904 to Present
Environmental Site Registry	BC ENV Online Environmental Site Registry	2019
Federal Contaminated Sites	Treasury Board of Canada Secretariat	2019
Water Well & Aquifer Search	BC ENV Online Water Resources Atlas Database	2019
Aerial Photographs	UBC Department of Geography, Geographic Information Centre Google Maps	1938, 1949, 1951, 1959, 1963, 1969, 1974, 1980, 1987, 1993, 19966, 2001, and 2007 2018
City Directories	Vancouver Public Library	None Available
Topography, Zoning and Utility Maps and Building Permits/Drawings	Regional District of Okanagan-Similkameen Parcel Viewer; Water Resource Atlas of British Columbia	2019
Surficial Geology	Geological Survey of Canada, Canadian Geoscience Map 195, 1 sheet, (Open Access)	2014

ITEM	SOURCE	YEARS / REMARKS
Interviews	District of Summerland	None

Ms. Katelyn Zinz of WSP completed a Site visit on November 29, 2019. Select photographs taken during the Site visit are presented in Appendix B.

3 SITE DESCRIPTION AND SETTING

As required by the BC ENV, the information for the Site is provided in the following table:

Table 3-1 Summary of Site Information

ITEM	INFORMATION
Common Name	None
Municipal Address	13500 Prairie Valley Road, 12591 Morrow Avenue, and none (PID 012-646-717)
Legal Description	Lot 2, Plan KAP8353 DL 2543; Lot 18, Plan KAP 182, DL 2543, except plan 13580 KAP60859 and KAP72843; No legal description.
P.I.D.	009-833-722; 012-646-695; 012-646-717
Latitude/Longitude[1]	49°35'43.64"N/ 119°42'2.31"W (Site center)

3.1 LOCATION AND DESCRIPTION

The Site is comprised of three legally titled lots located southwest of downtown Summerland. The Site is approximately 25.7 acres (10.4 hectares) in size and is accessed via Prairie Valley Road.

The Site is primarily undeveloped land with a gravel haul road running from the southwest corner to the center and several walking/bike trails throughout. The remainder of the Site is either bare land or forested with a previously excavated gravel pit in the center of the lot. The land is currently unoccupied.

The Site is bounded to the south and east by forest, agricultural, and residential land. The Site is bounded to the north by forest and residential properties and to the west by residential and agricultural properties.

3.2 SITE HISTORY

According to the DoS, the project site was historically a public works yard and storage area operating from 1910 to circa 1970. Known historical activities at the site included gravel crushing, cutting and bevelling of asbestos-cement pipes and electrical equipment storage.

[1] Obtained from Google Earth™

3.3 TOPOGRAPHY

Based on the surface elevation data obtained from the Water Resource Atlas of British Columbia, the Site and immediate surrounding area generally slopes down from the north to the south towards Prairie Creek, with the lowest elevation in the southeast corner. Topography is depicted in Figure 3, Appendix A.

The nearest aquatic receptor is an on-Site stream located in the north portion that runs to the southwest portion of the Site. The stream runs south towards Prairie Creek which is located approximately 392 m south of the Site. For the purposes of this Stage 1 PSI, shallow groundwater at the Site is inferred to be generally consistent with the overall surface topography and flows in a southerly direction. Further hydrogeological studies would be required to confirm actual groundwater flow direction.

3.4 GEOLOGY

Surficial geology in the vicinity of the Site, as identified by the Geological Survey of Canada, Surficial Geology of Canada Map 195 (ed. Prelim., Surficial Data Model v.2.0 conversion of Map 1880A) is inferred to be comprised of glacio-lacustrine sediments and offshore sediments comprised mostly of silts and clays.

3.5 SURFACE DRAINAGE AND HYDROGEOLOGY

At the time of the Site visit, the Site was undeveloped and there were no buildings on Site. The majority of surface water runoff from unpaved areas is anticipated to infiltrate into the underlying soils or evaporate. In the southwest corner there is a small portion of paved road (approximately 0.15 ha). Surface water runoff from this area is anticipated to flow into nearby ditches and infiltrate into the underlying soils.

Shallow local groundwater can be influenced by many factors such as underground utilities, building foundations, topography and fill material/soil type. Based on general Site and immediate surrounding topography, WSP infers that the immediate shallow local groundwater flows towards the south.

3.6 AQUIFERS

The Site is located within an area of a mapped aquifer, which is considered to have moderate productivity and demand, and low vulnerability[2]. The following table provides details of the aquifer in the area of the Site.

Table 3-2 Aquifer Characterization

NAME	DESCRIPTION / LOCATION	MATERIALS	LITHOSTRATOGRAPHIC UNIT	CLASSIFICATION	SIZE (KM2)	TYPE OF WATER USE
300 IIC (10)	Faulder (Enesas Creek)	Bedrock	N/A	11C	55.1	Domestic

[2] BC ENV web site, "Aquifers and Water Wells of BC" aquifer data search.

3.7 FLOOD ZONE POTENTIAL

According to the Government of British Columbia's Southern Interior Floodplain map for the Okanagan Lake, the Site is not within a mapped 200-year flood zone and is therefore considered to have a low potential for flooding from major off-Site water bodies.

3.8 PRECIPITATION RECORDS

The nearest climate station to the Site is known as "Summerland CS"; however, there was no available data for this station. The next closest station is known as "Penticton A". According to Environment Canada Canadian Climate Normals[3] , the mean annual rainfall for the climate station is 298.5 mm and the mean annual precipitation is 346 mm. The greatest amount of precipitation occurs during the months of May and June, while the driest months are February and March.

4 HISTORICAL RECORDS REVIEW

The results of the historical search and records review are summarized in the following sections.

4.1 CITY DIRECTORIES

A request was made to the Vancouver Public Library (VPL) on December 9, 2019 for any City Directories available for properties within a 500m radius of the Site. A response from VPL indicated that there are no Directories available for the District of Summerland areas and therefore, no records were reviewed.

4.2 AERIAL PHOTOGRAPHS

Aerial photographs relevant to the Site and surrounding area dating from 1938, 1949, 1951, 1959, 1963, 1969, 1974, 1980, 1987, 1993, 1996, 2001, and 2007 (obtained from the UBC's Geographic Information Centre) were reviewed. In addition, a Google Earth map (2018) were reviewed. Features observed at the Site and the surrounding areas in the aerial photographs are summarized in the following table:

Table 4-1 Summary of Reviewed Aerial Photographs

YEAR	SUBJECT SITE	NORTH	SOUTH	EAST	WEST
1938	The Site appears to be undeveloped land except for a concrete irrigation flume visible in the north portion.	Land to the north appears to be undeveloped, forested land.	Immediately south of the Site, land appears undeveloped except for a small orchard to the southwest along Prairie Valley Road.	Land to the east is appears primarily undeveloped with some agricultural land visible to the southeast.	Land to the northwest appears undeveloped. Land to the southwest appears to be used for agriculture and residential purposes.

[3] Environment Canada. *Canadian Climate Normals 1981-2010*. http://climate.weatheroffice.ec.gc.ca/climate_normals/index_e.html

YEAR	SUBJECT SITE	NORTH	SOUTH	EAST	WEST
1949	A dirt road off of Prairie Valley Road is evident in the southwest corner, as well as an excavated area in the centre of the Site.	Generally similar to the previous photograph.		Cleared areas are visible east of the Site.	Generally similar to the previous photograph.
1951	The haul road has been fully developed along the west boundary of the Site.	Generally similar to the previous photographs.			
1959	No significant changes were apparent.				
1963	The haul road leading into the center lot of the Site has been paved. Site is being used as a gravel pit.	Generally similar to previous photographs.		The agricultural land immediately east has been expanded further north.	A building has been constructed in the immediate southwest corner. Residential buildings are under construction west of the Site.
1969	Generally similar to previous photographs.		Construction areas are visible further south of Prairie Valley Road.	Trees have been cleared from an area southeast of the Site.	Generally similar to previous photographs.
1974	A gravel mound is visible within the gravel pit area.	No significant changes were apparent.	Area to the southeast of the Site has been cleared for agricultural expansion.	The land immediately east appears to be in use for agricultural purposes.	Land west appears to be primarily agricultural and resident. Some forested areas remain to the northwest.

YEAR	SUBJECT SITE	NORTH	SOUTH	EAST	WEST
1980	A dirt road appears to have been developed from Morrow Ave. to the northwest corner of the Site to the gravel pit. A small portion of the Site in the southeast appears to be agricultural use.	No significant changes were apparent.	Land to the south/southeast is being used for agricultural purposes.	Further east residential buildings are visible.	No significant changes were apparent.
1987	Generally Similar to previous photographs.	Roadways inferred to be Sunset Place and Summergate Drive are under construction north of the Site.	No significant changes are evident.	A roadway, inferred to be Taylor Place, is under construction east of the Site.	No significant changes are evident.
1993	A large rectangular gravel pile is visible in the centre of the Site.	Residences along Sunset Place and Summergate Drive have been constructed.	Generally similar to previous photographs.	Residences along Taylor Place have been constructed.	Generally similar to previous photographs.
1996	Generally similar to the previous photographs.				A residence has been constructed immediately west of the Site.
2001	No significant changes were apparent.				
2007	The area previously occupied by the gravel pit appears to have some vegetation regrowth.	A dirt road is visible off of Sunset Place leading towards the Site.	Generally similar to previous photographs.		
2018 (Google Maps)	Hiking/biking trails are visible throughout the Site.	Generally similar to previous photographs.			A roadway, inferred to be Ottley Avenue, is under construction off of Morrow Ave.

