



DEVELOPMENT PERMIT

NO. DP- 2018-22

TO: **Shazach Holdings Inc.**

ADDRESS: **P.O. Box 1040, Gibsons, BC V0N 1V0** (Permittee)

- 1) This Development Permit is issued subject to compliance with all of the Bylaws of the Town of Gibsons applicable thereto, except those specifically varied or supplemented by this Permit.
- 2) The Development Permit applies to those "lands" within the Town of Gibsons described below:

Parcel Identifiers: 030-240-875; and
007-238-550

Legal Descriptions: Lot 13, District Lot 689, Group 1 New Westminster District
Plan EPP75275; and
Lot 37, Blocks 1 to 4, District Lot 689, Plan 17973

Civic Address: 1000 and 1018 Venture Way, Gibsons BC

- 3) The lands are within Development Permit Area No. 9 for the purpose of the protection of the Gibsons Aquifer.
- 4) The "lands" described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit, and any plans and specifications attached to and forming part of this Permit, specifically:
 - o *Environmental Assessment Report, prepared by Entech Environmental Consultants Ltd. and dated February 21, 2019*
- 5) All requirements of the program are to be followed. On-site monitoring by a qualified professional during excavation is required.
 - a. During the construction phase, Shazach Holdings Inc. will develop a spill response and contingency plan.
 - b. A small spill near the Bob Cat equipment storage, next to the Office shall be cleaned up and included in the spill response of the facility.
 - c. During the redevelopment of the property, the owner shall be cognizant of the historical activities in this area and, if contaminated, they shall remediate any soil.
 - d. Best management practices should be maintained for the risk associated with the temporary storage of chemicals or hazardous liquids if they are brought onto the site.
 - e. Current best practices shall be followed for any use of liquids on the properties associated with maintenance and operation of the facility.
 - f. Any machinery on the site shall be in good working order without leaks, or if maintenance is required, it should be performed on an impermeable barrier.

- g. Best practices for waste management are to be followed.
 - h. If a future tenant wishes to use the facility for significant chemical storage or distribution then further review of their proposed operation shall be conducted. These operations may include; a dry cleaners, chemical distribution, fuel storage or an operation with significant use of volumes of potentially hazardous materials.
- 6) If the Permittee does not commence the development permitted by this Permit within twenty-four months of the date of this Permit, this Permit shall lapse.
 - 7) Upon completion of the works, a letter from a qualified professional is required to ensure all conditions of this permit were met.
 - 8) This Permit is NOT a Building Permit.

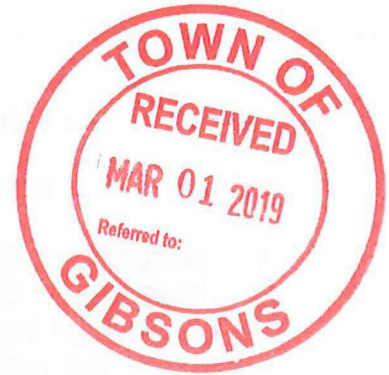
ISSUED THIS 1st DAY OF APRIL, 2019.



Lesley-Ann Staats, MCIP, RPP
Director of Planning

Copied to Entech Environmental Consultants Ltd.

ENVIRONMENTAL ASSESSMENT REPORT



FOR

**1000 and 1018 Venture Way,
Gibsons, B.C.**

Prepared on Behalf of:

**Julian Burtnick
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P.O. Box 1040
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Gibsons, BC
VON 1VO**

February 21, 2019

Project No. 2018.047

REPORT PREPARED BY:

Entech Environmental Consultants Ltd.

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

| | |
|--|-----------|
| 1. INTRODUCTION | 5 |
| 2. INVENTORY OF POTENTIAL CONTAMINATION SOURCES..... | 5 |
| 2.1. Current Site Activities | 5 |
| 2.1.1. 1000 Venture Way | 6 |
| 2.1.2. 1018 Venture Way | 6 |
| 2.2. Proposed Site Activities | 8 |
| 3. PHYSICAL STUDY AREA | 9 |
| 3.1. Topography | 9 |
| 3.2. Geology | 10 |
| 3.3. Hydrogeology | 12 |
| 4. SUMMARY OF THE POTENTIAL RISK TO THE ENVIRONMENT | 14 |
| 5. LOCATION OF ABOVE OR BELOWGROUND STORAGE TANKS | 15 |
| 6. POTENTIAL CONTAMINATION OF WELLS..... | 15 |
| 7. SPILL RESPONSE AND CONTINGENCY PLAN | 16 |
| 8. SITE SPECIFIC GROUNDWATER PROTECTION | 16 |
| 9. SITE SPECIFIC GROUNDWATER MONITORING PROGRAM | 17 |
| 10. STORMWATER MANAGEMENT | 17 |
| 11. CONCLUSIONS | 18 |
| 12. DISCLAIMER | 19 |
| 13. QUALIFICATIONS OF ASSESSOR | 19 |
| 14. INSURANCE COVERAGE | 19 |
| 15. REFERENCES | 21 |

FIGURES

- Figure 1 Site Location
- Figure 2 Monitoring Well and Extraction Well Locations
- Figure 3 Geological Cross Section

APPENDIX

- A Site Photographs

EXECUTIVE SUMMARY

This report was completed at the request of Shazach Holdings Inc. as part of their development permit application for Lots 13 and 37 located on 1000 and 1018 Venture Way, Gibsons BC (the Properties).

The Town of Gibsons is located on an Aquifer and it is used to supply untreated Potable water for 73 % of the population. The Town uses 4 extraction wells which are located in Lower Gibsons. A review of the BC Ministry Groundwater Well Database indicated that there were two wells within 300 m of the Properties. The records indicated that they were likely installed in the 1950's and or 1960's. They were drilled to an approximate depth of 10 m within a low permeable clay Till. It is unlikely that these wells are in use at the present time. A third well was located within 300 m of the Properties and it was completed on March 23, 2010, it is currently in used as a monitoring well for the Aquifer.

The property at 1018 Venture Way is currently being used by the Gibsons Recycling Depot and the other (1000 Venture Way) is vacant land. A site inspection was conducted by ENTECH on January 9, 2019. In general the recycling centre appeared to be well managed and it does not accept significant volumes of liquids and does not accept hazardous liquid wastes. However, it was reported that waste oil was accepted from 2005 but ceased in 2015. The waste oil tank infrastructure was removed and a volume of soil was excavated from the Site. A small area of staining was also indentified during the Site visit and was associated with equipment storage and maintenance. During the redevelopment of this area it is recommended that any soil in these areas be inspected to ensure that adequate remediation was completed. Both Properties are located in Upper Gibsons and sit above the Gibsons Aquifer. The Aquifer is approximately 100 m below, and is overlain by approximately 75 m of a Till Aquitard and therefore has a significant low permeable protection layer.

