STAFF REPORT

File No.: NP-RZ-2024.1 (Grimmer)

DATE OF MEETING:	January 30, 2026
TO:	North Pender Island Local Trust Committee
FROM:	Southern Team
COPY:	Robert Kojima, Regional Planning Manager
SUBJECT:	Rezoning Application – Draft amending Bylaw No. 236 and 237 Applicant: Aaron Grimmer – Gulf Excavating Ltd. Location: 4415 Bedwell Harbour Rd.

RECOMMENDATION

1. **That the North Pender Island Local Trust Committee receives draft bylaw No. 236, cited as "North Pender Island Official Community Plan Bylaw No. 171, 2007, Amendment No. 1, 2024", and directs staff to initiate bylaw referrals, subject to submission of an updated site plan from the applicant with accurate proposed area of use map boundaries to include in the draft bylaw.**

2. **That the North Pender Island Local Trust Committee receives draft bylaw No. 237, cited as "North Pender Island Land Use Bylaw No. 224, 2022, Amendment No. 1, 2024", and directs staff to initiate bylaw referrals, subject to submission of an updated site plan from the applicant with accurate proposed area of use map boundaries to include in the draft bylaw.**

REPORT SUMMARY

The purpose of this staff report is to provide an update on rezoning application NP-RZ-2024.1 (Grimmer) including the submission of septic approval and well monitoring construction reports, and to seek direction from the North Pender Island Local Trust Committee (LTC) on draft bylaw No. 236 and No. 237.

The above recommendations are supported as:

- The proposal is reasonable and consistent with policies of the North Pender Island Official Community Plan No. 171 (OCP) and Islands Trust Policy Statement (ITPS);
- The business provides an important community service and there have been no complaints or concerns raised with the operation under the current Temporary Use Permit (TUP);
- Draft maps attached to the bylaws still need to be updated to reflect accurate site boundaries for the proposed industrial use; and,
- Draft Bylaw No. 236 and No. 237 will facilitate First Nations and agency referrals and enable further public input.

BACKGROUND

The property owner and business operator have submitted a rezoning application to permit the continued operation of a concrete batch plant and associated uses on a portion of the subject property which is zoned Rural (R) and does not permit industrial uses.

At the April 5, 2024 meeting, the LTC passed the following resolution:

> **NP-2024-030**
> **It was MOVED and SECONDED,**
> That North Pender Island Local Trust Committee directs staff to proceed with application NP-RZ- 2024.1 (Grimmer) and to prepare draft bylaws.

With progress being made on the submission of required terms of reference items to support the application, staff are now seeking direction on proceeding with Draft Bylaw No. 236 and No. 237, including agency and First Nation referrals.

ANALYSIS

Policy/Regulatory

Islands Trust Policy Statement:

The proposed rezoning to permit a site specific industrial use on a portion of the lot for the operation of a concrete plant does not appear to be contrary or at variance with any Policy Statement directive policies; however a more comprehensive review with a checklist would be provided at consideration of First Reading if the application proceeds to that stage.

Official Community Plan

The property is split designated as Rural (R) and Industrial in the North Pender Island Official Community Plan No. 171, 2007 (OCP).

Rezoning of the portion of the property to permit the concrete plant requires a OCP amendment. If approved, draft Bylaw No. 236 would amend the OCP land use designation map (i.e. Schedule B) to change the designation of the portion of the lot proposed for the concrete plant from Rural to Industrial.

The Industrial Land Use Policies of the OCP need to be considered, including minimizing impacts on neighbouring properties and the environment. Staff are of the view that in general, the proposed uses are consistent with the Industrial Land Use policies of the OCP.

There are no Development Permit Areas designated on the subject property. However, if the amendment proceeds, the industrial zone would become designated as a Commercial and Industrial Form and Character DPA and the applicant would then be required to obtain a development permit consistent with the requirements of DPA 9 in the OCP prior to a building permit being issued for the proposed shop building and any other permitted structures.

Land Use Bylaw

A majority of the subject property is zoned as Rural (R) in the North Pender Island Land Use Bylaw (LUB) No. 224, 2022 (LUB). Rural zoning does not permit the industrial use currently authorized through TUP.

A portion of the parcel is also zoned General Industrial(e), which is a site specific zoning that permits a waste transfer facility commercial composting, and commercial recycling. The operation of this business on the same subject parcel is completely independent from the concrete plant business.

If approved, draft bylaw No. 237 would result in the following uses to be permitted through a site specific zoning map amendment in the portion of the subject lot zoned as General Industrial (g), or GI(g):

a) Contractor Yard;
b) Concrete production facility; and,
c) *Accessory buildings* and *structures*

Concrete production facility is defined in the amending draft bylaw to mean "*the use of the site, buildings and structures for the production, storage and handling of concrete products and associated materials including the handling, treatment and storage of waste materials*".

Draft Bylaw No. 237 also corrects a previous labelling error for site specific zone GI(e), changing it to GI(f) to correct and remove the currently existing double entry of GI(e) in Table 5.10 of the LUB.

Issues and Opportunities

Terms of Reference Requirements

A terms of reference was issued to the applicant in June 2024 (Attachment 3) requiring the following additional information to be submitted:

1) An updated site plan professionally prepared at an appropriate scale.
2) A septic disposal report, prepared by a registered onsite wastewater practitioner, for the septic servicing of the proposed shop building.
3) An updated Environmental Assessment report that includes:

    a. A completed compliance monitoring checklist as shown on Schedule 'E' of NP-TUP-2033.5 to monitor adherence to the current 'Environmental Management Plan' including recommendations for mitigation of any issues identified on the checklist;
    b. A review and update of the current Environmental Management Plan in consideration of any changes proposed through rezoning including recommendations for mitigation of any issues identified. The report must include sections on water management, chemical and petroleum hydrocarbon management, spill response and prevention, and monitoring and reporting; and an updated compliance monitoring checklist that captures any new/altered conditions for use in potential future monitoring.
4) Photographic or other proof that work is completed to install a groundwater monitoring well down gradient from the concrete batch plant and water management area for monitoring of groundwater quality.

The status of each submission is as follows:

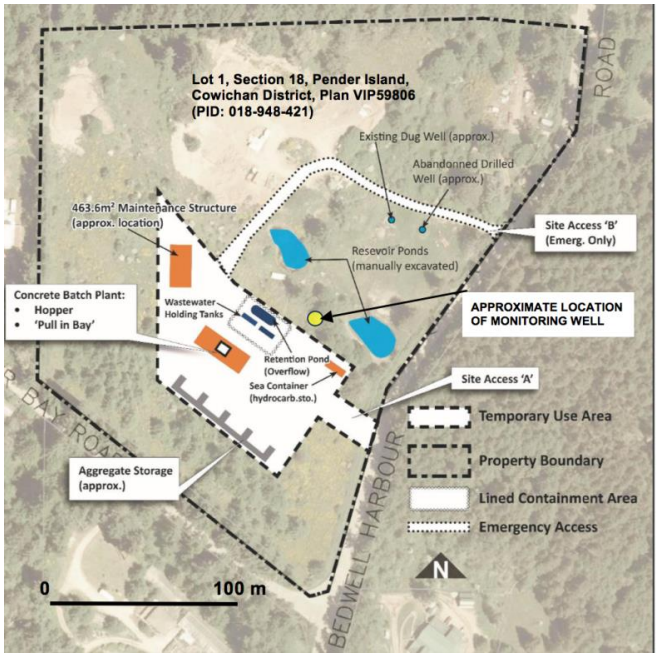
Site Plan – an updated site plan accurately delineating the proposed area of use has still not been submitted. Draft amending bylaw maps will need to be updated with the proposed area of rezoning that captures the

current operating footprint. The site plan that has been submitted does not completely align with this area of use.

Septic Report – the applicant has provided a septic report and record of filing with Island Health (Attachment 4). The report confirms that there is septic capacity at the site to service the proposed office and washroom use.

Environmental Monitoring Report – this report is still outstanding. The applicant indicates it is forthcoming as soon as possible. To date, there have been no concerns or complaints raised during the current TUP period in regards to the operation of the concrete plant. Staff will not proceed with seeking first reading of the draft bylaws until this report is submitted and reviewed by staff to identify any concerns with the current operation.

Water Quality Monitoring Well Report (Attachment 5) - A 6 inch diameter PVC monitoring well was installed on June 30, 2025 to a depth of approximately 5 metres, down gradient from the concrete batch plant as required under the conditions of the current TUP.



Section 219 Covenant

The LTC could require that the applicant grant a s. 219 *Land Title Act* covenant to the LTC for any additional restrictions not included in the LUB amendments. For example, a covenant could include ongoing conditions for water use/quality monitoring and reporting, environmental impact monitoring, or a more detailed site plan that describes very specifically where structures can be located, size etc.

Consultation

Agency Referrals

Staff have identified the following agencies for bylaw referral; the LTC may direct staff to include other agencies:

- CRD – Planning and Protective Services, Building Inspection
- Island Health
- Ministry of Transportation and Transit
- Ministry of Water, Land and Resource Stewardship - Strategic Land Use - Coast Area South Coast Region

- Mayne Island Local Trust Committee
- South Pender Island Local Trust Committee
- Saturna Island Local Trust Committee
- Salt Spring Island Local Trust Committee

First Nation Referrals

Staff will initiate referrals to all identified First Nations consistent with the standardized list maintained by staff.

Statutory Requirements

In accordance with statutory requirements for an OCP amendment, a public hearing is required and it is normal practice to hold a Community Information Meeting (CIM) prior to that. With direction from LTC, these would be scheduled either separately or concurrently after draft bylaws are complete, reviewed and have received at least First Reading.

Public hearing notice would be posted as per statutory and bylaw requirements in advance of a public hearing, including notification of the proposed rezoning to all properties located within 100 m of the subject property.

Rationale for Recommendation

The recommendation on page 1 is supported as:

- The proposal is reasonable and consistent with policies of the North Pender Island Official Community Plan No. 171 (OCP) and Islands Trust Policy Statement (ITPS);
- The business provides an important community service and there have been no complaints or concerns raised with the operation under the current Temporary Use Permit (TUP);
- Draft maps attached to the bylaws still need to be updated to reflect accurate site boundaries for the proposed industrial use; and,
- Draft Bylaw No. 236 and No. 237 will facilitate First Nations and agency referrals and enable further public input.

ALTERNATIVES

The LTC may consider the following alternatives to the staff recommendation:

1. **Request further information**

   The LTC may refer back to staff requesting further information prior to making a decision. Recommended wording for a resolution is as follows:

   That the North Pender Island Local Trust Committee request that staff report back with….

2. **Deny the application**

   The LTC may deny the application. Recommended wording for the resolution is as follows:

   That the North Pender Island Local Trust Committee proceed no further with application NP-RZ-2024.1.

3. **Hold the application in abeyance**

   The LTC may choose to hold the application in abeyance.