SITE

The Site consisted of undeveloped land circa 1938 to circa 1949. A review of the aerial photographs indicates that circa 1949 to 2007, the Site was used as a gravel pit and as a storage area for pipes and various construction materials. The haul road leading to the gravel pit area was constructed circa 1951 and was paved circa 1963. Circa 2007 to 2018 the Site remained relatively unchanged, with vegetation regrowth visible throughout the Site.

SURROUNDING PROPERTIES

A review of the historical aerial photographs indicates that the surrounding properties to the south and west appeared to be primarily agricultural and residential land circa 1938 until present. The land to the east remained mostly undeveloped until circa 1949 when agricultural expansion was visible. Circa 1974, agriculture land to the east had been fully developed. Circa 1987 until present day, significant expansion of residential properties to the east was apparent. Properties to the north remained undeveloped until circa 1987 when Sunset Place and Summergate Drive roadways were constructed. Circa 1993, the residences along Sunset Place and Summergate Drive were constructed. The properties have since then remained relatively unchanged.

4.3 FIRE INSURANCE PLANS

Fire Insurance Plans (FIPs) are not available for the District of Summerland area and therefore, were not reviewed.

4.4 FORTIS BC RECORDS (FORMERLY TERASEN GAS)

Effective April 1, 2006, Fortis BC no longer provides connection and disconnection dates for gas services[4].

4.5 GOVERNMENT RECORDS

4.5.1 DISTRICT OF SUMMERLAND RECORDS

WSP reviewed the District of Summerland's website as well as the Summerland GIS Map for information regarding permits, utility connections and zoning. Information provided is summarized in the following:

ZONING

According to the District of Summerland GIS Map, the Site is currently zoned as "I – Institutional Zone." As per the District of Summerland Zoning Bylaw 2000-450, the I zone is used to accommodate major community facilities that address institutional, cultural, and educational needs of the community. The lands must be designated as Administration under the District of Summerland's Official Community Plan. A description of the zoning is provided in Appendix C.

[4] Fortis BC letter: Titled "Environmental Inquiries Relating to Gas Service Installation Dates" (March 1, 2006). Fortis BC was formerly known as BC Gas in 2006.

4.5.2 CURRENT LAND TITLES

Current land title information was obtained from the Land Title and Survey Authority. A review of the land titles for the Site indicated that the current landowner, The Corporation of the District of Summerland, has owned Lot 2, District Lot 2543, Osoyoos Division Yale District Plan 8353 and Lot 20, District Lot 2543, Osoyoos Division Yale District Plan 182 Except Plan 5439 and Lot 18, District Lot 2543, Osoyoos Division Yale District Plan 182 Except Plans 13580, KAP60859 and KAP72843 since 1932.

The current land titles are included in Appendix D.

4.5.3 HISTORICAL LAND TITLES

The historical land titles for 13500 Prairie Valley Road (Lot 2, District Lot 2543, Osoyoos Division Yale District Plan 8353) date back to 1904. The previous registered owners include the Summerland Development Company Ltd. from 1904 to 1922, the Corporation of the District of Summerland from 1922 to 1924, the Summerland Development Company Ltd again in 1924, Mr. Alexander Steuart from 1924 to 1932, and the Corporation of the District of Summerland from 1932 to present.

The historical land titles for 12591 Morrow Avenue (Lot 20, District Lot 2543, Osoyoos Division Yale District Plan 182 except Plan 5439) also date back to 1904. The previous registered owners include the Summerland Development Company Ltd from 1904 to 1924, Mr. Alexander Steuart from 1924 to 1932, and the Corporation of the District of Summerland from 1932 to present.

Lastly, the historical land titles for Ottley Avenue (PID 012-646-717, KAP 182 REM Lot 18) also date back to 1904. The previous registered owners include the Summerland Development Company Ltd from 1904 to 1918, Mr. Alexander Steuart from 1918 to 1932, and the Corporation of the District of Summerland from 1932 to present.

Copies of the historical land titles are included in Appendix D.

4.6 FEDERAL CONTAMINATED SITES INVENTORY

The Treasury Board of Canada Secretariat maintains an inventory of all known contaminated sites held by various federal departments and agencies. This inventory does not include properties owned by Crown corporations but does contain non-federal sites for which the Government of Canada has accepted some or all financial responsibility. All sites have been classified through a system developed by the Canadian Council of Ministers of the Environment (CCME).

A search of the Federal Contaminated Sites Inventory was conducted on December 5, 2019; no records were identified within 500 m of the Site.

4.7 MINISTRY OF ENVIRONMENT & CLIMATE CHANGE STRATEGY

4.7.1 BC AQUIFER AND WATER WELL DATABASE

The existence and location of groundwater wells near the Site was searched on the BC ENV Water Resources Atlas database. The online database of the Water Management Division of BC ENV indicated that there was no water wells located on-Site and two (2) water wells located within 500 m of the Site. Both off-Site wells are listed as private domestic use.

The results of the BC ENV water well search is included in Figure 4, Appendix A.

4.7.2 BC ONLINE SITE REGISTRY SEARCH

A search of the online BC ENV Site Registry for the Site and surrounding properties within a radius of 500m from the Site was conducted on December 12, 2019. According to the BC ENV Online Site Registry, there are no properties located within 500 m of the Site that are registered or "listed". A property listed in the Site Registry does not necessarily imply that the property is contaminated.

The BC Online Site Registry search results are presented in Appendix E.

5 SITE RECONNAISSANCE

Ms. Katelyn Zinz of WSP completed a Site and surrounding area reconnaissance on November 29, 2019. The Site reconnaissance consisted of a walk-through to observe conditions at accessible areas on-Site.

During the Site visit, WSP completed a Site Visit checklist to cover standard items involved in a Stage 1 PSI. Select photographs taken during the Site visit are presented in Appendix B. Observations and on-Site conditions recorded during the Site visit are discussed in the following sections.

5.1 SUBJECT SITE

SITE DESCRIPTION

- The Site is located on the north/northeast side of Prairie Valley Road. The Site is generally comprised an old haul road, bare land and forested, vegetated areas.
- The Site is currently accessible from Prairie Valley Road.
- The Site is bounded to the south and east by forest, agricultural, and residential land. The Site is bounded to the north by forest and residential properties and to the west by residential and agricultural properties.
- The Site and immediate surrounding lands are generally sloped from the north to the south, with the lowest portion of the Site being in the southeast corner. The Site is part of a small mountain ridgeline that extends from the north to the south.

- Ground cover on the site is primarily grass and forest, with bare gravel covered land in the centre of the Site where the historical gravel pit operated.

SITE BUILDING(S) AND INTERIORS

- At the time of the site visit, the Site was undeveloped and did not contain any buildings.

UNCOVERED AREAS

- The Site is primarily uncovered and consists of bare gravel surfaces, grass and treed areas. A small portion of the Site is occupied by a partially paved old haul road.

ABOVEGROUND AND UNDERGROUND STORAGE TANKS (ASTS / USTS)

- There were no USTs or ASTs observed on-Site during the Site visit.
- In the future, if any abandoned USTs are encountered at the Site, such USTs should be decommissioned in accordance with the requirements of the BC Fire Code. A qualified environmental consultant should be retained to document any UST removal activities along with the characterization and disposal of any environmentally suspect material. Additional information on abandoned heating oil USTs is provided at the following link:

  http://www2.gov.bc.ca/assets/gov/environment/air-land-water/site-remediation/docs/fact-sheets/fs32.pdf

AIR AND WATER DISCHARGES

- No issues regarding any air discharges were identified at the time of the Site reconnaissance.
- Surface water runoff mostly infiltrates into underlying soils around the Site with the remainder from paved areas of the Site being directed to surrounding ditches.

NON- HAZARDOUS WASTE GENERATION, STORAGE AND DISPOSAL

- Non-hazardous waste in the form of steel pipes, concrete, and crushed gravel was observed within the central Site area that was the historical location of the gravel pit. Copper pipe storage was also noted along the east boundary on the rise above the flatlands. Miscellaneous storage was also historically located in the transformer storage area in the southeast portion of the Site.

HAZARDOUS WASTE GENERATION, STORAGE, HANDLING AND DISPOSAL

- An area in the southeast portion of the Site was historically used for storage of transformers containing PCBs. The PCBs were historically emptied in this area onto the bare ground surface. The area was also historically used for storage of various items and materials. This area is considered to be of low to moderate potential for environmental concern.
- Two (2) ACM pipes were observed in the historical southeast during the Site visit. During the interview, it was indicated that there was never any cutting of ACM pipes on-Site but there may have been minor storage. These ACM pipes should be appropriately disposed of prior to redevelopment activities.

CHEMICAL STORAGE AND HANDLING

- No chemicals were observed stored and/or used at the Site at the time of the Site visit.

SPILL AND STAIN AREAS

- At the time of the Site visit, there was no evidence of leaks or spills from hazardous/non-hazardous materials.
- The unpaved parking area located south of the haul road was historically used as a storage area of the crush and oil mixture that was mixed along the road.

SOILS AND FILLS

- A former gravel pit operated in the central portion of the Site. Gravel covered surfaces were observed within these areas. Non-native fills are not anticipated as the gravels were extracted from the area.

RADON GAS

- The Ministry of Health has completed a regional study of radon in homes in British Columbia (2012). The results of the study were published in a document entitled Cross-Canada Survey of Radon Concentrations in Homes - Final Report. According to the report, the average percentage of homes with elevated radon levels in Canada was near 7%. In BC, the proportion of homes with elevated radon levels in the Lower Mainland and Vancouver Island were significantly below the national average while the interior of BC had some of the highest elevated radon levels in Canada. For example, the East Kootenay region had 19% of homes with elevated radon levels while Kootenay Boundary had 19.3% and the Okanagan had 17.4% of homes with elevated radon levels.
- The Site is located near Summerland, which is listed as a Zone 1 – High area for radon potential in British Columbia. Radon concentrations may be elevated, especially in underground structures such ask parkades, basements, or crawlspaces.

