

## **BI-WEEKLY STATUS REPORT**

### **Cobble Hill Landfill Closure**

<b>PROJECT # : PRJ18074</b>	<b>File #:</b> 18074- BWR-75
<b>REPORT #:</b> 75	<b>Date:</b> August 30, 2020
<b>SHA REPRESENTATIVES:</b> Dr. Tony Sperling, P.Eng. Scott Garthwaite Carly Wolfe, EIT	<b>Owner:</b> Cobble Hill Holdings Ltd.  <b>Contractor:</b> Allterra Construction Ltd.

#### **Semi Monthly Reporting Requirements SPO MO1701**

##### **Per SPO MO1701 Section 4:**

Commencing in the month that closure activities commence pursuant to the approved Updated Final Closure Plan, the Named Parties must submit semi-monthly status reports, certified by a Qualified Professional. The reports must include the status of closure activities, inspection results, quality control and testing results, photographs which support/document the quality control and testing results, inspection reports and other supporting documents as needed to fully document all stages and components of the closure activities.

##### **Per Condition 10 of June 26, 2019 Letter Re: Second Amended Spill Prevention Order MO1701, dated June 29, 2017 – Final Closure Plan:**

Identification of any deviations from the quality management plan and the construction activities work plan and implementation schedule referenced in conditions 3 and 4 of this approval; The results of inspections, repairs, quality controls and testing, in accordance with the quality management plan referenced in condition 5 of this approval; The planned activities (and associated timing) for the next reporting cycle; and The environmental monitoring program laboratory reports and tabulated results (Quarterly Only-Submitted quarterly, reviewed annually by others). Copies of all soil relocation documentation as required in condition 7 of this approval.

Status reports must be submitted by the 15th and 30th of each month (or the next business day thereafter if the 15th or 30th of the month is not a business day) until closure activities have been completed. Submissions must be made electronically to the following email inbox:  
[EnvironmentalCompliance@gov.bc.ca](mailto:EnvironmentalCompliance@gov.bc.ca).

## 1. Status of Closure Activities

- Activities related to QMP “Construction Activities” occurred this reporting cycle.
- Placement of growing medium on PEA occurred this reporting period.
- Construction of surface water ditches occurred this reporting period.
- Hydroseeding occurred this reporting period.
- Final closure plan reported to be complete as of Friday August 28<sup>th</sup>, 2020.

## 2. Inspection Results

- Permanent Encapsulation Area (PEA): Liner has been covered and can no longer be inspected. Cover system appears to be in good condition.
- Soil Management Area (SMA): The SMA is empty and clean and appears to be in good condition.
- Cut-off ditch upland of PEA: All works are in good condition, ditch still performing well.
- Pictures detailing inspection results are shown at the end of this report.
- Dr. Tony Sperling was on-site during this reporting period. Item details requiring further work included the following:
  - Rip-rap placed in ditches were recommended to be restructured to provide a V-shaped design.
  - Large truck tires were recommended to be placed around stand pipes to provide vegetative protection and a small footprint for sampling or clean out activities.
  - Trim geotextile around south and west ditches and smooth the soil in that area.
  - Shape cobble into a “V” shape in the west ditch.
  - Shape the north slope at a 5H:1V.
  - A ditch at the toe of the north slope is recommended.
  - A mid slope ditch is recommended at a slope of 5%.
  - Assess seed type and the possible use of loose straw and /or wattles surrounding ditches.
  - Check dams are recommended at 10 linear metres to mitigate wash of cobble through ditch works.
  - An additional 2m of topsoil is required overtop of the landfill.
- Subsequent to Dr. Tony Sperling’s site visit, the following recommended items have been addressed:
  - North slope reshaped at a 5H:1V.
  - Geotextile around south ditch has been trimmed.
  - A mid slope ditch is complete.

## 3. Results of Inspections, Repairs, Quality Controls and Testing, in Accordance with the Quality Management Plan

- See attached site inspection reports.

#### 4. Identification of Any Deviations from the Quality Management Plan and the Construction Activities Work Plan and Implementation Schedule

<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD	Notes:
<input checked="" type="checkbox"/> DEVIATIONS OCCURRED THIS REPORTING PERIOD	A mid slope ditch has been constructed running east to west on the north slope. QP to determine the use of loose straw and/or wattles surrounding ditchworks. Check dams are recommended for the design of ditches given the size of cobbles utilized in construction. Check dams are recommended every 10 lineal distance in areas where cobbles were utilized.