The proposed development plan of the Properties was reviewed as part of this report and if the typical building best management practices for the area are followed and any additional site specific requirements the construction phase is unlikely to impact the Aquifer beneath.

As the Properties will be occupied by a number of as yet unknown small scale commercial business's and some residential life work facilities, ENTECH could not review if their operation will affect the Aquifer. However, this can be controlled at the time of occupation and/or application for individual business licenses. This would be similar for any new business what wishes to establish a facility in Gibsons. Future occupants for the development should adhere to environmental best practices with respect to their operation.

1. INTRODUCTION

Julian Burtnick of Shazach Holdings Inc. retained Entech Environmental Consultants Ltd. (ENTECH) to conduct an Environmental Assessment Report of 1000 and 1018 Venture Way, Gibsons, British Columbia (the Properties). This report is required as part of a redevelopment permit as documented in the Town of Gibsons Official Community Plan Section 16.10.

The subject Properties consist of two adjacent lots. The legal description of the Property is Lot 13 and 37, Plan EPP75275 and VAP17973, District Lot 689. The Parcel Identifiers are 030-240-875 and 007-238-550. The Civic addresses for the lots are 1000 and 1018 Venture Way, Gibsons, B.C. The location of the Properties is illustrated in Figure 1. They are located near the Sunnycrest Mall and Gibsons Community Centre approximately 1 km to the northwest of the Gibsons downtown/waterfront area. The property located at 1018 Venture Way is zoned Light Industrial and the property at 1000 Venture Way is zoned Live Work. Live Work is defined as self contained dwelling unit that may also be combined with commercial space, limited to the following commercial uses, artisan studio, arts studio, high tech, office, personal service provided only the resident or residents of such accommodation work in the self contained dwelling and provided only one additional non-resident is employed.

ENTECH conducted a desk top study for topography, geology, hydrogeology and available technical reports for the local area as part of this Report. A site inspection was also conducted to evaluate the current environmental status of the Properties and future development plans. The proposed development plans were also reviewed with respect to their potential environmental impact.

2. INVENTORY OF POTENTIAL CONTAMINATION SOURCES

This section of the Report describes the current and proposed site activities. A site inspection was conducted on January 8, 2019. ENTECH inspected both properties, via a site walkthrough and conducted an interview with the Manager of the Recycling Depot (Mr. James Duggan). Mr. Duggan has been operating the Depot since 2011. Particular attention was focused on activities that may or have the potential to impact the Aquifer below.

2.1. Current Site Activities

The site inspection occurred on January 9, 2019 and the weather conditions were over cast and approximately 1°C. Full access was granted to the facility and interviews were conducted with the Properties owner and the facility Manager for the Gibsons Recycling Depot. Shazach Holdings Inc. acquired the Lots in 2016.

The Manager indicated that the Recycling Depot had been in operation for approximately 15 years and previously it was a vacant lot. The Manager has been working at the facility for approximately 7 years.

2.1.1. 1000 Venture Way

At the time of the site inspection the property located at 1000 Venture Way was empty lot. The western section of the lot, approximately 20 m wide has been cleared to a depth of approximately 0.6 m below ground level. Clean fill appears to have been imported onto the site and has been compacted and graded to provide a gentle slope to the south.

The remainder of the lot appears to have been recently cleared of trees and brush and in the northwestern portion were piles of organic wood chips. The remainder of the lot appears empty. The surface material was a mixture of wood chips that have been spread out, native soils that gently slope to the south. In the northern portion of the lot, the surface elevation appears to have been raised by approximately 0.6 m, with reference to a chain link fence along the northern boundary. Trace amounts of debris were observed, but no evidence of significant fly tipping was observed.

A small drainage channel was located near the centre of the lot with gravel and the occasional hay bale placed intermittently as erosion control to slow any surface water drainage across the lot. Close to the piles of wood chips, decaying plant matter odour was noted and an iridescent sheen was observed in the drainage channel. The iron slick sheen broke into distinctive plates on contact and is typical of biochemical oxidation or the breakdown or decay of organic matter. The lot appeared to contain little of environmental significance.

Historically it was reported that the lot had not been used for any activity and had always been a green field site. The removal of the trees and brush occurred approximately 6 month ago and minimal amount of clean fill material were brought onto the lot to level it.

2.1.2. 1018 Venture Way

The facility at 1018 Venture Way is an operational Recycling Depot. ENTECH was given a tour of the facility and permitted access to all areas of the operation. The ground surface consists of compacted gravel with a gentle slope to the south. The eastern portion of the facility, approximately 25 m wide has been segregated from the recycling centre. The northeast section is currently being used for the temporary storage of three prefabricated building shells. The southern portion has been cleared and a pad of imported clean fill material has

been compacted and leveled in preparation for the future construction of a commercial building. This section of the Property has been fenced off from the Recycling Depot.

The Recycling Depot services the Town of Gibsons and is open seven days a week. There is clear signage on the entrance to the facility as to what materials are accepted and which materials are not permitted. Accepted materials include:

- Printed paper
- Paper packaging for dry goods
- Cartons and paper cups
- Plastic, Aluminum, Steel, glass containers
- Plastic bags, overwrap and other flexible plastic packaging
- Foam Packaging
- Light bulbs and fixtures
- Electronics
- Batteries
- Paint
- Smoke alarms
- Small appliances

Materials that are not accepted include:

- Garbage Bags
- Construction waste such as roofing materials, drywall, wood, toilets, sinks, showers, bathtubs and hot tubs, windows, doors, sheets of glass, tile concrete and bricks
- Household furniture
- Carpeting
- Antifreeze, used motor oils, oil filters and containers

The materials are imported onto the Property by the public where they are sorted into the appropriate waste streams before being shipped off site. Staff are located at the facility to provide assistance when needed and to ensure only permitted materials are accepted onto the facility. The general appearance of the facility appeared clean and well organized. The current owner has been operating the facility for approximately the last two years when many of the current operational procedures were implemented. There are minimal liquids accepted into the recycling depot. Paints are accepted into the recycling centre at a designated station. The paints are then stored in a contained tote with lid to prevent precipitation ingress. The paper products are accepted into the facility where they are baled and stored for disposal off site. Other materials such as plastics, Styrofoam and glass are collected and sorted then stored in covered bins for disposal. Similar protocols are used for metals, small appliances, and

mattresses. A small hydrocarbon surface stain was observed near the Bob Cat parking area and may need further investigation or remediation in conjunction with the development. A drainage ditch along the northwest property boundary adjacent to the equipment storage area may present a risk for the Site and potential offsite migration toward the west, and adjacent lot should there be an accidental fuel spill. A number of storage containers were located along the perimeter of the facility. These did not appear to be potential sources for environmental impact. The only processing on the facility was the waste paper compactor and bailer. The remainder of the operation appeared to be sorting, temporary storage and then disposal off site.