METHANE GAS

- WSP did not observe any piles of organic landfilling on-Site during the Site visit. Therefore, there is a low potential that methane gas is an environmental issue at the Site.

5.1.1 HAZARDOUS BUILDING MATERIALS AND SUBSTANCES

Detailed background information of the hazardous building materials is included in Appendix F. The hazardous materials and substances potentially present on-Site are discussed as follows:

Asbestos Containing Building Materials (ACMs)
Pipes identified in previous storage areas may be asbestos containing and should therefore be sampled prior to removal and disposal.

5.2 SURROUNDING PROPERTIES

During the November 29, 2019 Site visit, WSP conducted a reconnaissance of the surrounding area. WSP observed and photographed the surrounding properties from either the Site or from areas accessible to the public. The Site Photographs in Appendix B show various features of the surrounding area as of November 29, 2019.

At the time of the Site visit, surrounding properties to the south and east immediately adjacent to the Site were covered with forest, agricultural, and residential properties. Properties to the west were residential and agricultural, and the properties to the north were institutional and residential.

6 INTERVIEWS

Ms. Tami Rothery is the Sustainability/Alternative Energy Coordinator for the District of Summerland. She was interviewed along with four District retirees who had previously worked at the historical on-site gravel pit. They provided the following information:

- They indicated that the Site had previously been used as a gravel pit and storage area for pipes (steel, copper and concrete) and miscellaneous construction materials. Portions of the site had also been used to mix extracted crush with oil and to store the mixture afterwards. An area in the southeast was also used to store transformers and PCBs were emptied in this area onto bare ground.
- The retirees indicated that the Site was operational until the mid to late 1960s.
- They were not aware of any previous landfilling activities at the Site.
- They were not aware of any fill material being brought onto the Site.
- They were not aware of the presence of any aboveground storage tanks or underground fuel storage tank currently or historically located on-Site.
- The retirees indicated that, to their knowledge, there were no refueling activities completed on-Site.
- They were not aware of any historical environmental issues at the Site.
- They were not aware of any historical environmental issues at properties surrounding the Site.
- Ms. Rothery was not aware of any third-party notification letters issued by the owners of any surrounding properties.
- They were not aware of any spill or stain areas on the Site which need to be brought to the attention of WSP.
- The retirees indicated that there were a few areas on-Site that were historically used for concrete disposal/storage. Other than these areas, they were not aware of any current or historical waste disposal areas.

7 APPLICABLE STANDARDS

At the time of preparation of this report, the Site was zoned as "Institutional (I)" and was used as park land. According to the BC CSR, principal uses of the Institutional zoning include commercial, and residential purposes. Based on this and potential future use, the BC CSR soil standards for commercial land use (CL) would apply. For reference purposes, BC CSR residential – low density (RL-ld) may apply. For groundwater, the CSR drinking water (DW) and aquatic life - freshwater (AW-f) apply. For soil-vapour, the CSR soil vapour remediation standards for CL currently apply.

For soil classification/disposal purposes, the BC Hazardous Waste Regulation (HWR) standards/criteria also apply to the Site. Site-specific factors that apply at the Site are outlined in the following table.

Table 7-1 Applicable Regulatory Standards

SITE SPECIFIC FACTORS	APPLICABILITY	RATIONALE
Intake of contaminated soil	Yes	Applicable at all sites.

SITE SPECIFIC FACTORS	APPLICABILITY	RATIONALE
Groundwater used for drinking water (DW)	Yes	The drinking water standards are applicable at all sites unless the underlying aquifers' hydraulic conductivity, quality and/or yield proves that it is not capable of being a drinking water source.
Toxicity to soil invertebrates and plants	Yes	Applicable at all sites.
Groundwater flow to surface water used by freshwater (AW-f)	Yes	One (1) freshwater surface water body was identified within 500m radius of the Site.
Groundwater used for livestock watering (LW) or irrigation (IW)	No	No irrigation or livestock watering wells were located within a 500 m radius of the Site.

Therefore, the following standards currently apply to the Site:

SOIL

- CSR CL Standards; and
- CSR RL-Id Standards.

Site Specific factors include:

- Intake of contaminated soil;
- Toxicity to soil invertebrates and plants;
- Groundwater used for drinking water; and
- Groundwater flow to surface water used by freshwater aquatic life

GROUNDWATER

- CSR Drinking Water (DW);
- CSR Freshwater Aquatic Life (AW-f); and
- CSR Groundwater standards for $EPHw_{10-19}$ and VHw_{6-10} apply to all sites irrespective of water uses.

SOIL VAPOUR

- CSR CL Standards; and
- CSR RL Standards.

8 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

From the information gathered during this investigation, four (4) on-Site APECs were identified. Information for the APECs is summarized in the following table. An APEC Location Plan (Figure 6) is attached in Appendix I.

Table 8-1 Summary of Identified APECs and PCOCs

APEC NO.	APEC DESCRIPTION	REGULATED PCOCS IN SOIL AND GROUNDWATER	REGULATED PCOCS IN VAPOUR	RISK RATING*
APEC #1 (on-Site)	Area of historical transformer storage in the southeast portion of the Site where PCB's were historically emptied onto unpaved, permeable ground surface. Area was also used for storage of various items/materials including ACM pipes.	PCBs, screening for: BTEX/VPH, LEPH/HEPH/PAHs, asbestos, metals	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC # 2 (on-Site)	The haul road and unpaved parking area located south of the haul road were historically used as a mixing and storage area for crush and oil mixture.	BTEX/VPH, LEPH/HEPH/PAHs, metals	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC #3 (on-Site)	Area of copper pipe and miscellaneous metal parts storage above the flatland storage in the east portion of the Site.	Metals, screening for: BTEX/VPH, LEPH/HEPH/PAHs	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate
APEC #4 (on-Site)	Central flatland storage area used for a laydown area/storage of various steel pipes, concrete, crush, etc.	Metals, screening for: BTEX/VPH, LEPH/HEPH/PAHs	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate

Notes:
* Relative scale indicating potential for contamination to be present at the Site
High - Evidence of actual significant contamination
Moderate - Inferred potential significant contamination or evidence of minor contamination
Low to Moderate - Inferred potential minor contamination
Low - No inferred contamination
BTEX - Benzene, toluene, ethylbenzene, xylenes in soil groundwater and in vapour
VPH - Volatile petroleum hydrocarbons in soil and groundwater
VPH_V - Volatile petroleum hydrocarbons in vapour
VOC - Volatile organic compounds in soil and groundwater
VOC_V - Volatile organic compounds in vapour
LEPH - Light extractable petroleum hydrocarbons
HEPH - Heavy extractable petroleum hydrocarbons
PAHs - Polycyclic aromatic hydrocarbons

9 CONCLUSIONS

From information gathered from this assessment, WSP concludes the following:

- A review of the aerial photographs indicates that the Site consisted of undeveloped land circa 1938 to circa 1949. A review of the aerial photographs indicates that circa 1949 to 2007, the Site was used as a gravel pit and as a storage area for pipes and various construction materials. The haul road leading to the gravel pit area was constructed circa 1951 and was paved circa 1963. Circa 2007 to 2018 the Site remained relatively unchanged, with vegetation regrowth visible throughout the Site.
- A review of the historical aerial photographs indicates that the surrounding properties to the south and west appeared to be primarily agricultural and residential land circa 1938 until present. The land to the east remained mostly undeveloped until circa 1949 when agricultural expansion was visible.

Circa 1974, agriculture land to the east had been fully developed. Circa 1987 until present day, significant expansion of residential properties to the east was apparent. Properties to the north remained undeveloped until circa 1987 when Sunset Place and Summergate Drive roadways were constructed. Circa 1993, the residences along Sunset Place and Summergate Drive were constructed. Since then, the properties to the north have remained relatively unchanged.

- Based on our historical records review, interview information and Site reconnaissance, four (4) on-Site APECs have been identified for the Site.

10 RECOMMENDATIONS

Based on the reviewed information and current Site conditions, a sub-surface investigation in the form of a Stage 2 Preliminary Site Investigation in the area of identified APECs is recommended at the Site.

WSP's further recommendations are as follows:

- General housekeeping throughout the site including removal of various debris piles and disposal of the stored miscellaneous pipes.
    - Depending on the content of the debris piles, hazardous materials sampling of debris and transformer/pipe materials may be required prior to disposal.
- If any environmentally suspect fill material is encountered onsite during any future redevelopment activities, such fill should be characterized prior to disposal offsite or at a permitted facility.
- In the future, if any abandoned USTs are encountered at the Site, such USTs should be decommissioned in accordance with the requirements of the BC Fire Code. A qualified environmental consultant should be retained to document any UST removal activities along with the characterization and disposal of any environmentally suspect material.