4. **Receive for information**

The LTC may receive the report for information

NEXT STEPS

Based on direction from the LTC, staff will initiate the drafting of amending bylaws and issue a TOR to the applicant consistent with the DAI bylaw.

Submitted By:	Brad Smith, Island Planner	January 14, 2026
Concurrence:	Robert Kojima, Regional Planning Manager	January 21, 2026

ATTACHMENTS

1. Draft Bylaw No. 236
2. Draft Bylaw No. 237
3. Terms of Reference DAI Letter, June 2024
4. Septic Filing Report, Jan 2026
5. Monitoring Well report, July 2025

DRAFT

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 236

A BYLAW TO AMEND NORTH PENDER ISLAND OFFICIAL COMMUNITY PLAN
BYLAW NO. 171, 2007

The North Pender Island Local Trust Committee in open meeting assembled enacts as follows:

1. CITATION

This Bylaw may be cited for all purposes as "North Pender Island Official Community Plan Bylaw No. 171, 2007, Amendment No. 1, 2024".

2. SCHEDULES

North Pender Island Official Community Plan Bylaw No. 171, 2007 is amended as shown on Schedule 1, attached to and forming part of this bylaw.

3. SEVERABILITY

If any provision of this Bylaw is for any reason held to be invalid by a decision of any Court of competent jurisdiction, the invalid provision must be severed from the Bylaw and the decision that such provision is invalid must not affect the validity of the remaining provisions of the Bylaw.

READ A FIRST TIME THIS _____ DAY OF _____ 20____

PUBLIC HEARING HELD THIS _____ DAY OF _____ 20____

READ A SECOND TIME THIS _____ DAY OF _____ 20____

READ A THIRD TIME THIS _____ DAY OF _____ 20____

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS
_____ DAY OF _____ 20____

APPROVED BY THE MINISTER OF MUNICPAL AFFAIRS THIS
_____ DAY OF _____ 20____

ADOPTED THIS _____ DAY OF _____ 20____

_____ _____
CHAIR SECRETARY

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 236

SCHEDULE 1

The North Pender Island Official Community Plan Bylaw No. 171, 2007, is amended as follows:

Schedule "B" – Land Use Designation Map, is amended by changing the land use designation of a portion of the land parcel legally described as Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806 from Rural (R) to Industrial (I), as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "B" of Land Use Bylaw No. 70 as are required to effect this change.

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 236

Plan No. 1

Note: Updated map to be inserted when applicant submits updated site plan

DRAFT

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 237

A BYLAW TO AMEND NORTH PENDER ISLAND LAND USE BYLAW NO. 224, 2022

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

1. Citation

   This bylaw may be cited for all purposes as "North Pender Island Land Use Bylaw No. 224, 2022, Amendment No. 1, 2024".

2. North Pender Island Local Trust Committee Bylaw No. 224, cited as "North Pender Island Land Use Bylaw No. 224, 2022," is amended as follows:

   2.1. Part 1 Interpretation 1.1 Definitions is amended by adding a definition of *concrete production facility* such that it reads ""concrete production facility" means the use of the site, *buildings* and *structures* for the production, storage and handling of concrete products and associated materials including the handling, treatment and storage of waste materials"

   2.2. Subsection 5.10(12) Table 5.10 - the second instance of site-specific zone number 5 lettered GI(e) that refers to the Portion of Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806 is amended to renumber site-specific zone 5 to site-specific zone 6 and re-letter site-specific zone GI(e) to site-specific zone GI(f).

   2.3. A new site-specific regulation is added to Table 5.10 in Subsection 5.10(12) following site-specific zone GI(f) that reads:

	Table 5.10		
	1	2	3
	Site-Specific Zone	Location Description	Site-Specific Regulations
7	GI(g)	Portion of Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806	Despite Subsection 5.10(1), the only uses permitted in this location are: *a) Contractor Yard;* *b) Concrete production facility;* and, c) *Accessory buildings* and *structures*

   2.4. Schedule "1" – Zoning Map, is amended by changing the zoning classification of a portion of Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806 from General Industrial e (GI(e)), to General Industrial f (GI(f)), as shown on Plan No. 1 attached to and forming part of this bylaw, and by making such alterations to Schedule "1" of Bylaw No. 224 as are required to effect this change.

2.5. Schedule "1" – Zoning Map, is amended by changing the zoning classification of a portion of Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806 from Rural to General Industrial g (GI(g)), as shown on Plan No. 2 attached to and forming part of this bylaw, and by making such alterations to Schedule "1" of Bylaw No. 224 as are required to effect this change.

3. SEVERABILITY

If any provision of this Bylaw is for any reason held to be invalid by a decision of any Court of competent jurisdiction, the invalid provision must be severed from the Bylaw and the decision that such provision is invalid must not affect the validity of the remaining provisions of the Bylaw.

READ A FIRST TIME THIS _____ DAY OF _____ 20____

PUBLIC HEARING HELD THIS _____ DAY OF _____ 20____

READ A SECOND TIME THIS _____ DAY OF _____ 20____

READ A THIRD TIME THIS _____ DAY OF _____ 20____

APPROVED BY THE EXECUTIVE COMMITTEE OF THE ISLANDS TRUST THIS
_____ DAY OF _____ 20____

ADOPTED THIS _____ DAY OF _____ 20____

_____ _____

CHAIR SECRETARY

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 237

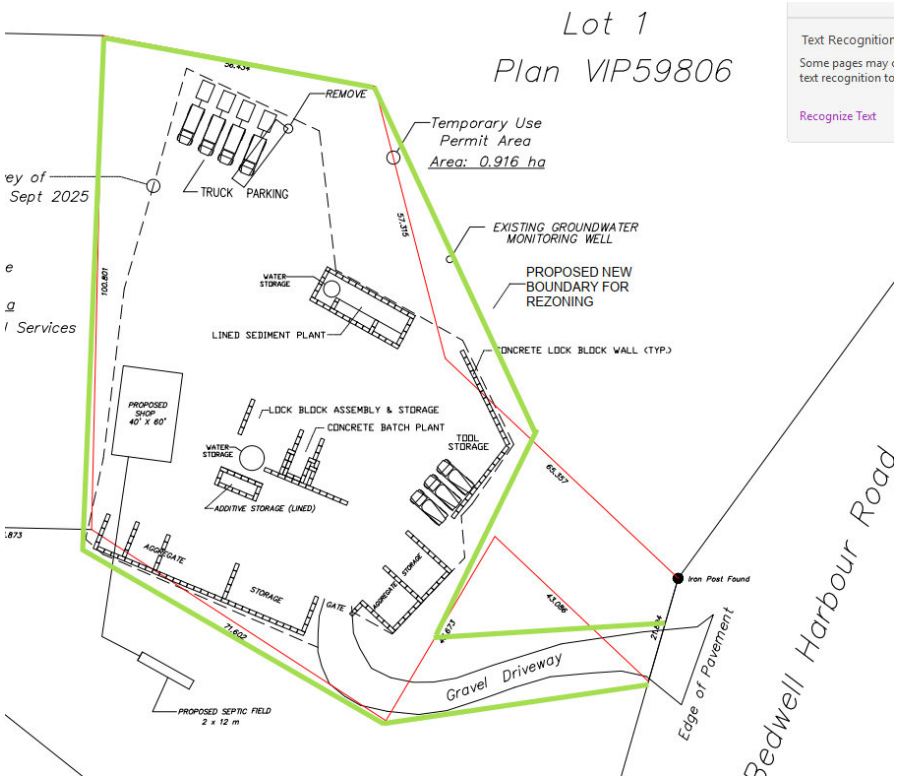
Plan No. 1

INSERT MAP SHOWING CHANGE OF GI(e) to GI(f)

NORTH PENDER ISLAND LOCAL TRUST COMMITTEE
BYLAW NO. 237

Plan No. 2

INSERT MAP SHOWING CHANGE OF RURAL TO GI (G)
NOTE: SITE BOUNDARY STILL NEEDS TO BE CONFRIMED VIA SITE PLAN SUBMISSION



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1.800.663.7867
Email information@islandstrust.bc.ca
Web www.islandstrust.bc.ca

June 19, 2024 File Number: NP-RZ-2024.1 (Grimmer)

Attn: Aaron Grimmer
Via email:

Dear Aaron Grimmer

Re: Rezoning Application NP-RZ-2024.1 (Grimmer) - Terms of Reference - 4415 Bedwell Harbour Road, North Pender Island (PID 018-948-421).

The North Pender Island Local Trust Committee (LTC) received a preliminary report for rezoning application NP-RZ-2024.1 (Grimmer) at the April 5, 2024 LTC meeting. At that meeting, the LTC passed a resolution to proceed with the application, including the drafting of amending bylaws and the issuance of a Terms of Reference (TOR).

Consistent with the North Pender Island Development Approval Information Bylaw No. 134 (DAI Bylaw), the objective of this TOR is to identify and request any anticipated information from the applicant in a timely manner, and as early as possible in the process.

The information received by Islands Trust in your application package includes:

1. Completed application form
2. Letter of Intent
3. Survey plan depicting area proposed for rezoning
4. Preliminary site plan drawings
5. Statement of Title Certificate
6. Site Disclosure Plan
7. Water License approval documentation

Additional information required to proceed with your application includes:

1) A **site plan** professionally prepared at an appropriate scale, based on the existing legal survey, delineating the proposed area for rezoning and all existing and proposed buildings and structures, roads and driveways, topographic features, and any significant sensitive habitat features.

2) **Conditional Water License NO. 504995** has been submitted by the applicant. This license was approved on May 8, 2023 and permits up to a maximum quantity of 3 cubic metres per day for the commercial concrete plant enterprise. As such, at this time, there are no further submission requirements to demonstrate adequate water supply. However, an updated **Water Management Plan** will be required, as further described in the Environmental Assessment section below.

3) A **septic disposal report**, prepared by a registered onsite wastewater practitioner, for the septic servicing of the proposed shop building consistent with section 8.13 of the LUB.

4) An updated **Environmental Assessment** report that includes:

    a. A completed **compliance monitoring checklist** as shown on Schedule 'E' of NP-TUP-2033.5 to monitor adherence to the current 'Environmental Management Plan' including recommendations for mitigation of any issues identified on the checklist;
    b. A review and update of the current **Environmental Management Plan** in consideration of any changes proposed through rezoning including recommendations for mitigation of any issues identified. The report must include sections on water management, chemical and petroleum hydrocarbon management, spill response and prevention, and monitoring and reporting; and an updated compliance monitoring checklist that captures any new/altered conditions for use in potential future monitoring.

5) Photographic or other proof that work is completed to install a **groundwater monitoring well** down gradient from the concrete batch plant and water management area for monitoring of groundwater quality. This is also a condition of NP-TUP-2023.5.

> ***Groundwater Monitoring***
>
> dd) A groundwater monitoring well shall be installed down gradient from the concrete batch plant and water management area within one (1) year of the issuance of this permit to allow for monitoring of groundwater quality resulting from TUP activities.