The previous owner of the facility operated the Recycling Depot for approximately 13 years. It is understood during this time, the Depot accepted additional materials such as drywall and used oils. The used oil ceased to be accepted to the facility approximately four years ago. The waste oil aboveground storage tank (AST) was removed and approximately 0.3 m of soil beneath the AST was also removed and disposed off at a licensed facility. This area still represents an area of potential environmental concern (APEC), and may need further investigation. It was reported that this area was remediated. However, there was no documentation or sampling conducted at the time. The potential source was removed and waste oil is no longer accepted to the facility. Therefore, the likely future risk to the soil and groundwater quality will not increase. It is recommended that when this area is redeveloped and if any residual impacted material is identified an Environmental Consultant be consulted to assist in the remediation.

At present the management and waste streams accepted to the facility do not appear to pose a significant risk to the under lying soil and groundwater quality. However, it is difficult to quantify the potential risk associated with the historical operation of the facility. The majority of the formerly accepted recycling materials would not pose a significant risk to the soil and groundwater quality. When the southeast corner of the Recycling Depot was prepared for redevelopment and the upper portion of soil removed, no visible evidence of contamination was observed according to the property owner.

2.2. Proposed Site Activities

ENTECH has reviewed the proposed development for the Properties. The initial phase is for the construction of an office building on the northeastern corner of the 1018 Venture Way Property. The southeast corner is the proposed location of a commercial sales building. The next phase of the proposed development would be 1000 Venture Way and consist of mixed use of small commercial/office/studio

developments with some buildings defined for residential occupation associated with the work space. It is understood that the development will include underground parking. The plans meet the current zoning requirements for this lot. Small commercial units are also proposed to be constructed on the remainder of the 1018 Venture Way Property at a future date.

The construction of the buildings will not likely pose a significant risk to the underlying soil and groundwater quality. Given the location of the Properties above a significant drinking water Aquifer in the region, typical construction standards of practice should be taken to prevent any potential impact to the Aquifer.

It is understood that the future tenants of the individual units will meet the zoning requirements for this area of Gibsons. For commercial operations such as café, daycare, rock climbing facility, office space etc. It is unlikely these types of business will pose a risk to the Aquifer. It is recommended that best practices for waste management are followed. However, if a future tenant wishes to use the facility for significant chemical storage or distribution then it is recommended further review of their proposed operation be conducted. These operations may include; a dry cleaners, chemical distribution, fuel storage or an operation with significant use of volumes of potentially hazardous materials. These types of business would likely require a change in zoning or submission of DPA9. The proposed development under the current zoning will not likely pose a significant risk to the Aquifer.

3. PHYSICAL STUDY AREA

The Properties are located in Upper Gibsons to the northwest of the central district of the Town. The site visit and a desk top study was conducted to provide information on the Physical Study Area. Various sources were reviewed including the Aquifer Mapping Study conducted by Waterline Resources Inc. (Waterline) in 2013. This report provided a detailed review of the topography, geology and hydrogeology of the Town and surrounding area.

3.1. Topography

The Properties are located on the south slope of Mount Elphinstone (1232 m) at an approximate elevation of 140 m. The topography of the surrounding area continues to gently slope towards Georgia Strait to the south and Howe Sound to the east. The Chaster Creek and Gibsons Creek provide the main surface drainage features in the study area. The Chaster Creek flows to the southwest

and the Gibsons Creek flows to the southeast. The Properties are located approximately equidistant (1 km) to the two creeks. The Properties are located on a relatively flat plateau between the two creeks which appear to have slightly eroded into the topography. This is more pronounced closer to the ocean.

The Property at 1018 Venture Way is generally flat with a slight slope towards the south. Over time gravel has been brought onto the site, compacted and graded. There was no visual evidence of drainage ditches or preferential pathways for surface water to flow within the centre of the Property. There was no visual evidence of surface water ponding on the 1018 Venture Way site, at the time of the visit. In the northwest corner of the Property, along the northern property line a shallow (<0.1 m) depression was observed that may have been used to assist in drainage during rain events.

The Property at 1000 Venture Way has a more pronounced surface grade to the south-southwest. It was reported that this Property was a green field site and had not been used for commercial or industrial purposes. There was visual evidence of a significant volume of wood chips, predominantly on the northern section of the lot. It was reported that the Property had recently been cleared of any trees and brush. The trees were converted to wood chips and placed across the northern section of the lot. A section to the northwest of this lot has been excavated to native hardpan and clean gravel fill was brought onto this area. The fill had been compacted and sloped to the south to assist with any short term drainage. In the remainder of the lot the natural topographic elevation was observed and two minor drainage ditches were observed. Two hay bales and some gravel were placed in the ditches to prevent any erosion from potential heavy precipitation events.

3.2. Geology

The geology of the area consists of Late Jurassic intrusions of quartz diorite and granodiorite. This massif forms the bedrock of Mount Elphinstone. The Bowen Island Bedrock Group overlies the plutonic intrusion near the Town of Gibsons. The northern boundary of this group is located approximately 1 km to the north of the Properties and trends southeast to northwest. The Bowen Island Group is an assemblage of metamorphic, sedimentary and meta volcanic rocks (Figure 3).

The surficial geology of the area is dominated by the Capilano Sediments, which consist of Marine and Glacio-Marine Deposits of varied Gravelly, Sandy, Stoney Clay and a Clay Veneer usually over a Till. (Surficial Geology and Sand and Gravel Deposits of the Sunshine Coast, Powell River and Campbell River Areas 1977, Bulletin 65, BC Ministry and Mines and Petroleum Resources). A detailed Aquifer Mapping Study was completed by Waterline Resources Inc. in 2013. This

Report stated that the surficial geology comprised of the Capilano Alluvium, which comprised of coarse sand and gravels, associated with the most recent glacial event.