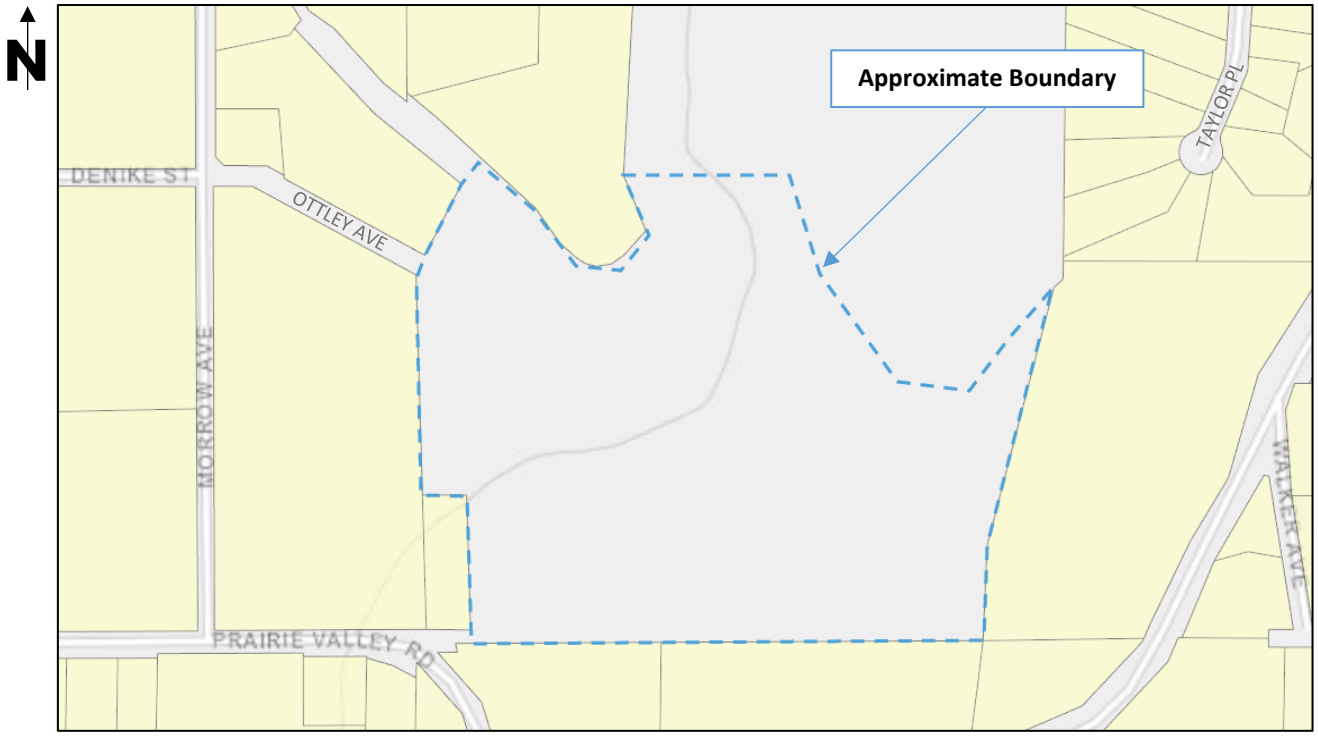
11 PROFESSIONAL STATEMENT

As required under Part 16, Section 63 of the "*Environmental Management Act*", Contaminated Sites Regulations (CSR, BC Reg. 375/96 including amendments up to B.C. Reg 13/2019 January 24, 2019), WSP confirms that:

1. The Environmental Site Assessment report has been prepared in accordance with requirements of the Act and its regulations, policies, procedures and protocols; and
2. The person(s) signing this report has (have) demonstrable experience in conducting investigations of this type and are familiar with the investigation completed at the Site.

APPENDIX

A FIGURES



wsp	PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION SUMMERLAND SOLAR ARRAY SUMMERLAND, BC				
	TITLE: SITE LOCATION AND SITE PLAN				
	CLIENT: DISTRICT OF SUMMERLAND				
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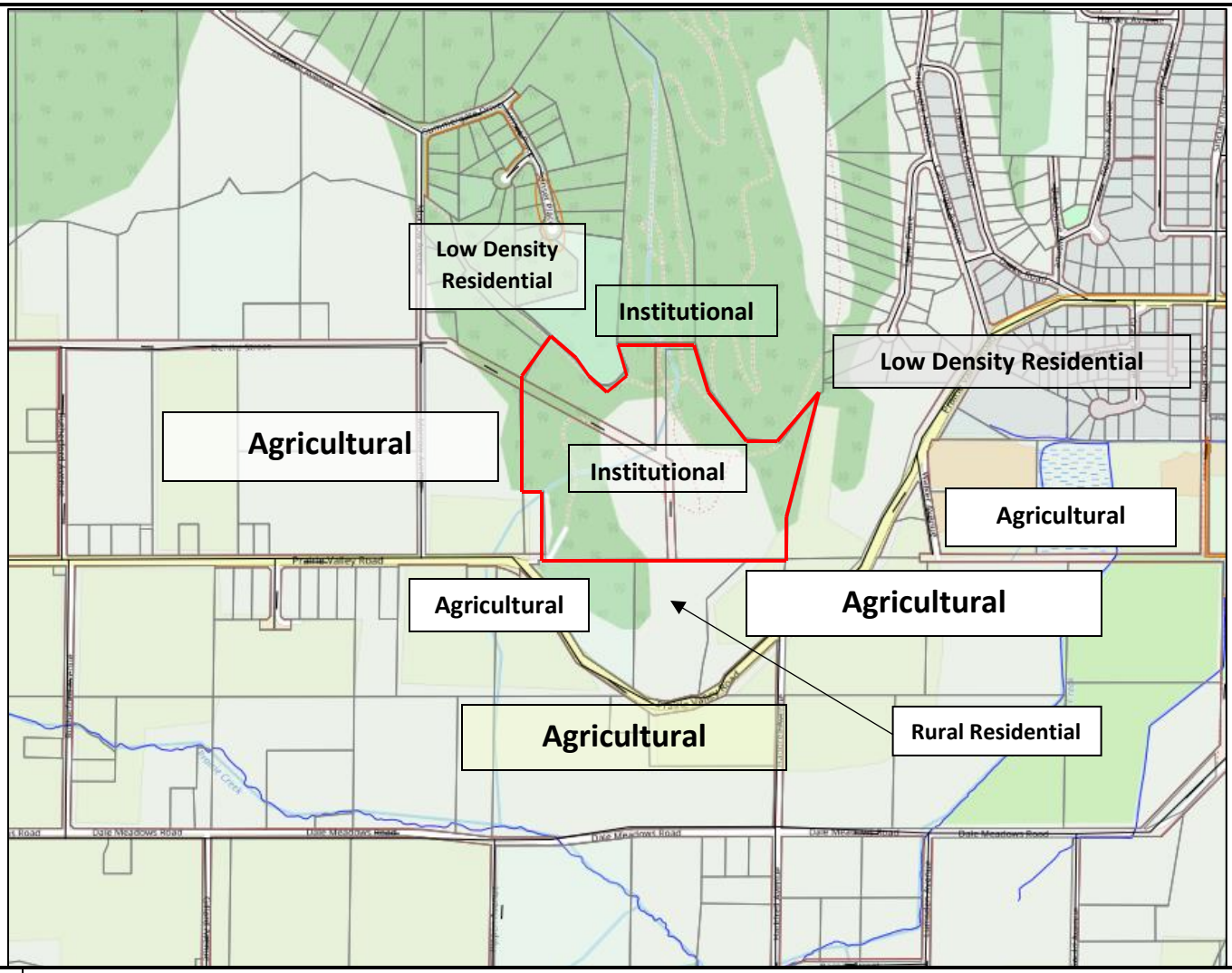
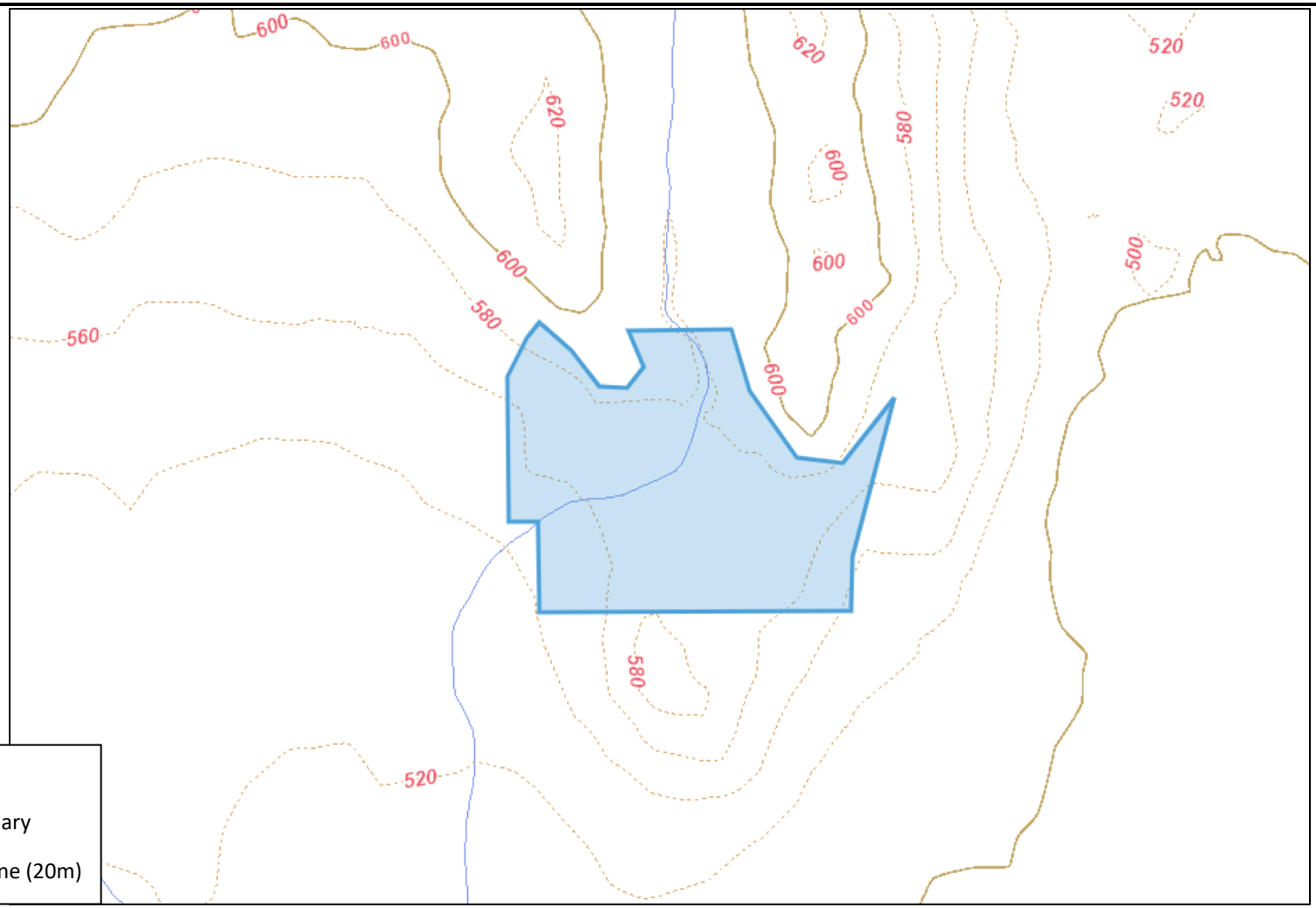