6) **Development Permit Areas** - There are currently no development permit areas (DPAs) affecting the area proposed for rezoning. However, the applicant should be aware that if this area of the property is rezoned to an Industrial zone, the requirements of **DPA 9 - Commercial and Industrial Form and Character** will then apply and a Development Permit will be required for the commercial operation of the concrete plant. DPA 9 guidelines start on p. 85 of the OCP.

7) ***Land Title Act* s. 219 covenant -** The applicant should be aware that the LTC may seek further conditions of rezoning to be established as part of a s.219 covenant. A s.219 covenant is a charge secured against the title to a property in favour of the LTC to impose an obligation on the property owner, as per the provisions of s.219 of the *Land Title Act.* In this case, a s. 219 covenant could include conditions not captured through rezoning in the LUB such as the inclusion of a detailed site plan, specific construction requirements, environmental monitoring and reporting obligations, and other limits on the proposed land use and development.

8) **Archaeological Material -** The Islands Trust reviews all applications to ensure the preservation and protection of cultural heritage, archaeological sites, and ancestral places. In this case, there is a portion of a registered archaeological site located on the subject property near the proposed area of rezoning, and archaeological potential identified on other areas of the subject property.

    To provide the applicant with awareness regarding potential archaeological sites, including what to do if archaeological materials are encountered during development, staff include the Islands Trust Chance Find Protocol and the provincial Archaeological Branch *Heritage Act* guidelines as attachments to this TOR.

Reporting Requirements

With respect to any reporting requirements listed above, the applicant and/or professional must, in accordance with generally accepted impact assessment methodology, ensure the reports:

(a) identify relevant baseline information and document the nature of the resource or other matter on which the proposed activity or development may have an impact;
(b) identify and describe the potential and likely impacts of the activity or development including any cumulative effects when combined with other projects proposed or under development;
(c) evaluate the impacts in terms of their significance and the extent to which and how they might be mitigated; and
(d) make recommendations as to conditions of approval that may be appropriate to ensure that undesirable impacts are minimized or avoided, and
(e) make recommendations as to measures that may restore or enhance natural functions or features that have been damaged or degraded prior to development or that would be impacted by the proposed development.

This information must be prepared by a professional or professionals in good standing with his/her professional organization within British Columbia, acting within his/her area of expertise, and with demonstrated and pertinent experience and/or training.

Please also note that the Islands Trust reserves the right to require additional information or clarification in response to the project reports. Any additional requirements will be provided in writing and will identify the additional information required in as clear and specific manner as possible.

If you have any questions concerning the application or TOR requirements stated above, please do not hesitate to contact me.

Sincerely,

BSmith

Brad Smith
Island Planner, North Pender Island Local Trust Area

Attachment 1. Islands Trust Chance Find Protocol
Attachment 2. Provincial Archaeological Branch *Heritage Act* guidelines

pc: Robert Kojima, Regional Planning Manager

PROTECTED ARCHAEOLOGICAL SITES IN BRITISH COLUMBIA

Archaeological sites are the physical remains of past human activity. There are over 61,000 known archaeological sites in British Columbia representing thousands of years of human history. The ***Heritage Conservation Act*** **(HCA)** recognizes the historical, cultural, scientific, and educational value of archaeological sites to First Nations, local communities, and the general public. Archaeological sites on both public and private land are protected under the HCA and must not be altered or damaged without a permit issued by the Province of British Columbia's Archaeology Branch.

Receipt of this form indicates that your local government has reviewed the records of the Archaeology Branch to determine whether your proposed activities are likely to impact a protected archaeological site. By identifying overlaps with archaeological sites early in the planning and development process, appropriate and timely steps can be taken that support an efficient development process. You should be aware that there are limitations concerning this review; please read the Provincial disclaimer below.[1]

Your property or project area falls into the selected category:

☑ Direct overlap with protected archaeological site(s): _____

Provincial records indicate that an archaeological site protected under the HCA is recorded within your property or project area.

- Your proposed activities may impact the protected archaeological site.
- You must obtain a site alteration permit issued by the Archaeology Branch before impacting the site.
- Completing an application for an alteration permit usually requires archaeological expertise. It is also possible that further archaeological study will be required before the Archaeology Branch will approve an alteration permit. You may consider engaging an eligible consulting archaeologist (see page 2) to confirm the results of this review and assist you in establishing permit requirements with the Archaeology Branch.
- Disturbance of a protected archaeological site without an alteration permit is a contravention of the HCA and may result in substantial fines and development delays.
- The archaeological site impact management and permit process is summarized on page 2. If you have questions about the process, contact the Archaeology Branch.

☐ Direct overlap with an area of high archaeological potential

Provincial records indicate your property or project area has high potential to contain an archaeological site protected under the HCA, either because the area has been previously assessed for potential or there is a known archaeological site within 50 m that may extend beyond its recorded boundaries.

- Your proposed activities may impact an unrecorded archaeological site. Archaeological sites are protected under the HCA, even if they have not yet been identified and recorded.
- Disturbance of a protected archaeological site without a permit is a contravention of the HCA. Accidental discovery of an unknown archaeological site during development requires activities to be halted and the Archaeology Branch contacted for direction; significant development delays may result while permit requirements are established.
- To avoid the possibility of unauthorized archaeological site impacts and development delays, you may wish to engage an eligible consulting archaeologist (see page 2) to determine in advance whether your activities are likely to impact an unrecorded protected archaeological site.
- The archaeological site impact management and permit process that you will need to follow if an archaeological site is encountered before or during development activities is summarized on page 2. If you have questions about the process, contact the Archaeology Branch.

☐ No identified overlap or low potential for archaeological sites

Provincial records do not indicate known archaeological sites or areas of archaeological potential within your property or project area.

- Provincial records may be incomplete with regard to archaeological potential in your area.
- There is always a possibility for unrecorded archaeological sites to exist. Archaeological sites are protected under the HCA, even if they have not yet been identified and recorded.
- If an archaeological site is encountered, development activities must be immediately halted, and the Archaeology Branch contacted for direction at 250-953-3334 or archaeology@gov.bc.ca.

[1] **Provincial Disclaimer**: The Archaeology Branch of the Province of B.C. is responsible for the administration of the *Heritage Conservation Act*. It is not administered by local governments. In completing this form, local government staff rely on information provided by the Archaeology Branch. Any questions regarding this document should be directed to the Archaeology Branch or to an eligible consulting archaeologist. The information in this document is based on a search of provincial records. There are archaeological sites in B.C. that are unknown and not recorded. The Province makes no representations or warranties with respect to the accuracy or completeness of this information. Persons relying upon it do so at their own risk.

Archaeological Site Impact Management and Permit Process

Archaeological sites are protected under the *Heritage Conservation Act* (HCA) and must not be altered or damaged without a permit issued by the Province of British Columbia's Archaeology Branch. The archaeological site impact management and permit process is summarized below. This summary applies to most situations where small-scale development plans overlap with protected archaeological sites. There are always exceptions that can be explained to you by an archaeologist or the Archaeology Branch as you proceed through the steps. Major development projects may be subject to additional requirements that are beyond the scope of the basic process described below.

If your property or project area contains a protected archaeological site:

You must obtain a s. 12.4 alteration permit issued by the Archaeology Branch before conducting activities that will impact a protected archaeological site. Permit applications are available on the Archaeology Branch website. However, completing a permit application usually requires archaeological expertise. Most applicants will therefore engage a professional archaeologist to review development plans, verify archaeological records, confirm that an alteration permit is required, complete the permit application, and work with the Archaeology Branch on the applicant's behalf to ensure all HCA permit requirements are met.

The archaeologist may conclude, after a desktop review or a preliminary walk-over, that your activities will not impact the archaeological site. The archaeologist should send a letter stating their professional opinion to the Archaeology Branch. You may no longer require an alteration permit to proceed with your activities, provided they don't change.

In other cases, the archaeologist and/or the Archaeology Branch may conclude that an alteration permit cannot be issued because archaeological records contain insufficient information on the nature, extent, integrity, and significance of the archaeological site. It is important that this information be on record before your activities irreparably alter the site. You may therefore be required to furnish additional archaeological site information. It might be possible to obtain the required information via a more in-depth review of the existing archaeological records. Alternatively, you may need to arrange for an archaeological impact assessment (AIA) to collect the necessary data.

If an Archaeological Impact Assessment is recommended:

An AIA is conducted by an archaeologist under an inspection permit. The permit allows the archaeologist to conduct subsurface tests to collect information about the archaeological site. The AIA results in recommendations for managing impacts to the archaeological site. The archaeologist's recommendations and their feasibility should be discussed with you before they are submitted to the Archaeology Branch. Common recommendations include:

- Changing building plans or construction techniques to reduce or avoid archaeological site impacts.
- Proceeding with an alteration permit with or without concurrent archaeological studies, depending on the expected degree of impact to the site.
- No further archaeological study or permits required.

The Archaeology Branch will review the AIA recommendations and determine next steps. **Note that the application process for all Archaeology Branch permits takes a minimum of 8-12 weeks from the date the application is submitted**. Contact an eligible consulting archaeologist for time and cost estimates. The Archaeology Branch does not charge a fee for processing and issuing permits.

Contact an eligible consulting archaeologist:
An eligible consulting archaeologist is in good standing to hold a Heritage Conservation Act permit for archaeological studies in that Culture Area. Ask the archaeologist if they can hold a permit or contact the Archaeology Branch (250-953-3334) to verify an archaeologist's eligibility. Archaeologist may be found through the B.C. Association of Professional Archaeologists (www.bcapa.ca) or business directories.

Contact the B.C. Archaeology Branch:
B.C. Archaeology Branch, Ministry of Forests
Email: archaeology@gov.bc.ca
Telephone: 250-953-3334
Web: www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology/private-commercial-or-development-property

Submit a Data Request Form to inquire about archaeological sites within your property or project area:
www.archdatarequest.nrs.gov.bc.ca

Last Update: September 20, 2023

Chance Finds – Instructions for reporting findings of archaeological artifacts or human remains

The following provides important information from the British Columbia's Ministry of Forests Archaeology Branch[1] on how to respond if you discover an archaeological artifact or human remains on your property.

The most important step is to STOP WORK and not disturb any archaeological artifact or human remains that you may encounter. Then, please follow the instructions provided below depending on the nature of your discovery.

Report finding possible sites or artifacts

If you think you have discovered an archaeological site or artifact:

- Stop work. Do not disturb the site or artifacts. Please contact the B.C. Archaeology Branch via email at archpermitapp@gov.bc.ca
  (or archaeology@gov.bc.ca; 250-953-3334)

Report finding possible human remains

If you think you have discovered human remains:

- Stop work. Do not disturb the remains and please contact the B.C. Archaeology Branch immediately via email at archpermitapp@gov.bc.ca (or archaeology@gov.bc.ca; 250-953-3334)
  - The B.C. Archaeology Branch will notify the BC Coroners Service and the local policing authority. The BC Coroners Service will determine if the human remains are of archaeological significance. The B.C. Archaeology Branch may also arrange for a qualified anthropologist or archaeologist to provide an assessment of the remains and reach out to Local First Nations Additional steps are taken from there.