#### 5. The Planned Activities (and associated timing) for the Next Reporting Cycle

- Final site inspection by Qualified Professional Dr. Tony Sperling scheduled for September 2, 2020.
- As-built drawings.
- Completion of any remaining recommendations

#### 6. Environmental Monitoring Program Laboratory Reports and Tabulated Results

- Sampling occurred per the Site's approved Revised EMP this reporting period. Results will be attached to subsequent bi-weekly report when available.

#### 7. Copies of All Soil Relocation Documentation

- Origin site land use was assessed via Technical Guidance 10 on Contaminated Sites. Soil quality was confirmed per letters of assurance provided by CSAP to BC ENV.

#### 8. Leachate Volumes Over Reporting Period

- Total Leachate Collected: 7.99 m<sup>3</sup>
- Total Leachate Stored: 60.76 m<sup>3</sup>
- Total Leachate Transferred: 0 m<sup>3</sup>

## 9. Pictures



**Picture #1 (left) : South ditch with more rip rap added to cover all geotextile**

**Picture #2 (right) : West ditch with extra geotextile removed**





**Picture #3 (left): Intermediate ditch complete**

**Picture #4 (right): Berms knocked down and sloped to match cover**



**Picture #5: Toe ditches complete at north slope**



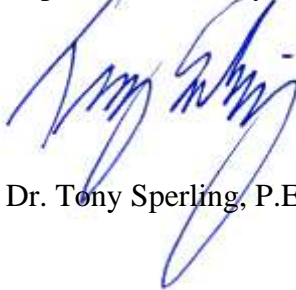
**Picture #6: North slope toe extended to achieve 5H:1V slope.**

Report prepared by:



Carly Wolfe, EIT

Report Reviewed by:



Dr. Tony Sperling, P.Eng.



*August 30, 2020*

**Note:** Report prepared by Sperling Hansen Associates Inc. If those in attendance have additions or objections to these notes, they should report back to Sperling Hansen Associates (SHA) within 3 days of receipt, otherwise, these notes will be considered a complete and accurate permanent record of this reporting period.

**Attachments:**

Cobble Hill Landfill Site Inspection Report 2020-08-18  
Cobble Hill Landfill Site Inspection Report 2020-08-19  
Cobble Hill Landfill Site Inspection Report 2020-08-24  
Cobble Hill Landfill Site Inspection Report 2020-08-25  
Cobble Hill Landfill Site Inspection Report 2020-08-27  
Cobble Hill Landfill Site Inspection Report 2020-08-28



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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Joel Clarkston, Grad. Tech.

**Date:** August 18, 2020

**Time:** 8:00AM – 3:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Mainly Sunny

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Mainly Sunny

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 18, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.



**Picture # 1:** Site overview looking southwest towards topsoil placement along the north and western sides of the PEA. Two rock trucks hauled material throughout the day to various locations to be graded out with an excavator, and bulldozer.



**Picture # 2:** Previously stockpiled topsoil material being loaded on to a rock truck. Larger rocks or unsuitable debris were removed from the topsoil prior to being loaded on to the rock trucks.