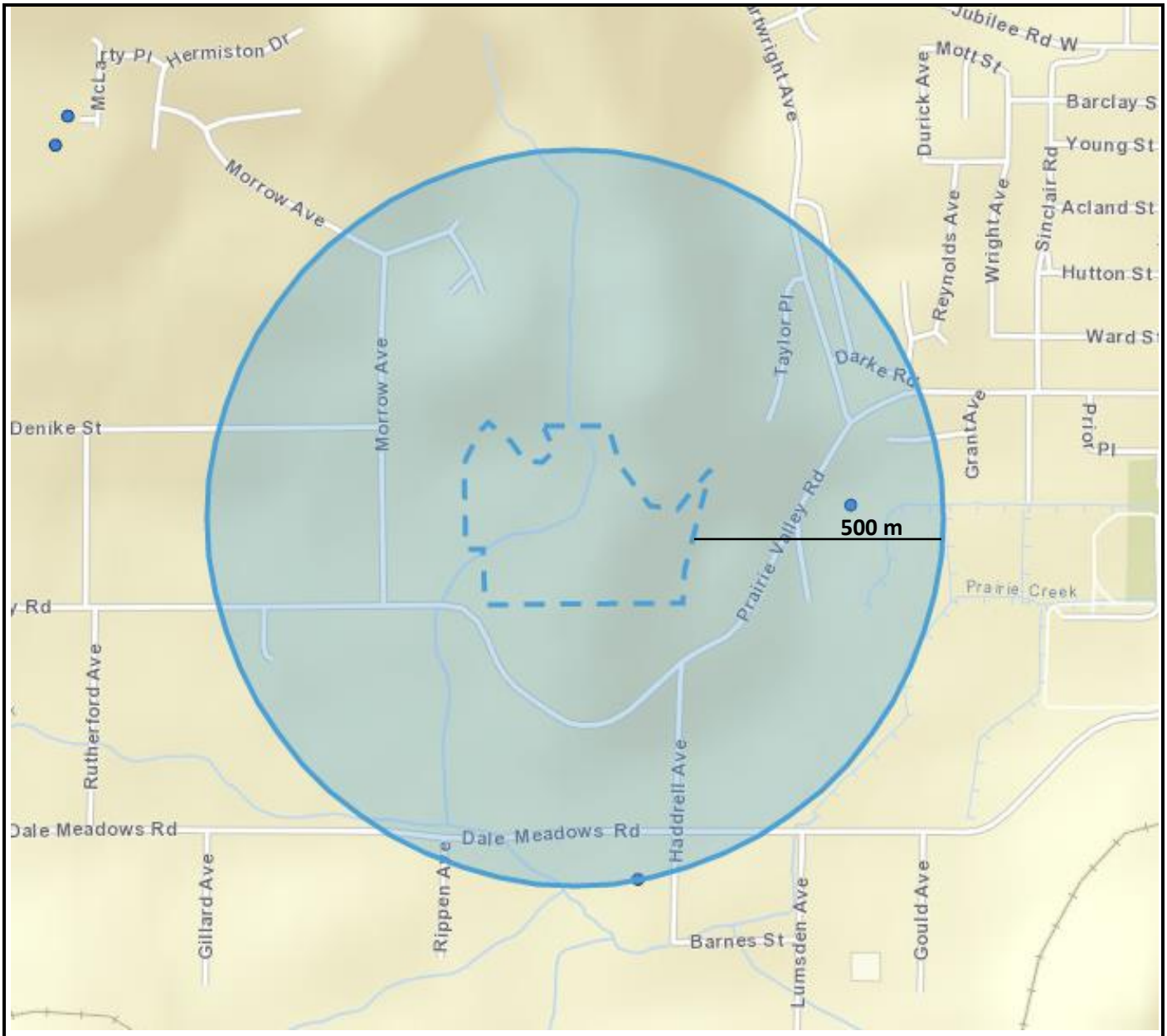
LEGEND

Site Boundaries

	PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION SUMMERLAND SOLAR ARRAY SUMMERLAND, BC				
	TITLE: SURROUNDING LAND USE PLAN				
	CLIENT: THE DISTRICT OF SUMMERLAND				
FIGURE NO.: 2	DATE: JAN 2020	FILE NO.: 191-15279-00	SCALE: NTS	DRAWN BY: AM	REV NO.: 2



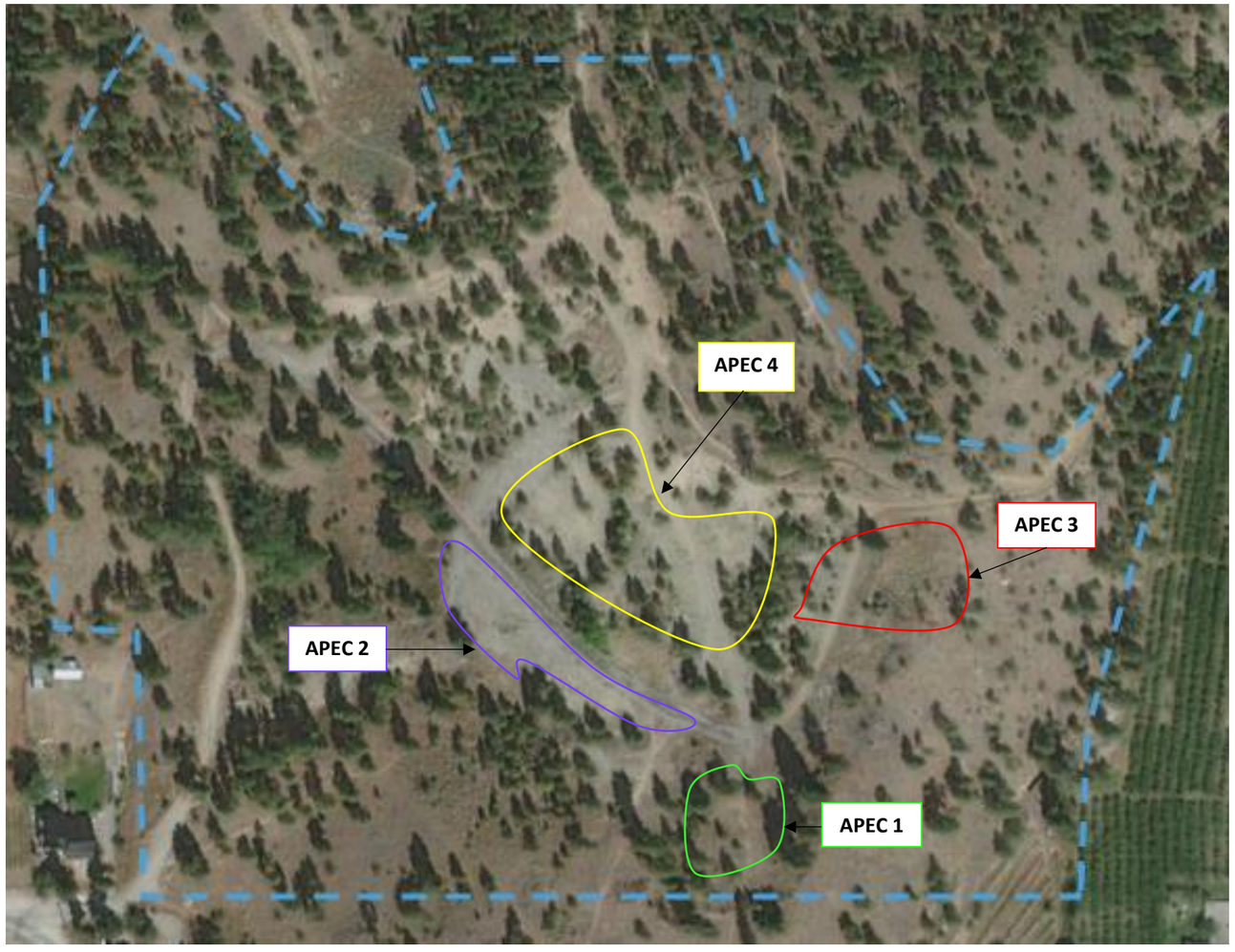
	PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION SUMMERLAND SOLAR ARRAY SUMMERLAND, BC				
	TITLE: TOPOGRAPHIC PLAN				
	CLIENT: DISTRICT OF SUMMERLAND				
FIGURE NO.: 3	DATE: JAN 2020	FILE NO.: 191-15279-00	SCALE: NTS	DRAWN BY: AM	REV NO.: 1