Heritage Conservation Act obligations

Archaeological sites on both public and private land are protected under the *Heritage Conservation Act*, whether they are known or not, and must not be altered without a permit[2].

Suspected contraventions of the *Heritage Conservation Act* are investigated by Natural Resource Compliance and Enforcement. If you witness or are aware of a Natural Resource Violation, please fill out a Report of Natural Resource Violation form[3] or call 1-877-952-7277, (Option 2) toll-free, or #7277 on a cellphone.

---

[1] https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology/report-a-find
[2] see https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/archaeology/permits
[3] https://forms.gov.bc.ca/industry/report-a-natural-resource-violation

island health

RECORD OF SEWERAGE SYSTEM

Filing # (OFFICE USE ONLY) GV26/005

1. Property Information

■ New Construction ☐ Alteration ☐ Repair ☐ Amendment – Original Filing #

Tax Assessment Roll #

PID # 018-948-421

Legal Description (Plan, Lot, District Lot, Block Numbers)
LOT 1, SECTION 18, PENDER ISLAND, COWICHAN DISTRICT, PLAN VIP59806

Street (Civic) Address or General Location: 4415 Bedwell Harbour Rd.
City: Pender Island

2. Owner Information

Name of Legal Owner: BARBARA JEAN GRIMMER
Mailing Address: [redacted]

Phone: [redacted]
City: Pender Island
Prov: BC
Postal Code: V0N2M1

3. Authorized Person Information

Name of Authorized Person: Christopher Carrier
Mailing Address: 2202 Clam Bay Rd.

Phone: 778-688-9165
City: Pender Island
Prov: BC
Postal Code: V0N2M1

Registration #: ow0691
Email: ecosourceseptic@gmail.com

4. Structure Information

Sewerage System Will Serve:
☐ Single Family Dwelling ■ Other Structure *(specify)* Office ☐ Other Dwelling *(specify)* _____

The sewerage system is designed for an estimated minimum daily domestic sewage flow of *(check one)*
■ Less than or equal to 9,100 litres ☐ More than 9,100 litres but less than 22,700 litres

5. Site Information

Depth of native soil to seasonal high water table or restrictive layer *(cm)* 45CM

Information respecting the type, depth and porosity of the soil is attached ■ Yes ☐ No

GPS Location of System *(decimal degrees)* Latitude 48.79602 Longitude -123.28461

Horizontal Accuracy *(m)* CRD WebMap ■ Recreational GPS ☐ Differential GPS

6. Drinking Water Protection

Will the sewerage system be located less than 30 m from a well? ☐ Yes ■ No

If yes, attach a professional's report and specify the intended distance _____ *(m)*

Distance of proposed sewerage system to the closest body of surface water >30M *(m)*

7. System Information

Sewerage treatment method ■ Type 1 ■ Type 2 ☐ Type 3

8. Legal or Regulatory Considerations

■ Construction of the proposed sewerage system will not conflict with legal instruments registered on the property.

Is this filing submitted as the result of an order from the Health Authority? ☐ Yes *(attach a copy of the order)* ■ No

9. Plot Plan and Specifications

Plot Plan (to scale) and specifications are attached ■ Yes ☐ No

■ The plans and specifications are consistent with Standard Practice

Source of Standard Practice: ■ Ministry of Health Standard Practice Manual ☐ Other

10. Authorized Person's Signature

Signature: Christopher Carrier -- ROWP - ASTTBC
Digitally signed by Christopher Carrier -- ROWP - ASTTBC
Date: 2026.01.07 10:49:30 -08'00'

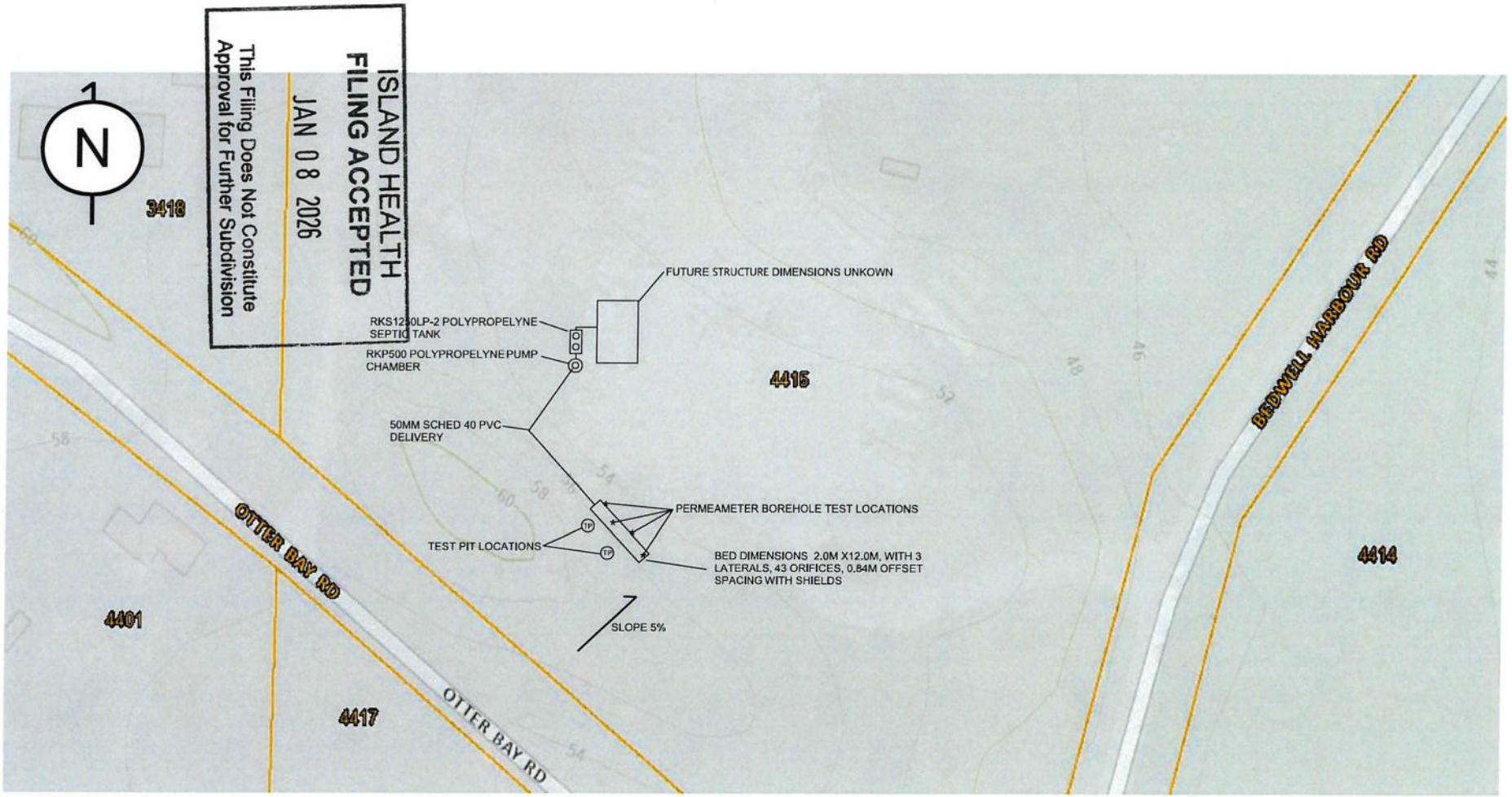
Date: January 7, 2026

OFFICE USE ONLY

Filing Accepted Date Jan 8/26

Receipt Number 2601CMC7566

Revised August 2015



[redacted]

AP SEAL

Plan-VIP59806, Lot-1,
Section-18, District-Cowichan Land
PID 018-948-421

4415 Bedwell Harbour Rd,
Pender Island, BC V0N 2M1

ECO SOURCE SEPTIC
AND
GULF EXCAVATING LTD
PO BOX 85 PENDER ISLAND BC
V0N2M1
office@gulfexcavating.com

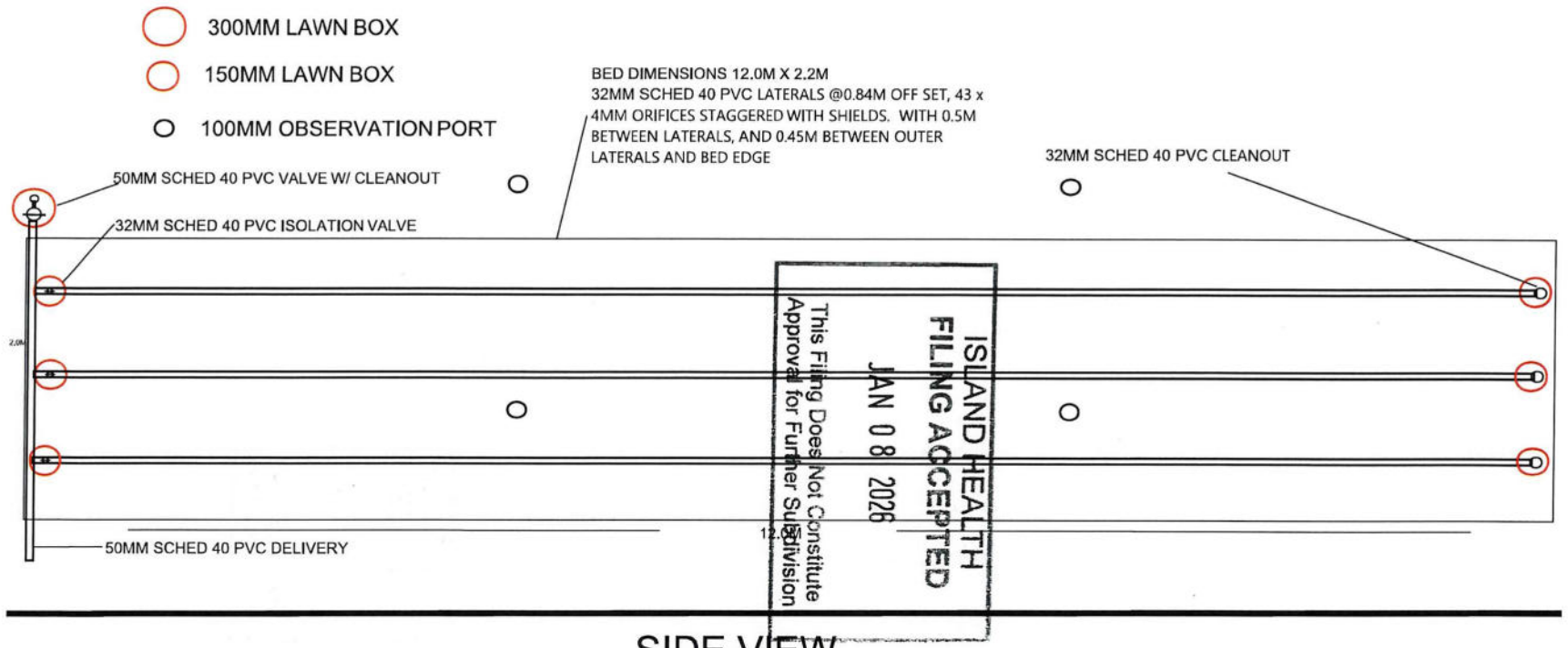
JOB NAME
GULF EX-4415 BEDWELL HARBOUR RD