Beneath the surficial geology the primary lithology is the Vashon Drift. This unit is subdivided into two, the Upper a glacio fluvial sand and gravel and the Lower a ground moraine which is mainly comprised of a Till. The Till appears to be more extensive and likely covers the Gibsons Aquifer beneath creating an Aquitard layer. An aquitard is defined as less permeable beds in a stratigraphic sequence. These beds may be permeable enough to transmit water in quantities that are significant in the study of regional groundwater flow but their permeability is not sufficient to allow the completion of production wells (Freeze and Cherry). The borehole log for WL10-01 which is located close to the Properties indicates that the Aquitard is approximately 75 m thick in this area. The Aquitard consists of a hard packed silt, clay, sand and gravel. It forms a concrete like mixture of consolidated pebbles in a sandy matrix. In Upper Gibsons this unit impedes the migration of groundwater from surface to the aquifer beneath. In Lower Gibsons it forms a cap over the Aquifer that contains the water pressure resulting in artesian conditions in the lower portion of the Aquifer. The uniformity of this Aquitard across the entire Aquifer is not fully known at this time. The Waterline study indicated that there may be areas where the Till is thinner and may be less of a permeable barrier. It was also reported that there may be vertical recharge from the creeks into the stratigraphy below associated with potential erosion of the streams flowing through the Till horizon.

The Vashon Till is underlain by the Pre-Vashon sediments which are comprised of gravel, sand and silt. This unit is defined as the Gibsons Aquifer. The basal deposits are laminated and composed of stony clays which are believed to rest upon the early Cretaceous Granodioritic bedrock. The Pre-Vashon deposits have only been mapped along the Langdale Creek valley to the east of the Town of Gibsons and otherwise are only recorded in well logs. The Waterline report indicates that beneath Upper Gibsons the Aquifer is partially saturated and beneath Lower Gibsons it is confined. The vertical thickness of the Pre-Vashon sediments was not reported, but the borehole logs from WL10-01 and WL10-02 indicate that it is at least the Aquifer is approximately 40 m thick in Upper Gibsons and is overlain by approximately 75 m thick Aquitard. As the geology progresses towards the south, Borehole (WL10-02) indicates that the surficial sand and gravel increases and the Aquitard Till was identified between 30 to 50 m below surface. Bedrock was not encountered in this borehole, but the Aquifer was proven to a depth of 157 m. Frontier Geoscience Inc. conducted a geophysical survey and produced a bedrock contour map. The data identifies a northwesterly trending bedrock valley that attains depths as much as 50 m below

sea level. The north valley wall is very steep in the east central survey area, becoming more gradually varying to the west.

3.3. Hydrogeology

A detailed report was produced by Waterline and used for the basis of this summary. The Town of Gibsons is in a unique position where it uses an untreated water source for the potable supply for approximately 73 % of its population. The remaining 27 % of the population, located in Upper Gibsons are supplied water by the Sunshine Coast Regional District (SCRD) from the Chapman Creek watershed located approximately 15 km to the northwest of the Town of Gibsons. As discussed above the most significant hydrogeological feature is the Pre-Vashon Aquifer. The Aquifer is confined by a Till Aquitard of approximately 30 to 75 m thickness. However, it was reported that the thickness may vary within the study area. It was suggested that there could be a component of recharge through the Aquitard in zones where it may have been eroded associated with the creeks running through the area. The Aquifer is partially saturated in Upper Gibsons and as you progress towards Lower Gibsons the Aquifer becomes saturated and even under artesian conditions near to the coast. The Aquifer also contains a fresh/saltwater interface close to the boundary with Howe Sound. This is significant factor in the management of the potable water extraction. The Waterline report included significant study on the characteristics of the Aquifer, such as:

- Mapped Aquifer extent and groundwater flow
- Aquifer Transmissivity and Average Linear Groundwater velocity
- Long Term Groundwater Level Monitoring
- Groundwater surface water interactions
- Assessment of Cross Formational Flow
- Groundwater and Surface water Geochemistry, and
- Hydrogeological Modeling.

The level of detail of the report indicates the value of the Aquifer to the Town of Gibsons. The Town has also implemented a series of measures to protect the water quality and prevent possible activities that may impact the Aquifer.

The Town has four extraction wells that are located in the Lower and Middle Gibsons (Figure 2). Town well #3 is the primary supply well. Town well #2 is maintained and used as a back up only. Town well #1 is the oldest well (greater than 45 years) and has likely become inefficient. Town wells #1 and #4 are under artesian conditions and when the extraction pumps are not in operation the overflow is diverted to the Towns sewer system. The report indicates that there is significant storage in the Aquifer and it has the capacity to supply the Town in the

future. The effects of population growth and climate change were also considered and even with demand increases the Aquifer has the capacity to meet these requirements.

The Waterline Report reviewed the Aquifer recharge and identified three sources. These were:

- Mountain Block Recharge
- Creek Recharge
- Recharge through windows in the Capilano Alluvium.

The recharge is a difficult parameter to measure and varies considerable across the study area. The assessment of the Aquifer recharge was completed by developing an understanding of the physical environment and using geochemical tracers to assist in identifying the likely source and pathway of water entering the Aquifer. Waterline in conjunction with UBC concluded that the Mountain Block recharge contributes potentially 55 % of the recharge to the deep part of the Aquifer. It was thought that the recharge occurred via faults and fractures in the bedrock but there was little data available.

The creeks within the study area may also provide recharge to the Aquifer. They appear to be a greater significance where the Vashon Till/Basal Capilano Aquitard cover is thin or has been eroded away. The report did not quantify the volume of recharge into the Aquifer and it assumed that the creeks do provide a pathway to the aquifer.

The third source of recharge to the Aquifer was through “windows” in the upper Aquitard. This was most likely occurring in the northern part of upper Gibsons. Likely associated with potential erosion of the upper Till near the base of Mount Elphinstone. It was also reported that there could be a fault zone in this area which may provide some pathway for recharge. Some gravel deposits are also located in this area and were reported to be well drained. This could result in direct recharge from precipitation, snow melt and the mountain block which would likely be relatively rapid. This is consistent with the groundwater age determinations indicating that groundwater in the shallow part of the Aquifer is generally <10 years. The groundwater in the lower part of the Aquifer contained groundwater with an apparent age of approximately 86 years. This was attributed that the recharge in the lower part of the Aquifer was from the mountain blocks fissures and fractures.