LEGEND

- Water Well
- Subject Site

wsp	PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION SUMMERLAND SOLAR ARRAY SUMMERLAND, BC				
	TITLE: WATER WELL SEARCH RESULTS				
	CLIENT: THE DISTRICT OF SUMMERLAND				
FIGURE NO.: 4	DATE: JAN 2020	FILE NO.: 191-15279-00	SCALE: NTS	DRAWN BY: AM	REV NO.: 1



Summary of Identified APECs and PCOCs

APEC NO.	APEC DESCRIPTION	REGULATED PCOCS IN SOIL AND GROUNDWATER	REGULATED PCOCS IN VAPOUR	RISK RATING*
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APEC #4 (on-Site)	Central flatland storage area used for a laydown area/storage of various steel pipes, concrete, crush, etc.	Metals, screening for: BTEX/VPH, LEPH/HEPH/PAHs	VOCs/VPH, naphthalene if detectable in soil and/or water	Low to moderate

Notes:

* Relative scale indicating potential for contamination to be present at the Site
- High - Evidence of actual significant contamination
- Moderate - Inferred potential significant contamination or evidence of minor contamination
- Low to Moderate - Inferred potential minor contamination
- Low - No inferred contamination

BTEX - Benzene, toluene, ethylbenzene, xylenes in soil groundwater and in vapour
VPH - Volatile petroleum hydrocarbons in soil and groundwater
VPH_v - Volatile petroleum hydrocarbons in vapour
VOC - Volatile organic compounds in soil and groundwater
VOC_v - Volatile organic compounds in vapour
LEPH - Light extractable petroleum hydrocarbons
HEPH - Heavy extractable petroleum hydrocarbons
PAHs - Polycyclic aromatic hydrocarbons

PROJECT:
STAGE I PRELIMINARY SITE INVESTIGATION
SUMMERLAND SOLAR ARRAY
SUMMERLAND, BC

TITLE:
APEC LOCATION PLAN

CLIENT:
THE DISTRICT OF SUMMERLAND

FIGURE NO.:	DATE:	FILE NO.:	SCALE:	DRAWN BY:	REV NO.:
5	JAN 2020	191-15279-00	NTS	AM	1

APPENDIX

B PHOTOGRAPHS

Photo 1: An overview of the site looking north.

Photo 2: A view of the haul road and parking area looking east.

Photo 3: Overview of the lot looking South where the potential solar monitoring station is to be located.

Photo 4: Overview of the site looking southwest.

Photo 5: A view of the metal pipes observed in the central portion of the site.

Photo 6: A closeup of the material on the pipes that is potentially ACM wrap.

Photo 7: View of a lead pipe and concrete block found on site.

Photo 8: Another pile of metal pipes observed along the east boundary of the site.

Photo 9: View of an asbestos-containing pipe observed in the southeast portion of the site. Another piece of ACM pipe was also observed within close proximity.

Photo 10: View of the concrete irrigation flume and hiking trail that runs along the north portion of the site.

Photo 11: View of parts of the irrigation flume that were disposed of on-site.

Photo 12: A view of buried concrete on-site located in the central storage area along the north boundary.

Photo 13: A view of the potential solar monitoring station location, looking east.

Photo 14: An overview of the storage area where transformers were stored and emptied.

APPENDIX

C MUNICIPAL INFORMATION

13.4 I Institutional Zone

I

13.4.1 Purpose

To provide a zone to accommodate major community facilities that address institutional, cultural, and educational needs of the community. Lands must be designated as Administration under the *District*'s Official Community Plan.

13.4.2 Principal Uses

The following *Uses* and no other *Uses* shall be the permitted *Principal Uses* in this zone subject to all applicable regulations of this Bylaw:

(a) art gallery and museum;

(b) *Child Care Centre, Major, Minor*;

(c) community centre;

(d) convention centre;

(e) court house;

(f) *Funeral Home*;

(g) *Group Home, Major*;

(h) hospital;

(i) library;

(j) *Place of Worship*;

(k) *Protective & Emergency Services*;

(l) *Education Services*;

(m) *Recreational Services, Indoor;*

(n) *Recreational Services, Outdoor;*

(o) *Recycle Drop-Off Centre*; and

(p) research centre and laboratory.

Bylaw 2017-021 added (b) Dormitory as an accessory use (August 28, 2017)

13.4.3 Accessory Uses

The following *Uses* and no other *Uses* shall be the permitted *Accessory Uses* in this zone subject to all applicable regulations of this Bylaw:

(a) *Accessory Buildings* & *Structures*;

(b) *Dormitory;*

(c) *Eating & Drinking Establishment*; and

(d) *Employee Housing*.

13.4.4 Subdivision Regulations

(a)	Minimum *Lot Area*	700m^2
(b)	Minimum *Lot Width*	18.0m
(c)	Minimum *Lot Depth*	30.0m

13.4.5 *Development* Regulations

(a)	Maximum *Lot Coverage*	50 percent
(b)	Maximum *Floor Area Ratio*	0.8

13.4.6 Siting Regulations – *Principal* & *Accessory Uses*

(a)	Minimum *Front Setback*	7.0m
(b)	Minimum *Rear Setback*	7.0m
(c)	Minimum *Side Setback* (*Interior*)	5.0m
(d)	Minimum *Side Setback* (*Exterior*)	5.0m
(e)	Maximum *Height*	The lesser of 14.0m or 4 *Storeys*

13.4.7 Other Regulations

(a) *Employee Housing* shall be limited to one (1) *Dwelling* unit per *Lot* or *Development Site*.

(b) In addition to the regulations listed above, other regulations may apply. These include Section 4: General Regulations, Section 5: *Landscaping* and Screening Regulations, Section 6: Parking and Loading Regulations, and Section 7: Specific *Use* Regulations.

Bylaw 201-008 – added Section 14.4.8 – Institutional Site Specific Provisions

13.4.8 Institutional Site Specific Provisions

.1 In the case of the land at 14812 & 14820 Victoria Road N, legally described as Parcel A (Plan B5540) of Lot 13, District Lot 340, ODYD, District Plan 287A Except Plan KAP72519 and Lot 13, District Lot 3640, ODYD, Plan 287A Except: 1) Parcel B (135968F) 2) Plans B5540, B3694, and KAP72519; shown of figure 13.4.8.1, the following provisions shall apply:

(a) Permitted uses shall include those listen in Section 13.4 as well as the Cluster Housing Use shall be permitted as an accessory use to the Places of Worship Use subject to the following regulations for:

a. The density of dwelling units shall not exceed 30 units per hectare

b. Siting Regulations for the Cluster Housing Use is

i.	Minimum Front Setback	4.5m
ii.	Minimum Rear Setback	4.5m
iii.	Minimum Side Setback (Interior)	1.5m
iv.	Minimum Side Setback (Exterior)	4.5m

c. The maximum height for the Cluster Housing Use is 9.5 metres.

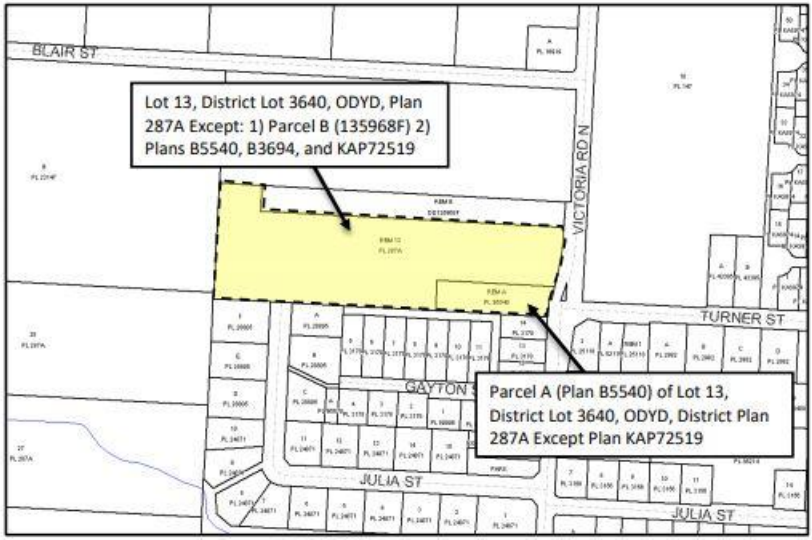

Figure 13.4.8.1

APPENDIX

D CURRENT AND HISTORICAL LAND TITLES

TITLE SEARCH PRINT 2019-12-12, 13:33:29

File Reference: 191-15279-00 Requestor: Royan Viggers

Declared Value $ 550000

CURRENT INFORMATION ONLY - NO CANCELLED INFORMATION SHOWN

Land Title District	KAMLOOPS
Land Title Office	KAMLOOPS
Title Number	LB162089
From Title Number	KV18248
Application Received	2008-01-31
Application Entered	2008-02-04

Registered Owner in Fee Simple

Registered Owner/Mailing Address: THE CORPORATION OF THE DISTRICT OF SUMMERLAND
PO BOX 159
13211 HENRY AVENUE
SUMMERLAND, BC
V0H 1Z0

Taxation Authority Summerland, The Corporation of the District of

Description of Land

Parcel Identifier: 009-833-722

Legal Description:

LOT 2 DISTRICT LOT 2543 OSOYOOS DIVISION YALE DISTRICT PLAN 8353

Legal Notations

THIS CERTIFICATE OF TITLE MAY BE AFFECTED BY THE AGRICULTURAL LAND COMMISSION ACT, SEE AGRICULTURAL LAND RESERVE PLAN NO. M11063

Charges, Liens and Interests

Nature:	COVENANT
Registration Number:	KV18250
Registration Date and Time:	2003-02-18 10:31
Registered Owner:	THE CORPORATION OF THE DISTRICT OF SUMMERLAND
Remarks:	INTER ALIA

Duplicate Indefeasible Title NONE OUTSTANDING

Transfers NONE

Pending Applications NONE

TITLE SEARCH PRINT 2019-12-12, 13:37:17

File Reference: 191-15279-00 Requestor: Royan Viggers

CURRENT AND CANCELLED INFORMATION SHOWN

Land Title District KAMLOOPS
Land Title Office KAMLOOPS

Title Number KV20521
From Title Number KL141098

Application Received 2003-02-24

Application Entered 2003-02-26

Registered Owner in Fee Simple
Registered Owner/Mailing Address: THE CORPORATION OF THE DISTRICT OF SUMMERLAND
P.O. BOX 159
SUMMERLAND, BC
V0H 1Z0

Taxation Authority Summerland, The Corporation of the District of

Description of Land
Parcel Identifier: 012-646-695
Legal Description:
LOT 18 DISTRICT LOT 2543 OSOYOOS DIVISION YALE DISTRICT PLAN 182
EXCEPT PLANS 13580, KAP60859 AND KAP72843

Legal Notations
LAND HEREIN MAY BE SUBJECT TO A CHARGE UNDER THE MUNICIPAL AND IMPROVEMENT DISTRICT REHABILITATION AND DEVELOPMENT ACT SEE C8500

Charges, Liens and Interests NONE

Duplicate Indefeasible Title NONE OUTSTANDING

Transfers NONE

Pending Applications NONE

Corrections NONE

TITLE SEARCH PRINT 2019-12-12, 13:38:30

File Reference: 191-15279-00 Requestor: Royan Viggers

Declared Value $ 586000

CURRENT AND CANCELLED INFORMATION SHOWN

Land Title District	KAMLOOPS
Land Title Office	KAMLOOPS
Title Number	LB162087
From Title Number	KV18249
Application Received	2008-01-31
Application Entered	2008-02-04

Registered Owner in Fee Simple

Registered Owner/Mailing Address: THE CORPORATION OF THE DISTRICT OF SUMMERLAND
PO BOX 159
13211 HENRY AVENUE
SUMMERLAND, BC
V0H 1Z0

Taxation Authority Summerland, The Corporation of the District of

Description of Land

Parcel Identifier: 012-646-717

Legal Description:

LOT 20 DISTRICT LOT 2543 OSOYOOS DIVISION YALE DISTRICT PLAN 182 EXCEPT PLAN 5439

Legal Notations NONE

Charges, Liens and Interests

Nature:	COVENANT
Registration Number:	KV18250
Registration Date and Time:	2003-02-18 10:31
Registered Owner:	THE CORPORATION OF THE DISTRICT OF SUMMERLAND
Remarks:	INTER ALIA

Duplicate Indefeasible Title NONE OUTSTANDING

Transfers NONE

Pending Applications NONE

Corrections NONE

ABSTRACT REGISTRY SERVICES LTD.
Phone: (250) 372-0746 Fax: (250) 828-0191
E-mail: abstractlto@telus.net

Date: December 24th, 2019
Client: WSP Canada Inc.
Attention: Alexandra Markus

File: 191-15279-00

HISTORICAL SEARCH REPORT

Civic Address (if given): 13500 Prairie Valley Road, Summerland, BC

LTO: Kamloops

Legal Description: Lot 2 District Lot 2543 Osoyoos Division Yale District Plan 8353

PID: 009-833-722

Title No:	Registered Owner:	Date Title Registered:	Legal Description (Current and Parent):	Leases & Right to Purchase
LB162089 CURRENT		2008	As above	
	**** Titles LB162089 and KV18248 are computer (online) titles and have not been viewed**			
193524F	THE CORPORATION OF THE DISTRICT OF SUMMERLAND	1957	As above **(Deposit Plan 8353)** Former Lot 12 Plan 182	N/A
61186F **By Tax Sale 32252W**	THE CORPORATION OF THE DISTRICT OF SUMMERLAND	1932	Lot 12 DL 2543 ODYD Plan 182	N/A
37201F	ALEXANDER STEUART	1924	As above	N/A
37200F	SUMMERLAND DEVELOPMENT COMPANY LIMITED	1924	As above	N/A
31662F **By Tax Sale 76W**	THE CORPORATION OF THE DISTRICT OF SUMMERLAND	1922	As above	N/A
AFB Vol.6 Fol.192 No. 7367A	THE SUMMERLAND DEVELOPMENT COMPANY LIMITED	1904	As above **(Deposit Plan 182)** Part Former Part DL2543 ODYD	N/A

ABSTRACT REGISTRY SERVICES LTD.
Phone: (250) 372-0746 Fax: (250) 828-0191
E-mail: abstractlto@telus.net

Date: December 24th, 2019
Client: WSP Canada Inc.
Attention: Alexandra Markus

File: 191-15279-00

HISTORICAL SEARCH REPORT

Civic Address (if given): 12591 Morrow Avenue, Summerland, BC

LTO: Kamloops

Legal Description: Lot 18 District Lot 2543 Osoyoos Division Yale District Plan 182 Except Plans 13580, KAP60859 and KAP72843

PID: 012-646-695

Title No:	Registered Owner:	Date Title Registered:	Legal Description (Current and Parent):	Leases & Right to Purchase
KV20521 CURRENT		2003	As above	
	**** Titles KV20521 and KL141098 are computer (online) titles and have not been viewed**			
61186F **By Tax Sale 32253W**	THE CORPORATION OF THE DISTRICT OF SUMMERLAND	1932	Lot 12 DL 2543 ODYD Plan 182	N/A
37201F	ALEXANDER STEUART	1924	As above	N/A
AFB Vol.6 Fol.192 No. 7367A	THE SUMMERLAND DEVELOPMENT COMPANY LIMITED	1904	As above **(Deposit Plan 182)** Part Former Part DL2543 ODYD	N/A

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Date: December 24th, 2019
Client: WSP Canada Inc.
Attention: Alexandra Markus

File: 191-15279-00

HISTORICAL SEARCH REPORT

Civic Address (if given): Ottley Avenue, Summerland, BC

LTO: Kamloops

Legal Description: Lot 20 District Lot 2543 Osoyoos Division Yale District Plan 182 Except Plan 5439

PID: 012-646-717

Title No:	Registered Owner:	Date Title Registered:	Legal Description (Current and Parent):	Leases & Right to Purchase
LB162087 CURRENT		2008	As above	
	**** Titles LB162087, KV18249 and KL141100 are computer (online) titles and have not been viewed**			
61186F **By Tax Sale 32255W**	THE CORPORATION OF THE DISTRICT OF SUMMERLAND	1932	Lot 12 DL 2543 ODYD Plan 182	N/A
15892F	ALEXANDER STEUART	1918	As above	N/A
AFB Vol.6 Fol.192 No. 7367A	THE SUMMERLAND DEVELOPMENT COMPANY LIMITED	1904	As above **(Deposit Plan 182)** Part Former Part DL2543 ODYD	N/A

APPENDIX

E BC ENV DOCUMENTS

SiteRegSearchLat49Long119

Area Nil Search

As of DEC 08, 2019, no records from Site Registry
fall within 0.5 kilometers of coordinates
Latitude 49 degrees, 35 minutes, 43.6 seconds, and
Longitude 119 degrees, 42 minutes, 2.3 seconds.

You have been charged for this information.

Sites may be revealed by searching with alternate search methods. For example, a site not revealed in an Area search may be revealed by searching with another piece of information such as PID, PIN, address or Crown Lands File Number

APPENDIX

F BACKGROUND INFORMATION EMA, CSR AND HAZARDOUS BUILDING MATERIALS

BACKGROUND INFORMATION OF EMA AND CSR

The *Waste Management Act* (WMA) addressed contaminated sites in British Columbia since 1988. The *Waste Management Amendment Act*, 1993 (WMAA, also known as Bill 26) was passed in June 1993. The MOE added provisions, which specifically addressed contaminated sites, and promulgated the Contaminated Sites Regulation[1] (CSR), which came into effect on 1 April 1997. The first, second and third stage amendments to the CSR were made on 19 July 1999, 4 February 2002 and 20 November 2003, respectively. In July 2004, the WMA was repealed and replaced by the *Environmental Management Act* (EMA), and the CSR was amended. A revised CSR with 10 Schedules was promulgated at this time. The fifth, sixth, seventh, eighth, ninth and tenth stage amendments were made to the CSR in 2007, 2008, 2011, 2013, 2014 and 2016 respectively. The CSR is currently in effect under the EMA. The eleventh stage amendments came in to effect in November 2017. The CSR has staged investigations as follows:

- Stage 1 PSI comprises of a historical search and records review, and a walk-through site visit.
- Stage 2 PSI comprises of selective sampling and analyses of environmental media at identified APECs to determine the presence or absence of potential contaminants of concern (PCOCs) exceeding the applicable standards.
- Detailed Site Investigation (DSI) comprises of evaluation of the lateral and vertical extents of contaminants of environmental concern (COCs) in different media at areas of environmental concern (AECs) identified during the Stage 2 PSI.