DRAWING TYPE
SITE PLAN

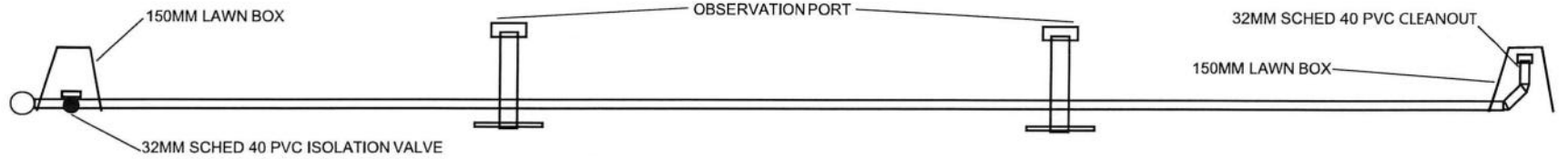
PROPERTY OWNER
BARBARA JOHNSTONE GRIMMER

DATE
OCTOBER 8, 2025

PLAN VIEW



SIDE VIEW



[redacted]

AP SEAL

Plan-VIP59806, Lot-1, Section-18, District-Cowichan Land
PID 018-948-421

4415 Bedwell Harbour Rd, Pender Island, BC V0N 2M1

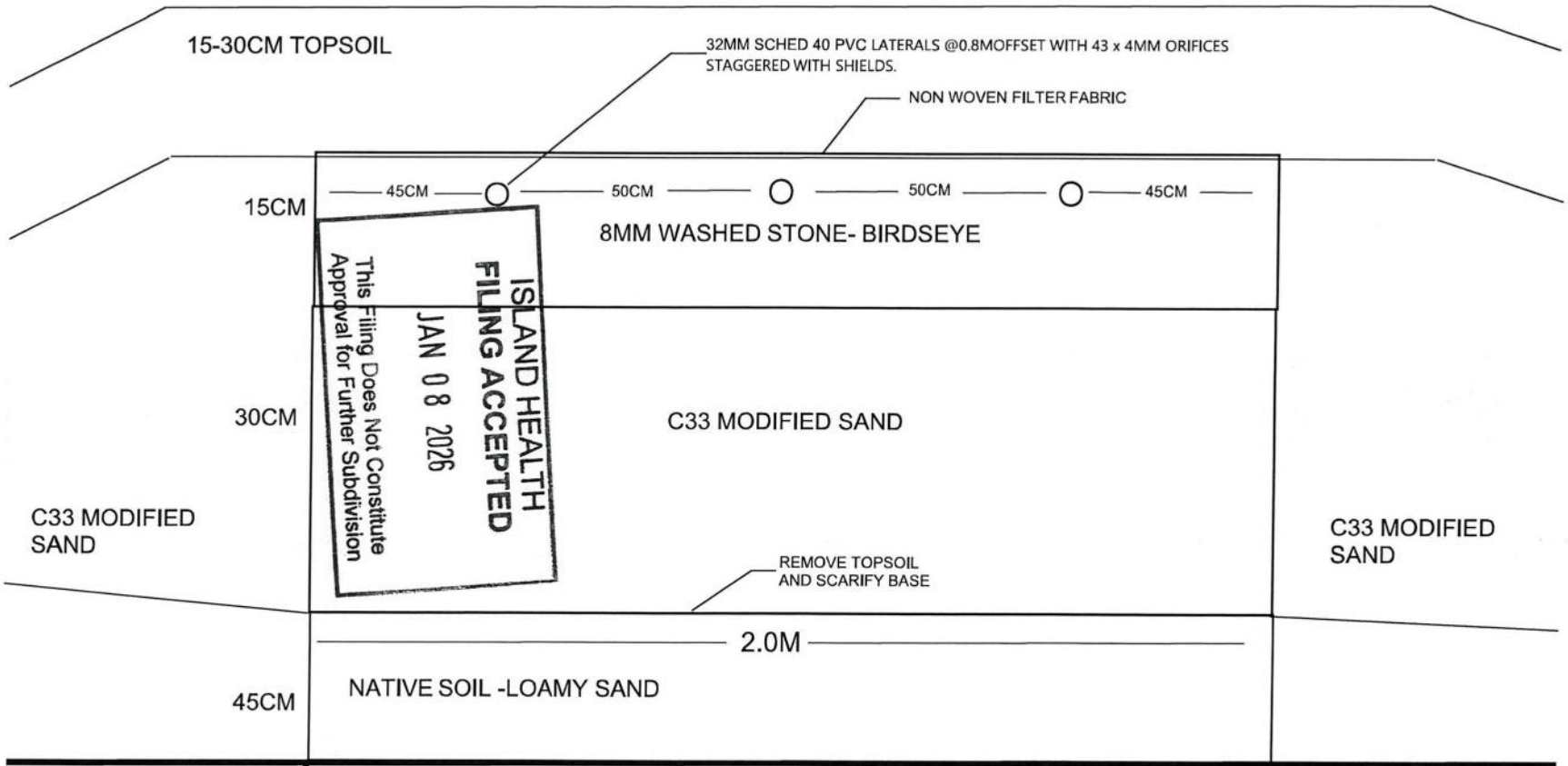
ECO SOURCE SEPTIC
AND
GULF EXCAVATING LTD
PO BOX 85 PENDER ISLAND BC
V0N2M1
office@gulfexcavating.com

JOB NAME
GULF-4415 BEDWELL HARBOUR

DRAWING TYPE
SITE PLAN-FIELD-PROFILE

CLIENT NAME
BARBARA JOHNSTONE-GRIMMER

DATE
OCTOBER 30 2025



[redacted]

Plan-VIP59806, Lot-1, Section-18, District-Cowichan Land
PID 018-948-421

4415 Bedwell Harbour Rd, Pender Island, BC V0N 2M1

GULF EXCAVATING LTD
PO BOX 85 PENDER ISLAND BC
V0N2M1
office@gulfexcavating.com

JOB NAME
GULF-4415 BEDWELL HARBOUR RD

DRAWING TYPE
SAND MOUND - CROSS SECTION

PROPERTY OWNER
BARBARA JOHNSTONE GRIMMER

DATE
OCTOBER 30 , 2025

EcoSource Septic
and
Gulf Excavating Ltd.

PO box 85 Pender Island BC V0N2M1
office@gulfexcavating.com

Health Authority Initial Filing For Construction of Sewerage System:
Site investigation report, record of design and specifications

Date: October 30, 2025

Legal Land Description: Plan-VIP59806, Lot-1, Section-18, District-Cowichan Land
PID 018-948-421

Street Address: 4415 Bedwell Harbour Rd, Pender Island, BC V0N 2M1

GPS: LAT. 48.79602 LONG. -123.28461

Property Owner: Barbara Johnstone Grimmer

Summary of Proposed Works: (also see attached site plan)

New onsite wastewater system to accommodate the continued use of an industrial area currently using portable toilets as means of sanitary controls. The system will be oversized and able to accommodate a bathroom from the neighbouring industrial parcel.

Proposed Wastewater System:

* Daily Design Flow (DDF) 960 L/day
* Type 1 Effluent
* Will install a new 5682L RKS1250LP/2 - 2 chamber polypropylene septic tank, A Polylok effluent filter with check ball will be installed on the outlet.
* New Canwest Tanks 2273L RKP500 pump chamber
* Pressure Distribution with timed dosing using a Shinmaywa effluent pump (3/4HP/115V manual) using a C-Level transducer and Rhombus Simplex control panel
* Pressure dispersal to a sand mound measuring 2.2m x 12.0m with a 0.30m layer of Mound Sand and 0.15m of 8mm pea gravel.

Site Information:

Total parcel size: 56731.4748m
Potable Water Source: Drilled Well

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Topography:
The proposed dispersal area is on contour, with a 5% slope to the bed center line.

General Description:
The proposed dispersal field will be situated at the top of an undisturbed slope to the south of the industrial area, and the septic tank and pump chamber will be located on the border of the two industrial parcels to accommodate shared use.

Horizontal Separation
There are no HS restrictions associated with the proposed dispersal field.

.

[redacted]

Site/Soil Evaluation: (see attached drawings for test pit locations) Native Soil in area of dispersal field:

Test pit #1:

0-7 cm	Dark brown loamy sand with high organic content (topsoil) Moderate Granular structure with friable consistence, moist and with 20% coarse fragments
8-52 cm	Light brown loamy sand, Strong Granular with friable consistence and with 20% course fragments
53 cm	Shale

The limiting condition in test pit #1 is Shale at 49cm

Test pit #2:

0-5 cm	Dark brown loamy sand with high organic content (topsoil) Moderate Granular structure with friable consistence, moist and with 20% coarse fragments
6-64 cm	Light brown loamy sand, Moderate Granular with friable consistence, moist and with 15% course fragments
65 cm	Shale

The limiting condition in test pit #2 is Shale at 65 cm

Hydraulic soil conductivity of the 'B' horizon in KFS is 7980mm/day

Vertical Separation (VS) Design Limit
The VS design limit elevation is selected based on the shallowest limiting condition within the proposed dispersal area, indicated by Test Pit #1

*After topsoil is removed from the dispersal area 45cm of Native Soil remains

45 cm Native Soil + 30cm Mound Sand = 75 cm as constructed VS

Key Constraints and Design Rationale

Constraints

* Sand to 49cm depth with strong structure and friable consistence in the infiltrative area

Mitigating Strategies

Soil allows for Microdosing with 75cm VS which exceeds minimum VS as per table II-17 SPM v3 of 60cm for Loamy Sand

DDF (Daily Design Flow):

DDF is determined using SPM v3 table III-11, Non-residential Average Daily Flow Rate Guide. Under "Open Site (e.g. quarry) without canteen" at 60L per day per person at 16 employees (currently only 8 employees combined between the two industrial parcels.)

16 x 60 = 960 L DDF

HLR (Hydraulic Loading Rate)

The HLR for type 1 will be applied to the mound sand and the loamy sand. The infiltrative surface is size based on an HLR of 40L/day/m2 for type 1 effluent applied to Mound Sand as per SPM table II-23. The basal area is sized based on type 1 effluent applied to Loamy Sand at 30L/day/m2

AIS (Area of Infiltrative Surface) calculation of

960 L DDF / 40L/day/m2 = 24.0m2

Basal AIS calculation of

960 L DDF / 30L/day/m2 = 32.0m2

[redacted]

LLR (Linear Loading Rate) calculation of Minimum System Contour Length (MCL) The minimum system length on contour, based on an LLR of 85L/m for 5 % slope, 45cm depth of Sand with favourable structure category as per SPM v3table II-27 is

960 L DDF / 85 L/m = 11.29 MCL

Configuration of Dispersal System

2.0m x 12.0m x 0.3m Mound Sand with 10cm pea gravel under and 5cm over laterals providing 24.0m2 AIS, meeting the minimum required area.