With respect to the physical conditions immediately surrounding the Properties, they are located in Upper Gibsons and the geology beneath them consists of a thin veneer of the Capilano sediments which is underlain by approximately 75 m

of the Vashon Till (Aquitard). The Properties are located approximately 1.7 km from the Towns extraction wells and are located almost equidistance, between the two creeks. The local area surrounding the Properties did not indicate any erosional features which may promote vertical migration of surface water.

4. SUMMARY OF THE POTENTIAL RISK TO THE ENVIRONMENT

ENTECH has reviewed the physical setting of the Properties and the Historic and Current uses. There was no indication of the land use at 1000 Venture Way posing a potential risk to the underlying Aquifer. The current operation of the Gibsons Recycling Depot appears to be well managed and relatively clean. At present the Recycling Depot does not accept high risk materials such as hazardous wastes or oils. The facility does accept paints stored in totes with lids to prevent precipitation ingress. They are processed in a purpose specific area and volumes encountered did not appear to be high. There was a small spill observed near some of the Bob Cat equipment storage, next to the Office. It was not know if this was maintenance related and it is recommended that this be cleaned up and be included in the spill response of the facility.

Other small amounts of debris were observed during the site visit and these were typical of a recycling operation and likely will be included in the general running or routine clean up. In general the facility did appear to be well maintained and the staff at the facility did appear to be aware of potential impacts to the environment and adequately prepared to mitigate any spills etc.

It was noted that historically the facility did accept oils and other wastes such as drywall. The drywall may have contained contaminants but these dry materials when shipped off site would not pose a significant risk to the Aquifer. There was limited information on the historic oil collection and storage. However, it was reported that when this waste stream was removed from the facility approximately 0.3 m depth of material was excavated and removed from the facility. This material was disposed of at a licensed facility, approximately 4 years ago. No monitoring data was available for this remediation event. It is likely that any impacted soil was related to surface spills and was removed during the decommissioning of this waste stream. During the redevelopment of the property the owner will be cognizant of the historical activities in this area and if required they will remediate any soil. The remainder of the Property may also contain a small volume of waste materials such as metals, glass, plastics etc. at or near the surface. These will be removed at the time of redevelopment. They do not pose a significant risk to the Aquifer and will be included in best management practices going forward.

ENTECHs review of the Properties operation and physical location do not appear to be a significant risk to the underlying Aquifer based on the information reviewed to date.

5. LOCATION OF ABOVE OR BELOWGROUND STORAGE TANKS

There were no visible AST or underground storage tanks (USTs) located at the Properties during the Site visit. Historically a waste oil AST was located at the Property. It was removed approximately 4 years ago and approximately 0.3 m of soil below the AST was excavated and transported to a licensed facility (according to the facilities operational manager). Given ENTECHs review of the proposed development plans there was no indication of liquid storage in significant volumes that would require an UST.

6. POTENTIAL CONTAMINATION OF WELLS

A Well Head Protection Area Study has already been completed for the Properties. This report indicated that three wells were located within 300 m of the Properties. One monitoring well (Tag Number 14626) is registered as a Private well and it was constructed in 1956. The well record indicates that the total depth was approximately 10 m and within a zone of grey clay. It also indicates that the well would go dry in low precipitation summers. It is unlikely that this well is used for potable consumption. The BC Ministry of the Environment well records database does contain another record associated with this Tag Number. However, this well is located in the Naikoon Provincial Park Headquarters on Graham Island in the Haida Gwaii. Therefore, it is believed that this well is actually referenced as 53077 in the BC well records data base.

A second well (Tag Number 5489) was located to the west of the Properties, the well information was limited but it appears it was also drilled to a depth of approximately 10 m. There was no information on the date the well was drilled, but a field survey completed in 1967 indicated that it had caved in.

The third well identified within 300 m of the Properties is monitoring well MW10-01 drilled by Waterline as part of their groundwater study. This well intersected the Aquifer and is used to monitor the groundwater elevation and groundwater quality. It is not used for potable water extraction.

Registering of wells was voluntary until February 29, 2016 and therefore the records may not be complete.

7. SPILL RESPONSE AND CONTINGENCY PLAN

The Recycling Depot does have a spill response and contingency plan for its operation. Due to the low volume of liquids associated with the current operation the risks associated for potential impact will be low. However, current best practices are recommended for any use of liquids on the Properties associated with the maintenance and operation of the facility.

During the construction phase Shazach Holdings Inc. will develop a spill response and contingency plan. The risk of impact to the Aquifer is assumed to be low during this phase due to the small volumes of hazardous liquids associated with the construction. However, if hazardous materials are brought onto the Site additional measure may have to be incorporated. It is unlikely that significant volumes of hazardous materials will be involved in the development of the properties. If solid hazardous materials are required the construction of an impermeable barrier beneath the storage area would be advisable and coverage when not in use. If significant volumes of hazardous liquids are required a separate storage would be advisable. This would have secondary containment and a roof structure to prevent the precipitation entering the containment. It is also recommended that any machinery on site be in good working order without leaks or if maintenance is required it should be performed on an impermeable barrier.

8. SITE SPECIFIC GROUNDWATER PROTECTION

Due to the relevance of the Gibsons Aquifer beneath the Properties additional measures may be incorporated into the development of the site. These measures will likely be standard practice within Gibsons, compared to construction activities in other areas. The typical best practices for construction in this area will likely be sufficient. However, given the significance of the Aquifer the project manager and any subtrades need to have an understanding to the environmental implications of the construction methods. The general construction activities related to the development of the Properties will likely pose a low risk to the Aquifer. Best management practices should be maintained for the risk associated with the temporary storage of chemicals or hazardous liquids if they are brought onto the site.

For example if significant volumes of concrete are installed within a consistently saturated horizon any groundwater removed from excavations related to basements may have the pH monitored before release. Given the surficial soil conditions and relatively shallow foundations it is not anticipated that significant volumes of groundwater will be created. However, if during heavy precipitation events any excavations require dewatering then field parameters such as (pH

and TSS) should be monitored prior to release. This will prevent any significant volumes of water flowing across the site creating erosion or effecting any vertical groundwater percolation.

9. SITE SPECIFIC GROUNDWATER MONITORING PROGRAM

Due to the low risk during the construction and future land use, and thickness of the Aquitard beneath the Properties the installation of a monitoring network would not be of any benefit.