Canadian Standards Association[2] (CSA) refers to Stage 1 and Stage 2 PSIs as Phase I and Phase II Environmental Site Assessments (ESAs), respectively. The DSI is considered a part of the Phase II ESA if contamination is identified. A Phase III ESA consists of remediation or risk assessment.

[1] Contaminated Sites Regulation (CSR, BC Reg. 375/96 including amendments up to BC Reg. 13/2019, January 24, 2019; Victoria, British Columbia); Effective April 1, 1997; Ministry of Environment; Victoria, British Columbia.

[2] Canadian Standards Association (CSA); Phase I Environmental Site Assessment (CSAZ768-01 (R2012)); Rexdale, Ontario.

BACKGROUND INFORMATION OF HAZARDOUS BUILDING MATERIALS

ASBESTOS CONTAINING MATERIALS (ACMS):

Asbestos is a naturally occurring fibrous material that has been commonly used in construction from the early 1900s until the 1990s. It was used extensively because it is an insulator, has good fire protection properties, has tensile strength, and is resistant to chemical erosion. Some of the common uses of asbestos in buildings include spray applied fireproofing, mechanical insulation, linoleum, floor tiles, dry wall taping compound, vermiculite, asbestos cement board and tiles, asbestos cement pipes, and textured decorative coating.

The use of friable asbestos containing materials (ACMs) in buildings was gradually reduced in Canada through the 1970s and 1980s. WorkSafe BC requires that all buildings constructed before 1990 should be tested for asbestos before any demolition or renovation work. Any building which is a workplace must have an inventory prepared of all asbestos containing materials and an Asbestos Management Plan must be developed and maintained until all ACMs have been removed from the building.

OZONE DEPLETING SUBSTANCES:

An ozone-depleting substance ("ODS") refers to any substance containing chlorofluorocarbon ("CFC"), hydrochlorofluorocarbon ("HCFC"), halon or any other material capable of destroying ozone in the atmosphere. ODSs have been used in rigid polyurethane foam and insulation, laminates, aerosols, air conditioners, fire extinguishers, cleaning solvents and the sterilization of medical equipment.

Federal regulations introduced in 1995 required the elimination of production and import of CFCs by 1 January 1996 (subject to certain essential uses) and a freeze on the production and import of HCFC-22 by 1 January 1996. These regulations also require the complete elimination of HCFC-22 by the year 2020. The provincial/territorial governments manage the use and handling of ODS. The B.C. Government passed the Ozone Depleting Substances Regulation in 1993 to control ODS stored in products and equipment, and encourage consumers and industry to use more environmentally safe alternatives.

WSP expects a low potential for environmental concern with respect to ODSs at the Site as long as any ODS containing items are maintained properly. Prior to demolition or disposal, equipment which contains ozone depleting substances should be degassed by a certified / licensed contractor as required by British Columbia's Ozone Depleting Substances Regulation.

POLYCHLORINATED BIPHENYLS:

In Canada, polychlorinated biphenyls ("PCBs") were prohibited from being used in products, fluorescent light ballasts, equipment, machinery, electrical transformers and capacitors, which were manufactured or imported into the country after July 1, 1980. However, older equipment in use after this date may still contain PCBs if the equipment's fluid has not been changed, or if there was sufficient inventory of such equipment.

If a building is to be demolished all light ballasts and dielectric fluid containing equipment should be checked for PCB content prior to disposal. PCB ballasts should be recycled when removed from service. The Light Recycle website provides a list of recycling facilities which accept PCB ballasts at http://www.lightrecycle.ca/.

LEAD-BASED PAINTS:

Many older properties in Canada may have surfaces that are painted with lead-based paint. Removing or disturbing this paint when you are renovating could expose people within the building to serious health risks. Buildings built and painted before 1960 probably contain lead-based paint. Buildings built and painted between 1960 and 1990 may have small amounts of lead in some of the painted indoor surfaces. Highest amounts of lead were used in exterior paints. There is little concern about lead-based paint in buildings built and painted in 1991 or later, because most consumer paints produced in Canada and the U.S. since that time contain no more than background levels of lead. However, some specialty coatings (such as artists' paints and metal touch-up coatings) can contain higher levels of lead.

The lead content of consumer paints sold, imported or advertised in Canada is regulated under the Surface Coating Materials Regulations. In October 2010, the Government amended the *Surface Coating Materials Regulations* to significantly lower the level of total lead allowed in paints and other surface coating materials from 600mg/kg to 90 mg/kg - which is equivalent to a lead concentration of 0.009%.

Lead-based paint in good condition presents a relatively low risk if left undisturbed. If paint is in a flaking condition, it is advisable to have the paint chips tested for lead content. Any lead abatement should only be conducted by a qualified contractor following WorkSafe BC guidelines. Lead painted surfaces must be tested for leachability before disposal at a landfill site.

MERCURY:

Mercury switches were commonly used in thermostats both in residential and commercial/industrial buildings. Mercury is a poisonous heavy metal and devices containing mercury once out of use are to be treated as hazardous waste. These switches therefore have to be disposed appropriately. Mercury is also present in fluorescent light tubes, compact fluorescent lamps and halide lamps.

Mercury thermostats can be disposed of under the “Switch the 'Stat” program which is a thermostat replacement and collection program delivered in partnership with the Heating Refrigeration and Air Conditioning Institute of Canada (HRAI) in British Columbia. Drop of locations can be found at http://switchthestat.ca/eng/index.php. Fluorescent light tubes and compact fluorescent lamps can be disposed of under the Light Recycle program http://www.lightrecycle.ca/.

RADON GAS:

Radon is a colourless, odourless radioactive gas that occurs naturally from the breakdown of uranium. Radon can be found where soils and rocks contain uranium mineral. It is a radioactive gas that is produced by the decay of uranium. Radon is naturally occurring, and emanates from soil and rocks. It percolates up through soil into buildings, and if it is not evacuated there can be much higher exposure levels indoors than outdoors. In open air or in areas with high air circulation, radon is not considered a health problem. Fortunately, high radon levels can be easily tested for, allowing for mitigation. Health Canada’s guideline for the acceptable level of indoor radon in a normal living area is 200 Bq/m^3. Radon is a known carcinogen, and is estimated to cause up to 10% of all lung cancers in Canada.

In March 2012, Health Canada undertook a large-scale study of radon levels in homes across Canada and the results of the study were published in a document entitled Cross-Canada Survey of Radon Concentrations in Homes - Final Report. According to the report, the average percentage of homes with elevated radon levels in Canada was near 7%. In BC, the proportion of homes with elevated radon levels in the Lower Mainland and Vancouver Island were significantly below the national average while the interior of BC had some of the highest elevated radon levels in Canada. For example, the East Kootenay region had 19% of homes with elevated radon levels while Kootenay Boundary had 19.3% and the Okanagan had 17.4% of homes with elevated radon levels.

However, according to Health Canada’s *Reducing Radon Levels in Existing Homes: A Canadian Guide for Professional Contractors*, there is such a high variability in housing construction that even adjacent homes can have significantly different concentrations of radon. Only through radon testing can the radon levels in a home be determined with certainty.

APPENDIX

G STANDARD LIMITATIONS

STANDARD LIMITATIONS

WSP CANADA INC. CONDUCTED A STAGE 1 PRELIMINARY SITE INVESTIGATION (THE "Project") FOR 13500 PRAIRIE VALLEY ROAD, 12591 MORROW AVENUE, AND OTTLEY AVENUE FUTURE ROAD RIGHT-OF-WAY IN SUMMERLAND, BC (THE "Site") AS REQUESTED BY THE DISTRICT OF SUMMERLAND "Client") AND AGREED UPON IN THE PROPOSAL DATED NOVEMBER 1, 2019 (THE "Proposal"). THE FINDINGS AND CONCLUSIONS ARE DOCUMENTED IN THIS REPORT (THE "Report"). SUCH USE AND RELIANCE BY Client IN THIS Report IS SUBJECT TO THE TERMS, CONDITIONS AND LIMITATIONS SET OUT IN WSP'S TERMS OF ENGAGEMENT FOR THE Project.

1. The findings and conclusions documented in this Report have been prepared for specific application to this Project and have been developed in a manner consistent with that level of care normally exercised by environmental professionals currently practicing under similar conditions in the area.

2. The findings of this Report are based solely on data collected on Site during this investigation and pertain only to the locations that have been investigated and on the conditions of the Site during the completion of the work and services. WSP Canada Inc. has relied on good faith on information provided by individuals and sources noted in the Report. No other warranty, expressed or implied, is made.

3. If new information is developed in future work that affects the conclusions of this Report, WSP Canada Inc. should be contacted to re-evaluate the conclusions of this Report and provide amendments as required.

4. The service provided by WSP Canada Inc. in completing this Report is intended to assist the Client in a business decision. The liability of the Site is not transferred to WSP Canada Inc. as a result of such work and services, and WSP Canada Inc. does not make recommendation regarding the purchase, sale, or investment in the property.

5. This document is intended for the exclusive use of the District of Summerland for whom it has been prepared. WSP does not accept responsibility to any third party for the use of information presented in this Report, or decisions made or actions taken based on its content.

6. The information presented in this Report is based on, and limited by, the circumstances and conditions acknowledged herein, and on information available at the time of its preparation. WSP has exercised reasonable skill, care, and diligence to assess the information acquired during the preparation of this Report, but cannot guarantee or warrant the accuracy or completeness of the information. Information provided by others, whether represented or otherwise utilized, is believed to be accurate but cannot be guaranteed.