With 3 Laterals, 12m long, end feed manifold with 0.5m separation between laterals, and 0.45m from outer laterals to bed edge.

Total length of laterals for calculation of orifice spacing:

12.0MCL x 3 Laterals = 36.0m

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Number Of Orifices:

Based on SPM standard (table II-43) of 0.56m2 effective AIS per orifice

24.0m2 AIS / 0.56m2/orifices = 43 orifices

to be divided by 3 laterals ... with 14 orifices per each 12m outer lateral sections, and 15 orifices in the center lateral.

Orifice Spacing:

Total length of laterals / total number of orifices ...

42m / 50 orifices = 0.84m orifice spacing

Dosing Volume:

Soil dose frequency check, to meet SPM Table II-12 'Micro Dosing' dose category: Type 1 effluent applied to 30cm Mound Sand is 28 Doses per Day. As the DDF is low, and Average Daily Flow is used to determine dose volumes, this would result in a dose volume of 17.8L, which is insufficient volume for even distribution. As such, 18 DPD will be used, still strongly reflecting with Table II-12, yet with sufficient volume to attain uniform distribution.

480L ADF / 18DPD = 26.7L dose

Reserve Volume

67% of DDF, 960 L x 0.67 = 643 L

Alarm Reserve volume

50% of DDF, 960 L x 0.5 = 480 L

Transducer Settings

Alarm setting
To provide 50% DDF alarm reserve above alarm on. **49cm**

Pump on setting:
To provide 67% DDF reserve volume **25cm**

Total Dynamic Head (TDH) and pump sizing

Required pump flow based on 4.0mm orifices is 2.44LPM (from Module 109A - Friction Loss Tables -Table A.1.B2 per WACOWMA) for desired 1.5m squirt height.

(43 lateral orifices + 1 pump chamber orifice) x 2.44 LPM/orifice = 107.4 LPM

Total Dynamic Head:

The friction loss is determined per Module 109A Friction Loss Table A.1.C.2, and Table A.1.C.6 per WACOWMA

Friction loss of 0.523m per 30.5m length sched 40 PVC x total length of equivalent pipe for friction loss
Lift Head is approximately = 5m
51mm force main allowance, 100m/30.5m = 3.28m
51mm fitting allowance, 25.5m/30.5m= 0.84m
Orifice pressure loss total = 0.3m
= 9.42m TDH

[redacted]

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Pump required for 107LPM to 9.42m head based on manufacturers pump curve is a Shinmaywa 3/4 hp effluent pump.

Duty point is approximately equivalent to minimum required performance, 107LPM, resulting in squirt height of approximately 1.5 m from lateral elevation.

Construction Specifications: (also see attached drawings)

Sand Mound

* Minimum Bed Dimensions are 2.0m x 12.0m ... 3 laterals, an end feed manifold, 0.5m between laterals, with outer laterals 0.45m from bed edge.
* Excavate bed to design soil level and add 0.3m layer of Mound Sand.

Cover with 10 cm depth of 8mm birdseye.

Install four 100mm PVC infiltrative surface observation ports within the bed

* One port at either end of the bed, approximately 6m from the end. *
* Install two ports in the receiving area in the same orientation as above.
* Place the bottom of the ports at a depth approximately 5 cm below the infiltrative surface.
* Drill several holes at bottom of solid PVC pipe to a height of 15cm above infiltrative surface.

Install the dispersal piping network:

* With 3 - 32mm diameter laterals, 12.0m long, and an end feed manifold.
* Manifold requires vertical 51mm cleanout at the distal end of the manifold ... using 2 x 45-degree fittings with a short stub to bring the c/o threaded cap to slightly below surface grade, with access provided by 15cm lawn box.
* Install 3 - 32mm diameter ball valves at the manifold for isolation of each lateral section. For each valve, provide an irrigation box allowing hand access to the valves.
* At the far end of each lateral, install vertical cleanouts, using 2 - 45-degree elbows or long radius sweeps, extended to about 5 cm below finished grade, with lawn boxes for access.
* Ensure 0.5m separation between laterals
* Lowest orifice on each lateral to be positioned 180 degrees opposed to the rest to drain the laterals to prevent freezing.
* Laterals drilled with 4mm holes at 12 o'clock orientation, 0.84m spacing between orifices, with the first and last (staggered between laterals 1 and 2) orifice at approximately 40 cm spacing from either end of each lateral section ... ensure exactly 14 orifices per outer lateral section, and 15 in the center lateral, total of 43 orifices in the dispersal area.
* Install dispersal piping as level as possible (level within 2.5cm) to minimize draining volume and to ensure timely pressurization
* Include an orifice shield for every orifice used

* Place minimum 5 cm 8mm round birdseye over the laterals and orifice shields
* Cover gravel with hydrophilic geotextile fabric.
* Place cover soil
* Cover the fabric with 15cm - 30cm soil
* Achieve a well graded, sloped surface with positive drainage and no potential ponding on surface.

Aggregates:

* Birdseye gravel must be <8mm round and thoroughly washed with minimal silt
* Cover soil should be "topsoil" or lawn sand suited for grass growth.
* Bedding material under the tanks must be free of coarse fragments larger than 25mm. Care must be taken to avoid large rock in the native soil from contacting the tanks.

Pipe

* 100mm sewer connections must be CSA PVC drain line or better.
* Ensure minimum 1% fall from sewer service to septic tank and to pump chamber
* Force main and manifold to be 50mm PVC sched 40
* Laterals to be 32mm PVC sched 40

[redacted]

Septic tank

* Install a new RKS1250LP/2 - 2 chamber polypropylene septic tank
* Select the excavation to ensure at least 1% fall from the outlet of the tank AND with consideration of riser heights to ensure the lids are flush with the desired finished grade.
* In the new tank, install an outflow effluent filter with handle extended to within 15 cm of access lid.

Pump Chamber

* New Canwest Tanks RKP500 pump chamber
* Select an excavation elevation to ensure at least 1% fall from the outlet of the new septic tank AND in consideration of riser height to ensure lids are flush with desired finished grade.

* **Pump, Alarm, Transducer Settings**
* Shinmaywa 3/4 hp effluent pump
* Extend the vertical pump discharge pipes upwards into the access riser to bring the valves and unions within 15cm below the lid height, elbowed back down to the discharge point.
* Include 50mm valve union and check valve at the top of the force main within the pump chamber (on the horizontal leg no more than 15 cm below the lid height) to allow easy removal of pump.
* Be sure to include a pump lifting rope.
* Drill a 4mm hole in the vertical pipe to act as an air removal orifice
* Install a transducer
* Set transducer levels as follows

Redundant off	17cm
Timer on	25cm
Alarm on	49cm
Timer override	50cm

Electrical

* All electrical work is to be performed by a qualified electrician, as per applicable codes.
* Provide two separate electrical circuits, one for the alarm (115V), and a second circuit for the pump (115V). This will prevent power failure to the control alarm if there is a pump failure or other condition that trips the pump power breaker.
* A junction box must be installed at surface within 30 cm of pump chamber access lid.
* The wiring from the pump chamber to the junction box must be encased in conduit with adequate size to enable easy replacement of transducer wiring or pump power supply.
* Any conduit used for wiring from the pump chamber to the junction box must be sealed to prevent corrosive gases and moisture passing from the pump chamber.
* There must be no electrical connections or junctions inside the pump chamber.

Miscellaneous Specifications

* Prevent excessive disturbance, compaction and smearing of the original soil in the dispersal area, do not back trucks onto area, scarify to a shallow depth only 10 cm max. Take care to protect the receiving down grade area of the dispersal area from compaction. Do not install in wet conditions.
* Install all tanks level, with consistent support, with no coarse fragments larger than 25mm.
* All piping is to be adequately bedded with 12mm minus (hydro sand). compacted thoroughly to prevent distortion or misalignment by settling.
* Flush all lines prior to performing squirt test, start with the force main, then each lateral individually. * Perform squirt test with all laterals open and confirm minimum 1.5 m squirt height from all laterals.
* Ensure owner promptly or at soonest practical opportunity seeds the dispersal area with grass or similar shallow rooted cover.
* Ensure The dispersal area and tanks are protected from traffic, heavy loads, surface and subsurface flows of water. This may require fencing, rock barriers or other suitable means to restrict access, and may require drainage systems such as swales and/or interceptor drains.

Declaration

These plans and specifications are consistent with standard practice with regard to the Sewerage System Regulation and the Sewerage Systems Standard Practices Manual v3(2015) of the B.C. Ministry of Health. I have conducted a site evaluation and exercised due diligence.

[redacted]

Prepared by Aaron Grimmer

[redacted]

Approved by

[redacted]

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JAN 08 2026

This Filing Does Not Constitute Approval for Further Subdivision

Hy-Geo Consulting
www.hy-geo.com
Tel: (250) 744-7859 Victoria, British Columbia Canada V8Z 2M9

File: 2501141

July 14, 2025

Barbara Johnstone and Aaron Grimmer
Pender Island BC

Attention: Barbara Johnstone and Aaron Grimmer

Re: Installation of Groundwater Monitoring Well at Concrete Plant, 4415 Bedwell Harbour Road, Pender Island

As requested, Hy-Geo Consulting has prepared the following report on the recent installation of a groundwater monitoring well located down gradient from the concrete batch plant. The installation of a monitoring well was a requirement for property under the Temporary Use Permit, NP-TUP-2023.5 (Grimmer) issued by the North Pender Island Local Trust Committee (2023).

Site Location

The monitoring well was constructed on June 30, 2025 on a portion of Lot 1, Section 18, Pender Island, Cowichan District, Plan VIP59806 (PID: 018-948-421) as shown in Figure 1. The location and proposed depth of the well was previously discussed with Brad Smith, Islands Trust Planner on January 29, 2025.

Monitor Well Construction

The monitoring well was constructed by Gulf Excavating Ltd., to a depth of 15 feet (4.6 m) utilizing an excavator (Photo 1, Appendix A). The excavation encountered 1 foot of organic topsoil underlain by 2 feet of buff stiff clay followed by 12 feet of grey clay and shale (Photos 2 and 3, Appendix A). Groundwater was observed below a depth of 11 feet (3.4 m) on some of the fracture surfaces in the shale. After completing the excavation to a depth of 15 feet (4.6 m), a 20 foot (6.1 m) length of 6 inch diameter PVC thermoplastic casing with the bottom 5 feet (1.5 m) slotted was set in the excavation (Photo 4, Appendix A). Water as observed coming at the bottom of the excavation (Photo 5, Appendix A). Clean gravel with sand (Photo 6, Appendix A), was backfilled around the slotted portion of the casing to within 8 feet of the ground surface and the remainder of the excavation was initially filled in with the excavated materials to within 3.5 feet (1.1 m) of the ground surface. A temporary 8 inch diameter surface casing 4 feet (1.2 m) in length was then set over the 6 inch diameter well casing and the annual space between the casings filled with medium-sized bentonite pellets (Photo 7, Appendix A). The area around the 8 inch diameter casing was

then backfilled in stages with more of the excavated materials while the 8 inch diameter casing was being pulled back until the excavation was completely filled leaving the monitor well casing sticking up 25 inches above the ground surface. Figure 2 shows the design of the monitor well as completed prior to pulling the temporary surface casing. Photo 8, Appendix A, shows the temporary surface casing being removed and Photo 9, Appendix A shows the completed monitor well with 25 inch stick-up.