10. STORMWATER MANAGEMENT

A significant proportion of the requirements under Section 16.10 for stormwater management has been incorporated into the engineering design of the development. This section of the report will deal with environmental aspects of the stormwater management plan.

No watercourses were observed on the Properties during the Site visit. Therefore, there is no additional requirement for specific methods to preserve riparian channels are required. The site development caused a temporary drainage ditch to be generated and this feature should be included within a water management plan. During the development phase of the building construction, especially during the wet seasons additional water management may maybe required. This could be associated with the pumping out of foundation excavations etc. or surface run off from impermeable areas such as roofs, concrete flooring etc. If these activities are conducted in the dry seasons or any excavations are relatively shallow, then no additional management will be required. Given that the proposed design does not include any significant excavations the risk associated with these activities is likely to be low.

In the unlikely event of the need to pump significant volumes of water a temporary holding pond could be constructed to prevent any significant increase in precipitation runoff and subsequent surficial erosion on the remainder of the site. If any excavation and dewatering is conducted in the dry seasons or that the soil conditions contain low permeable and significant ingress of water is not observed then secondary water management will likely not be required. Due to the relatively shallow slope of the Properties ENTECH does not foresee any specific need to prevent erosion associated with discharge providing significant slope destabilization.

The development plans indicate that any precipitation from roof structures and building perimeters will be collected and directed via an adequately sized pipe

towards an infiltration tank. Once the construction is complete this design will assist in allowing less surface run off into the storm system and increasing the vertical recharge to the subsurface. Additional signage maybe provided at surface drains to try to prevent accidental discharge into the stormwater system. If the construction best management practices and engineering controls that have been provided to Shazach Holdings are followed during construction, it is unlikely that the development will have a negative impact on the Aquifer beneath the Properties. It is recommended that frequent environmental specific site inspections are conducted by the site supervisor to ensure that any spills response or erosion controls are in place and being utilized effectively.

11. CONCLUSIONS

This report was completed at the request of Shazach Holdings Inc. as part of their development permit application for Lots 13 and 37 located on 1000 and 1018 Venture Way, Gibsons BC.

ENTECH conducted a Site Visit on January 9, 2019, conducted interviews with facility staff, reviewed the proposed development plans and conducted a desktop study with respect to the topography, geology and hydrogeology of the Gibsons area.

The current and historical use of the Property at 1000 Venture Way poses a low risk to the Aquifer beneath the site. The current and historical use at the Property at 1018 Venture Way also poses a low risk to the Aquifer. However, as with any review of historical activities complete certainty cannot be obtained. Therefore, incase further information is discovered or evidence of contamination is observed during construction it should be remediated.

The future land use and construction activities also pose a low risk to the Aquifer beneath the Properties. However, due to the importance of the Aquifer to the Town, due care and best management practices should be adhered too during construction.

Once the development has been completed, the Properties will contain a number of small scale commercial units. It is assumed that all future occupancies will meet the current zoning bylaws. Therefore, prior to occupation the individual activities should meet the zoning requirements outlined by the Town of Gibsons. The controls for any individuals creating activities causing a risk to the Aquifer would be the same for other areas of the Gibsons.

12. DISCLAIMER

This study was conducted and reported using generally accepted hydrogeologic and environmental engineering practices and in accordance with Ministry of Environment (MOE) regulations. Any data collected from sample specific locations and hence may vary from actual site conditions, although the reported information is believed to provide a reasonable representation of the environmental conditions within the areas of investigation. ENTECH makes no warranty whatsoever, either expressed or implied, any use of this report is at the sole risk of the user. ENTECH also is not responsible for any actions taken as a result of information presented in this document, by any party including third parties. Information from this report is for the sole use of Mr. Julian Burtnick of Shazach Holdings Inc.

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13. QUALIFICATIONS OF ASSESSOR

ENTECH has been conducting environmental investigations since 1973 and is one of the oldest companies in the business in BC. The investigator for this project was Paul Scott, M.Sc., P.Geo., who has more than 20 years of experience conducting hydrogeological assessments.

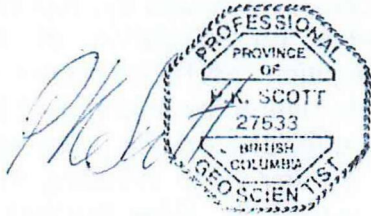
14. INSURANCE COVERAGE

ENTECH carries Professional Liability Insurance for Consultants from 'ENCON.' The coverage is for annual claim aggregates of up to \$5,000,000. The insurance agent is HUB International Insurance Brokers of West Vancouver.

Commercial General Liability Insurance in the amount of \$3,000,000 is also provided through our insurance agent HUB.

Thank you for allowing ENTECH to be of service.

ENTECH Environmental Consultants Ltd.



Paul Scott, M.Sc., P.Geo.
Senior Hydrogeologist



S. F. Sverre, M.Sc. R.Bio.
Senior Biologist

Encl.