**Picture # 3:** Looking southeast towards an excavator loading a rock truck with stockpiled top soil material.



**Picture # 4:** Looking north along the western slope of the PEA towards topsoil being placed and graded.

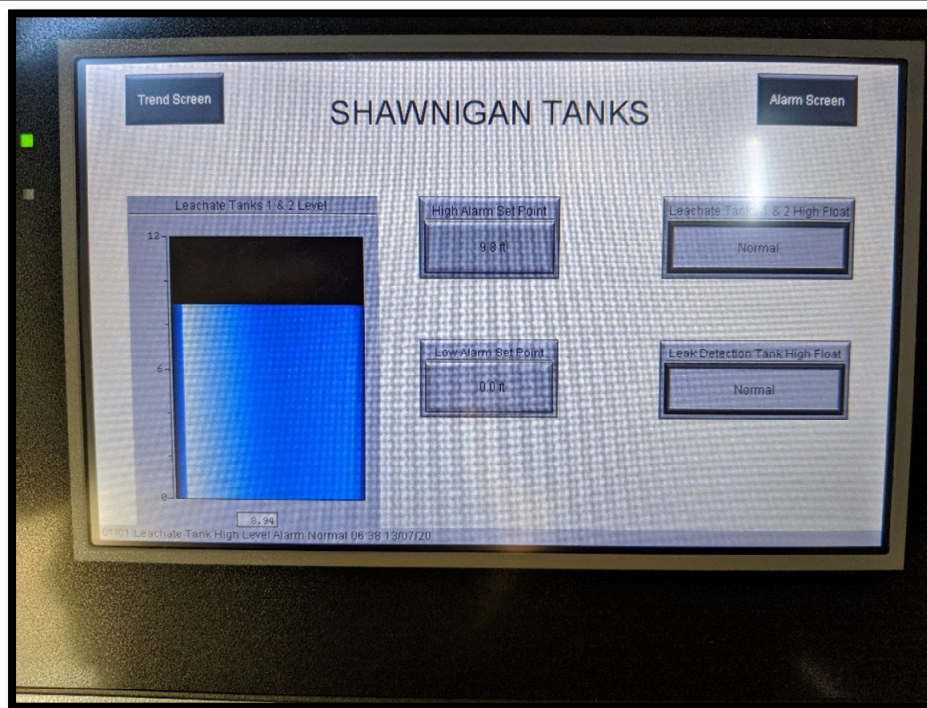




**Picture # 5:** Bulked in topsoil placed on the north side of the PEA prior to grading and track-packing.



**Picture # 6:** Placed, graded and track-packed topsoil along the west side of the PEA. View is to the south.



**Picture # 7:** Leachate display – 8.94 ft per tank.

Report prepared by:



Joel Clarkston, Grad Tech.  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Joel Clarkston, Grad. Tech.

**Date:** August 19, 2020

**Time:** 8:00AM – 3:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Mainly Sunny

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Mainly Sunny

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 19, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.





**Picture # 1:** Site overview looking southwest towards topsoil placement along the north and eastern sides of the PEA. Two rock trucks continued to haul material throughout the day to be graded out with a bulldozer.



**Picture # 2:** Previously stockpiled topsoil material being loaded on to a rock truck for transport.

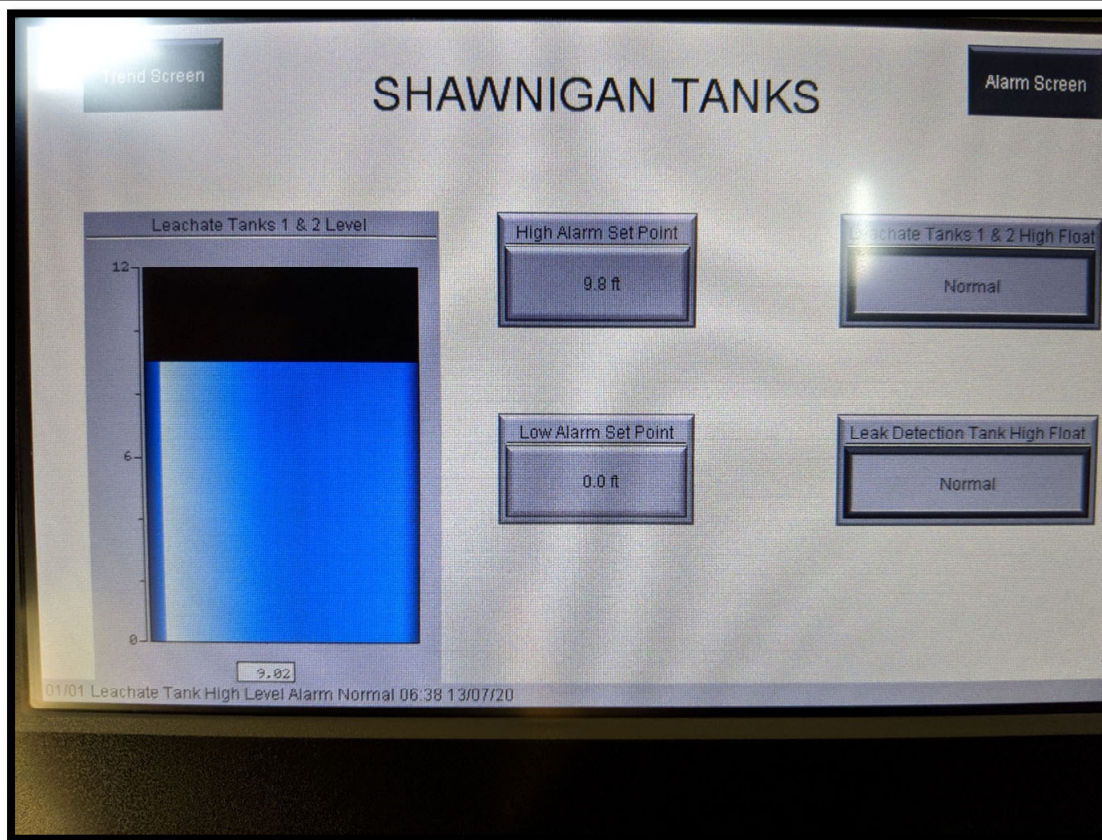


**Picture # 3:** Larger rocks were sorted out of the topsoil material (red arrow) prior to loading into the rock trucks for material transportation.