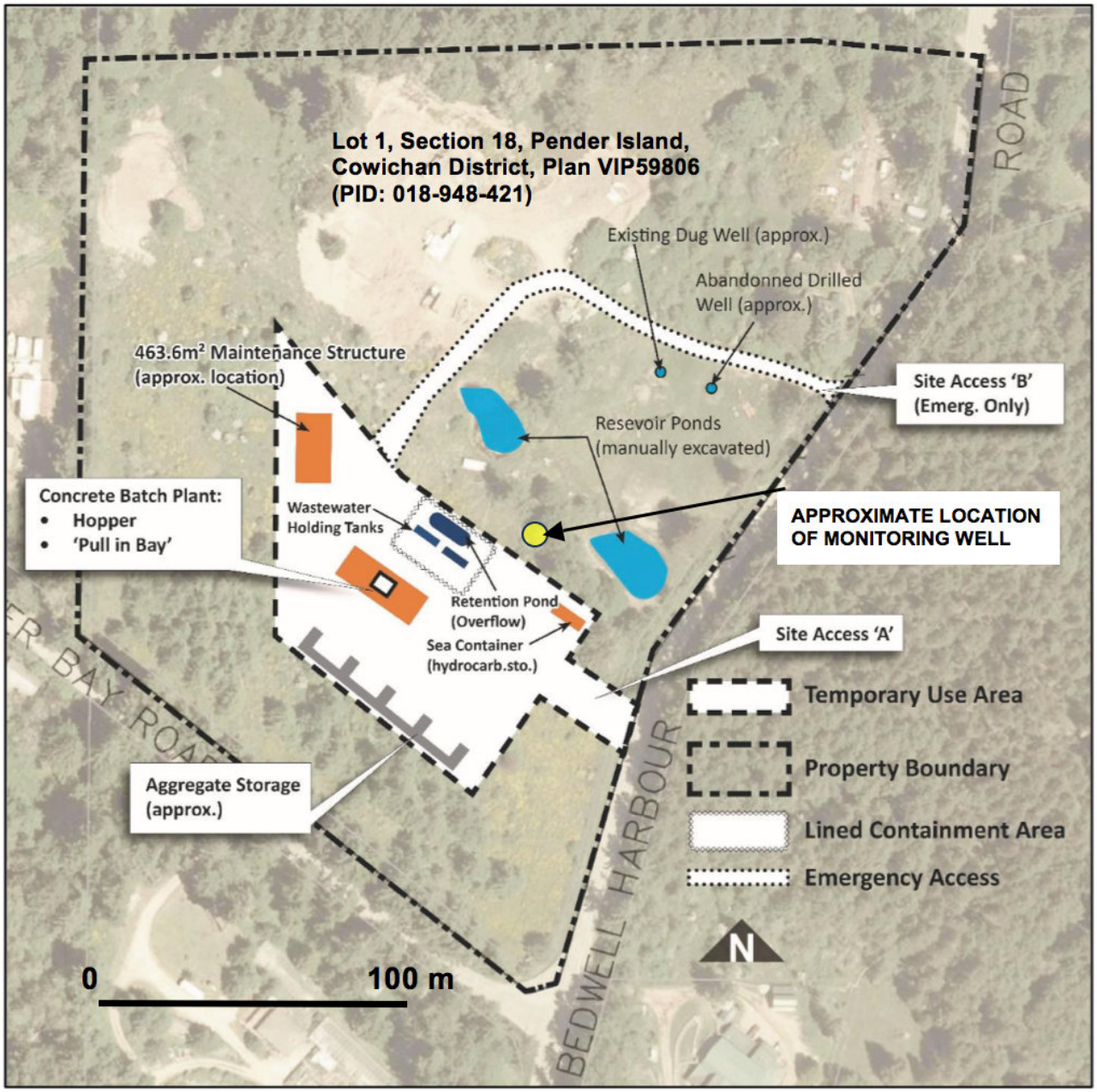

Figure 1. Approximate location of monitoring well constructed on June 30, 2025. Basemap from North Pender Island Local Trust Committee (2023).

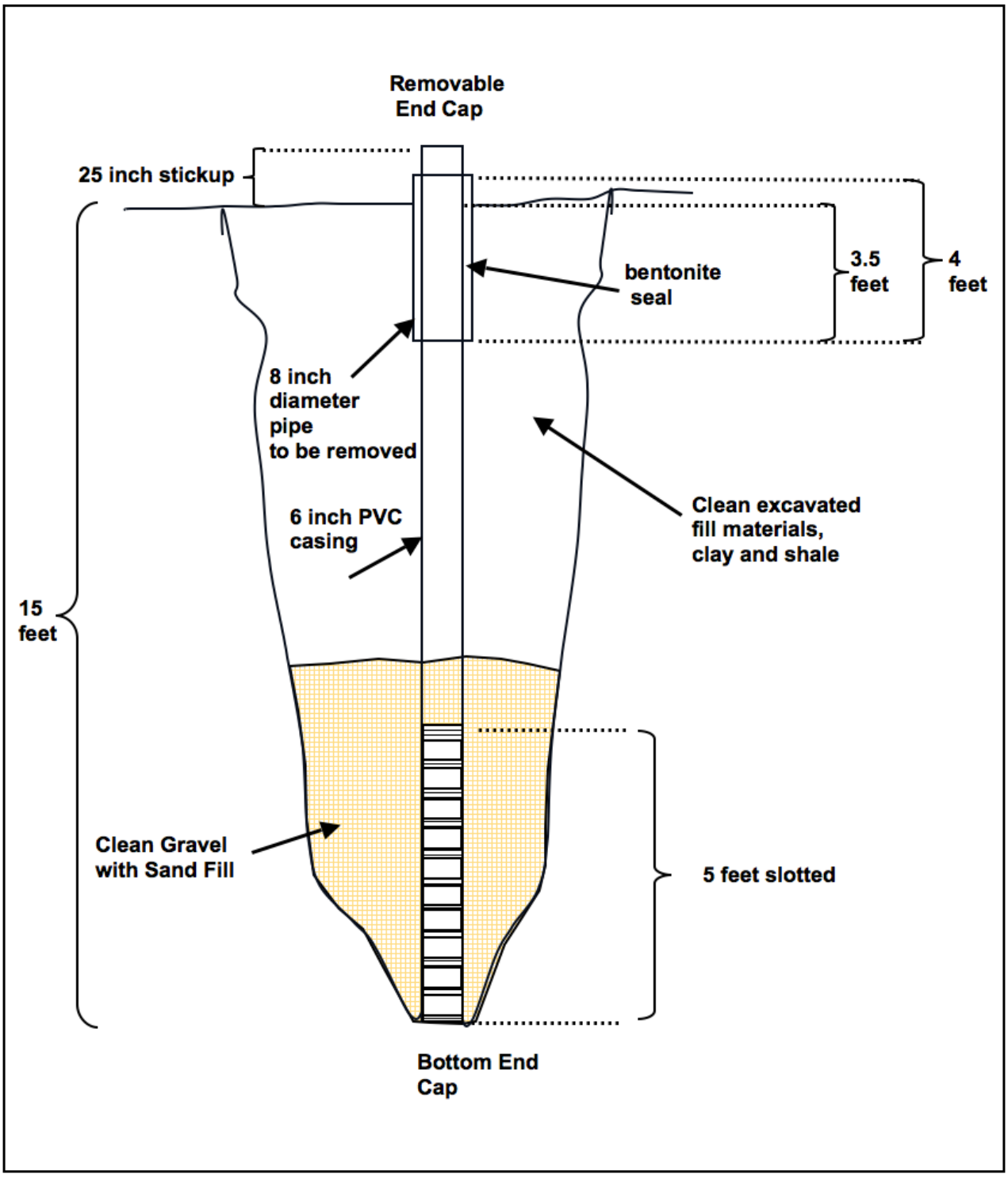

Figure 2. Schematic of monitor well installation, not to scale.

Conclusions

Based on the above, the following relevant conclusions can be made:

1. A 6 inch diameter PVC monitor well was successfully completed on June 30, 2025 to a depth of 15 feet, down gradient from the concrete batch plant as required under the Temporary Use Permit, NP-TUP-2023.5 (Grimmer) issued by the North Pender Island Local Trust Committee (2023).

2. The excavation encountered 1 foot of organic topsoil underlain by 2 feet of buff stiff clay followed by 12 feet of grey clay and shale.

3. Groundwater was observed along fractures and bedding planes within the clay and shale materials encountered at the site below a depth of 11 feet (3.4 m) and groundwater was present in the excavation when the well casing was installed.

4. The monitor well was constructed by excavation and completed in accordance with requirements under the *Groundwater Protection Regulation* (Province of British Columbia, 2025), including Section 20 Casings and liners, Section 22 Surface seal, Section 33 Casing stick-up, Section 35 Slope of surface of ground around wellhead, Section 38 Well caps, and Section 77 Well construction reports submitted to well owner only. A copy of the well construction report is provided in Appendix B.

Recommendations

The following recommendations are provided for implementation.

1. As the monitor well was completed with PVC thermoplastic casing it would be important to protect the casing from future damage by installing a larger diameter steel casing with a lockable well cap over the plastic casing. This would be in compliance with Section 34 Protection of thermoplastic casings under the *Groundwater Protection Regulation.* Care should be taken not to excavate the bentonite seal around the plastic casing when installing the steel casing. The stick-up of the plastic casing could also be reduced to 12 inches if necessary.

2. Prior to any groundwater sampling of the monitor well it would be prudent to bail several well volumes from the well before sampling.

Closure

This report was prepared in accordance with generally accepted engineering, hydrogeological and consulting practices. It is intended for the prime use of Barbara Johnstone and Aaron Grimmer in connection with its purpose as outlined under the scope of work for this project. This report is based on data and information available to the author from various sources at the time of its preparation and the findings of this report may therefore be subject to revision. Data and information supplied by others has not been independently confirmed or verified to be correct or accurate in all cases. Any errors, omissions or issues requiring clarification should be brought to the attention of the author. The author retains full copyright of the material contained in this report. The author and Hy-Geo Consulting accepts no responsibility for damages suffered by any third party as a result of any unauthorized use of this report.