15. REFERENCES

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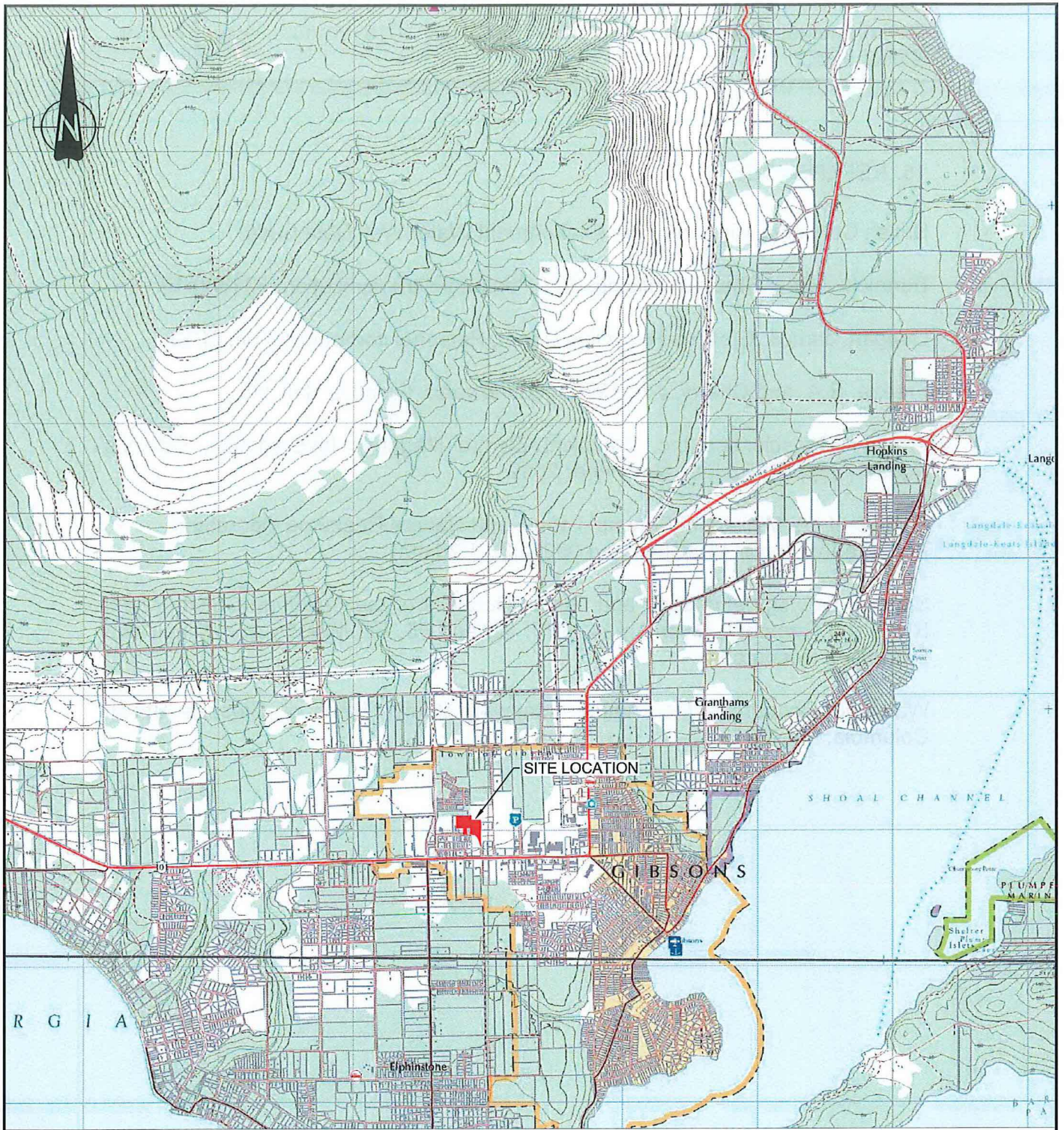
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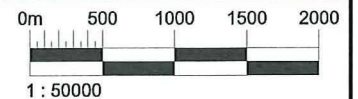
GeoBC of the Ministry of Forests, Lands, and Natural Resource Operations
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Reference: Basemap from GeoBC 92G043 1:20,000 Scale
Map Sheet, Dated 2016.



CLIENT

SHAZACH HOLDINGS INC.

TITLE

SITE LOCATION

PROJECT

ENVIRONMENTAL ASSESSMENT REPORT
1000 AND 1018 VENTURE WAY, GIBSONS, BC

DWN BY:

PS

REV. NO.:

A

DATE:

FEB. 2019

PROJECT No.

P2018.047

CHK'D BY:

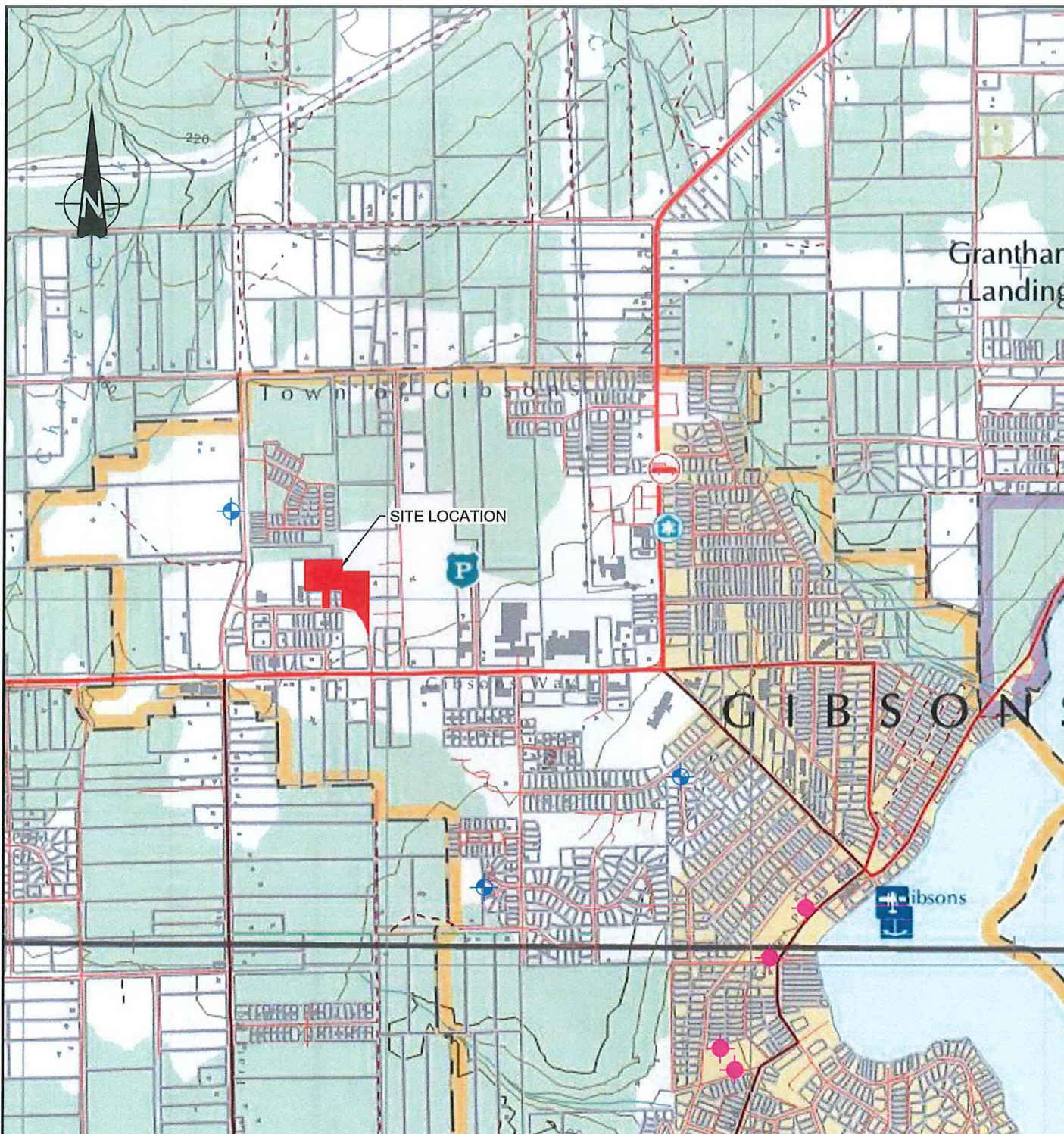
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SCALE:

AS SHOWN

FIGURE No.

FIGURE 1



Reference: Basemap from GeoBC 92G043 1:20,000 Scale Map Sheet, Dated 2016.

0m 100 200 300 400 500 600
1 : 15000

Monitoring Well
Extraction Well



CLIENT

SHAZACH HOLDINGS INC.

TITLE

MONITORING WELL AND EXTRACTION
WELL LOCATIONS

PROJECT

ENVIRONMENTAL ASSESSMENT REPORT
1000 AND 1018 VENTURE WAY, GIBSON'S, BC

DWN BY:

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REV. NO.:

A

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FEB. 2019

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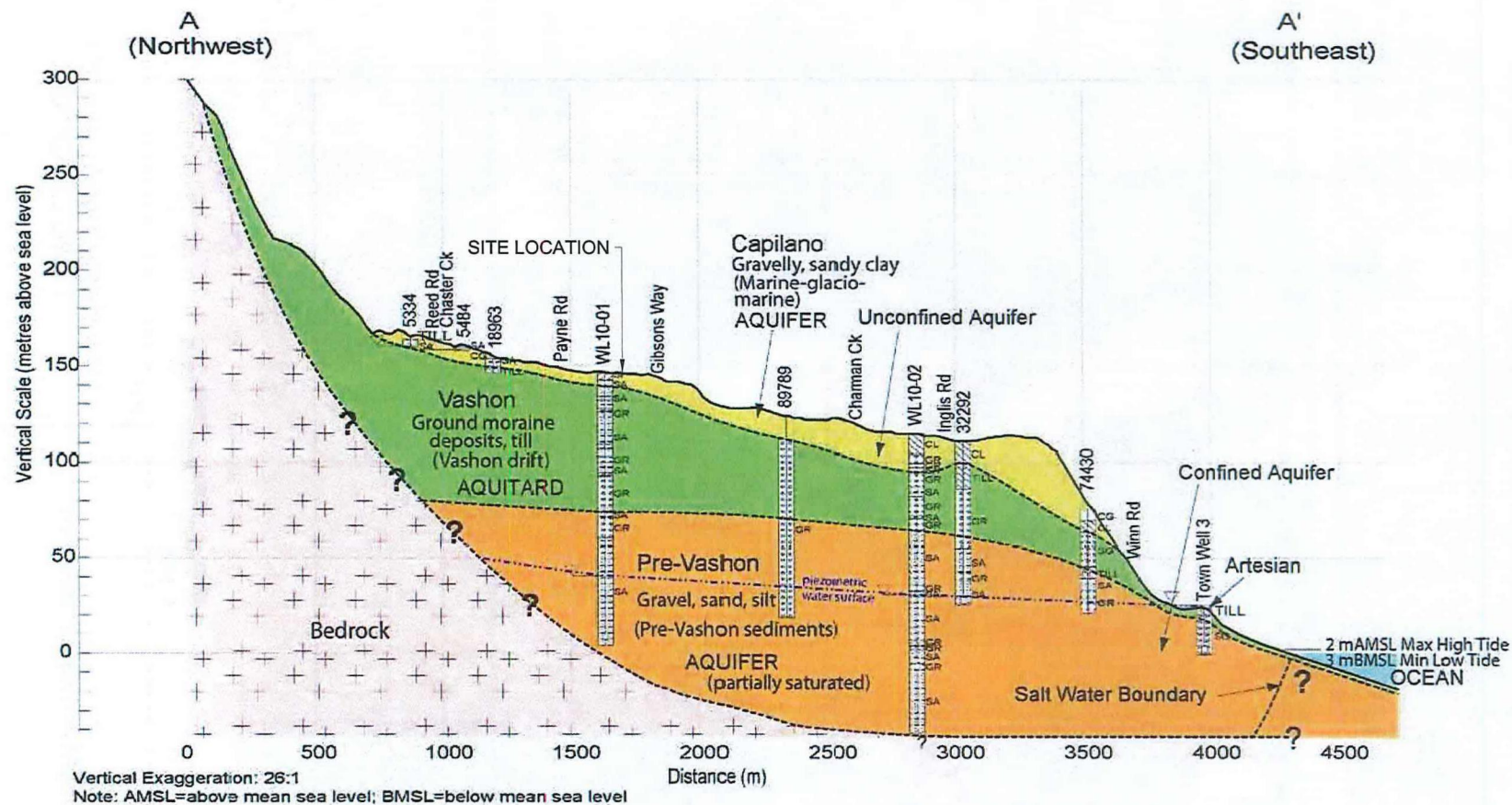
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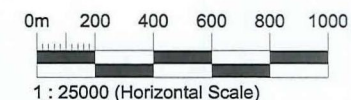
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FIGURE No.

FIGURE 2



Reference: Waterline Resources Inc. Aquifer Mapping Study, 2013.



CLIENT

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DWN BY:

PS

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PS

DATE:

FEB. 2019

SCALE:

AS SHOWN

PROJECT

ENVIRONMENTAL ASSESSMENT REPORT
1000 AND 1018 VENTURE WAY, GIBSONS, BC

TITLE

GEOLOGICAL CROSS SECTION

REV. NO.:

A

PROJECT NO.:

P2018.047

FIGURE No.

FIGURE 3

Appendix A Site Photographs



Picture 1 View to the South of the general public dropping off recycling into the sorting areas



Picture 2. View to the northwest of the paints and electronic drop off location. Note the former waste oil AST was located to the rear of the shipping container.



Picture 3 View to south of the paper compacting area



Picture 4. View of small stain likely associated with the Bob Cat storage



Picture 5 View of the covered electronics and paint receiving area



Picture 6 View of the Paint container totes



Picture 7 View to the northwest of the cleared lot at 1000 Venture Way. The recycling depot is in the background. Note some of the engineered drainage and erosion control measures.



Picture 8 View to the East of the general site preparation.