Respectfully submitted,

Alan P. Kohut PEng.
Principal and Senior Hydrogeologist

HY-GEO CONSULTING
Permit to Practice Number: 1001034

References

North Pender Island Local Trust Committee. 2023. *Temporary Use Permit, NP-TUP-2023-5 (Grimmer), 4415 Bedwell Harbour Road.*

Province of British Columbia. 2025. *Groundwater Protection Regulation, Water Sustainability Act.* Consolidated to November 29, 2022. Internet website https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/39_2016

Appendix A

Photographs taken June 30, 2025.

Photo 1. Excavator employed to install monitor well, June 30, 2025.

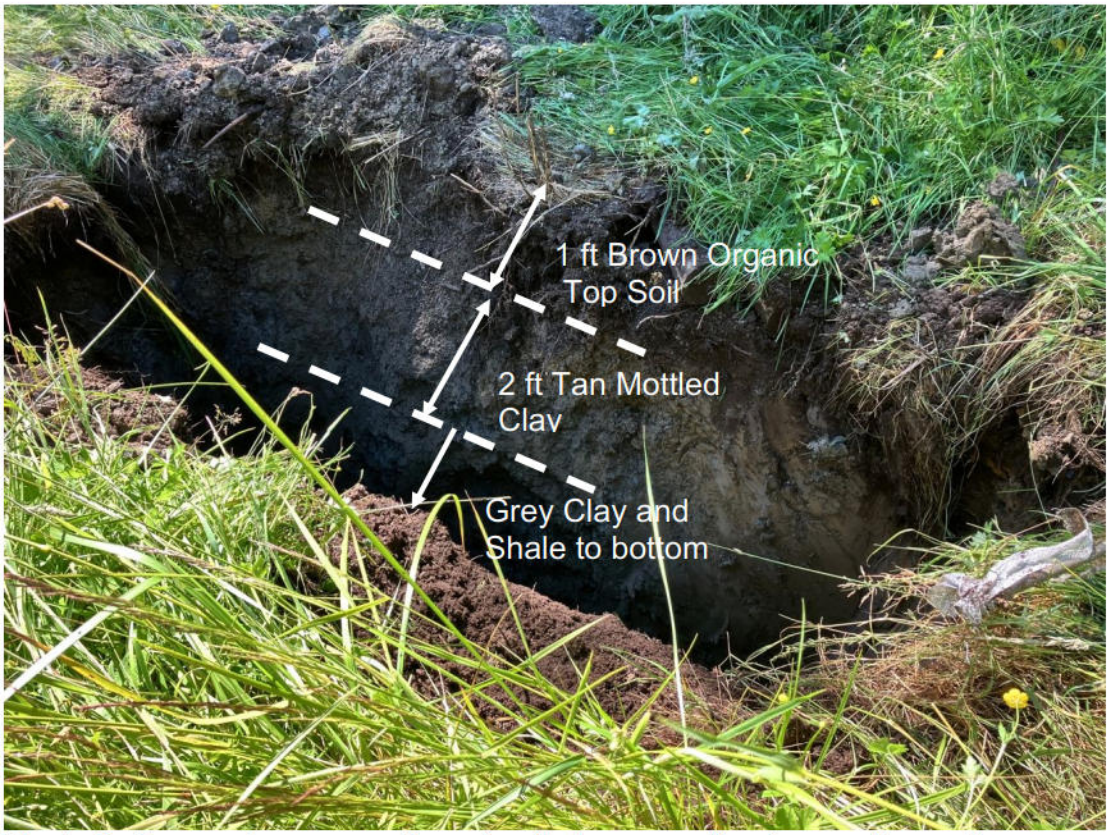

Photo 2. Exposed upper portion of soils in excavation for monitor well, June 30, 2025.

Photo 3. Excavated material comprised of soft grey clay and alternating harder layers of grey mudstone and shale, June 30, 2025.

Photo 4. 6 inch diameter PVC well casing set in excavation to depth of 15 feet (4.6 m), June 30, 2025. Casing was subsequently cut to provide a 25 inch (63.5 cm) stick up above ground level.

Photo 5. Monitor well casing set in excavation. Note water in bottom of excavation, June 30, 2025.

Photo 6. Gravel with sand material for backfill around slotted section of well casing, June 30, 2025.

Photo 7. Pouring bentonite pellets between 6 inch diameter well casing and temporary 8 inch diameter surface casing, June 30, 2025.

Photo 8. Pulling out 8 inch temporary surface casing, June 30, 2025.

Photo 9. Completed 6 inch diameter monitoring well, June 30, 2025.

Appendix B

Well Construction Report

BRITISH COLUMBIA

☑ **Well Construction**
☐ **Well Alteration**
☐ Original well construction report attached

Stamp company name/address/ phone/fax/email here, if desired.

Ministry Well ID Plate Number: NA
Where ID Plate is attached: _____
Ministry Well Tag Number: NA

See reverse for notes & definitions of abbreviations.

Well Class: Class of well (see note 2): Monitoring **Sub-class of well:** Permanent

Water supply wells: Indicate intended water use: ☐ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify): _____

Start date of work (YYYY/MM/DD): 6/30/25 **End date of work** (YYYY/MM/DD): 6/30/25

Person Responsible for Work (print clearly): **Name (first, last)** (see note 3): A.P. KOHUT P.Eng.

Person who completed the work: AARON GRIMMER **Registration no.** (see note 4): _____

Consultant (if applicable; name and company): A.P. KOHUT P.Eng. Hy-Geo Consulting

I understand and agree that:

- the well construction/alteration/decommission report form(s) are being filed as government water records in accordance with provisions of the Water Sustainability Act (WSA) and its regulations, including the Groundwater Protection Regulation;
- the well construction/alteration/decommission report form(s), including any written word(s) and comments, related dataset and other information included within the report(s), will be disclosed publicly by the government for use by the public as government water records concerning the well and the aquifer that are the subject of the report(s);
- the report form(s), including any written word(s) and comments, related dataset and other information included within the report(s), will be made available to the public by the government in accordance with the Open Government License-British Columbia (OGL-BC) which grants the public a worldwide, royalty-free, perpetual, non-exclusive license to make use of the reports, including for commercial purposes, but subject to the terms described in the OGL-BC.

Signature of Person Responsible [redacted]

Well Owner Name: BARBARA JOHNSTONE

Mailing Address: 4415 Bedwell Harbour Rd Town North Pender Island Prov. BC Postal Code _____

Well Location (see note 6): **Address:** Street no. _____ Street name _____ Town _____

or Legal description: Lot 1 Plan VIP5980 DL _____ Block _____ Sec. 18 Twp. ___ Rg. ___ Land District _____

or PID: 018-948-421 and **Description of well location (attach sketch, if nec.):** _____

Geographic Coordinates:

NAD 83: Zone: _____ (see note 7) **UTM Easting:** _____ **UTM Northing:** _____ **Latitude** (see note 8): 48 47' 48" **Longitude:** 123 17'2"

Method of drilling: ☐ air rotary ☐ dual rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ other (specify): Excav.

Orientation of well: ☑ vertical ☐ horizontal **Ground elevation:** 158 ft (asl) Method (see note 9): GPS

Lithologic description (see notes 10-15)

From ft (bgl)	To ft (bgl)	Material Description	Moisture: Dry	Damp	Moist	Wet	Colour: Black	Blue	Brown	Green	Grey	Variegated	Red	Tan	White	Hardness: Loose	Hard	Loose	Medium	Soft	Stiff	Very hard	Very Soft	Observations (e.g. other geological materials (e.g. boulder), est. water bearing flow (USgpm))
0	1	organic topsoil	X						X															
1	3	clay		X										X							X			
3	15	clay, mudstone-shale			X							X												water visible on fracture surfaces

Casing Details:

Type: ☐ Surface ☑ Production ☐ Open Hole ☐ Steel Removed

From ft(bgl)	To ft (bgl)	Dia in	Casing Material/Open Hole (see note 16)	Wall Thickness in	Drive Shoe
0	15	6	PVC		

Surface seal: Type: bentonite Depth: 3.5 ft Thickness: 1 in

Method of installation: ☐ Poured ☐ Pumped

Backfill: Type: clay Depth: 8 ft

Liner: ☐ PVC ☐ Other (specify): _____ Diameter: _____ in Thickness: _____ in From: _____ ft (bgl) To: _____ ft

Perforated pipe: From: 10 ft To: 15 ft

Screen Details:

Intake: ☐ Screen ☐ Open bottom ☐ Uncased hole

Screen type: ☐ Telescope ☐ Pipe size

Screen material: ☐ Stainless steel ☐ Plastic ☐ Other (specify): _____

Screen opening: ☐ Continuous slot ☑ Slotted ☐ Perforated pipe

Screen bottom: ☐ Ball ☐ Plug ☐ Plate ☐ Other (specify): _____

Screen Information: _____

From ft(bgl)	To ft (bgl)	Dia in	Type (see note 17)	Slot Size
10	15	6		2 mm

Filter pack: From: 8 ft To: 15 ft Thickness: ___ in

Filter Pack Material: ☐ Very coarse sand ☐ Very fine gravel ☐ Fine gravel ☐ Other: Gravel with sand

Filter Pack Material Size: ☐ 1020 sand ☐ 240 sand ☐ 1.0-2.0mm ☐ 2.0-4.0mm ☐ 4.0-8.0mm ☐ Pea gravel ☐ Other: _____

Well Development Method: ☐ Air lifting ☐ Bailing ☐ Jetting ☐ Pumping ☐ Surging ☐ Other (specify): _____

Development Hours: _____ hrs Development Notes: _____

Well Yield Estimation Method: ☐ Pumping ☐ Air lifting ☐ Bailing ☐ Other (specify): _____

Yield Estimation Rate: _____ USgpm Yield Estimation Duration: _____ hrs SWL before test: _____ ft (btoc)

Drawdown: _____ ft (btoc) Hydro-fracturing: ☐ Yes ☐ No Increase in Well Yield due to Hydro-fracturing: _____ USgpm

Water Quality: Water sample collected: ☐ Yes ☐ No

Date (YYYY/MM/DD) _____ Water quality odour: ____

Characteristics: ☐ Clear ☐ Cloudy ☐ Fresh ☐ Gas ☐ Salty ☐ Sediment ☐ Other (specify): _____

Colour: ☐ Black ☐ Black flecks ☐ Brown ☐ Clear/none ☐ Grey ☐ Slight colour/milky ☐ Orange ☐ Other (specify): _____

Comments: _____

Final well completion data:

Total depth drilled: 15 ft Finished well depth: 15 ft (bgl)

Final casing stick up: 25 in Depth to bedrock: 3 ft (bgl)

SWL: _____ ft (btoc) Estimated well yield: _____ USgpm

Artesian flow: _____ USgpm, or Artesian pressure: _____ ft

Type of well cap: PVC Well disinfected: ☐ Yes ☑ No

☐ **Confirmation/alternative specs. attached**

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction or alteration, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

white: Customer copy
canary: Driller copy
pink: Ministry copy

Sheet 1 of 1