**Picture # 4:** Looking east along the north side of the PEA towards topsoil material being bulked in prior to being graded out via bulldozer.





**Picture # 5:** Leachate display – 9.02 ft per tank.

Report prepared by:



Joel Clarkston, Grad Tech.  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

S. Babulic, EIT

**Date:** August 24, 2020

**Time:** 8:00AM – 3:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Partial Cloud

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Partial Cloud

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 24, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.





**Picture # 1:** Looking towards PEA from quarry entrance road – Contractor is moving previously stockpiled topsoil onto the PEA to increase thickness of cap, improve drainage and build out 5:1 slope.

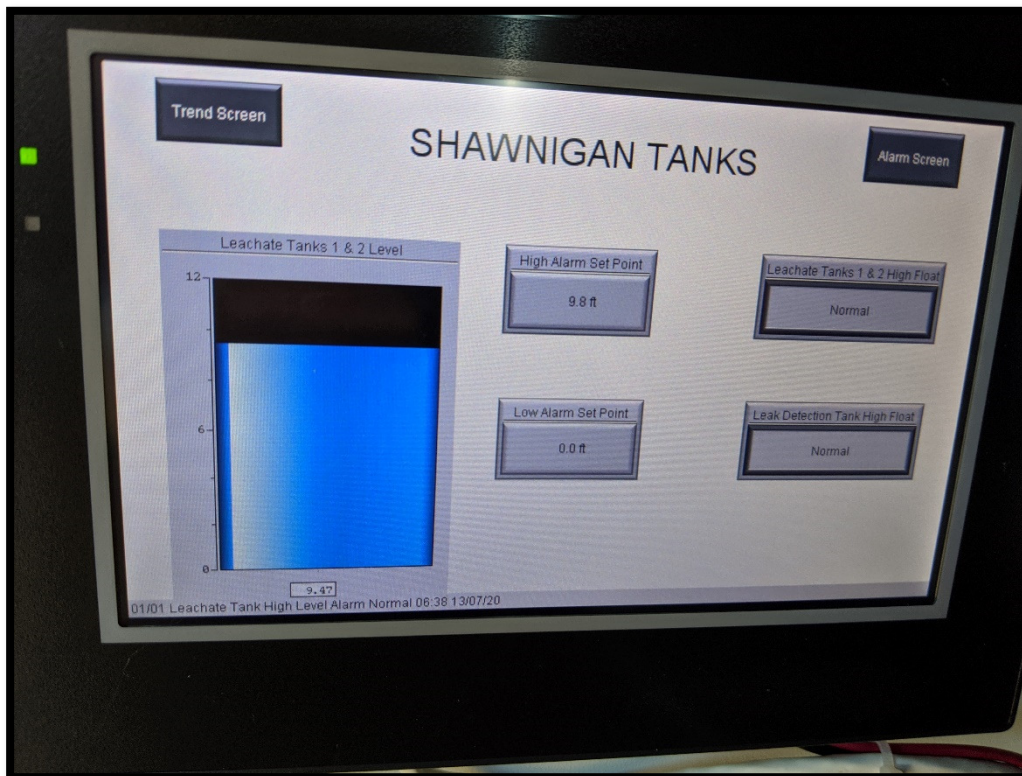


**Picture # 2:** Overview of PEA, looking south. Dozer is spreading soils down PEA slope.





**Picture # 3:** View of PEA from quarry entrance road. Materials dumped onto PEA earlier in the day have been spread with dozer.



**Picture # 4:** Leachate display – 9.47 ft per tank.

Report prepared by:



Sean Babulic, EIT  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Joel Clarkston, Grad. Tech.

**Date:** August 25, 2020

**Time:** 8:00AM – 3:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Mainly Sunny

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Mainly Sunny

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 25, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.





**Picture # 1:** Looking south towards topsoil material being graded out along the south side of the leachate facility access road. The final lift of PEA topsoil is expected to begin placement tomorrow and will be assisted by an on-site surveyor to provide spot elevations. Hydroseed placement is scheduled for Thursday August 27, 2020.



**Picture # 2:** Looking east towards topsoil material being graded out along the south side of the leachate facility access road.

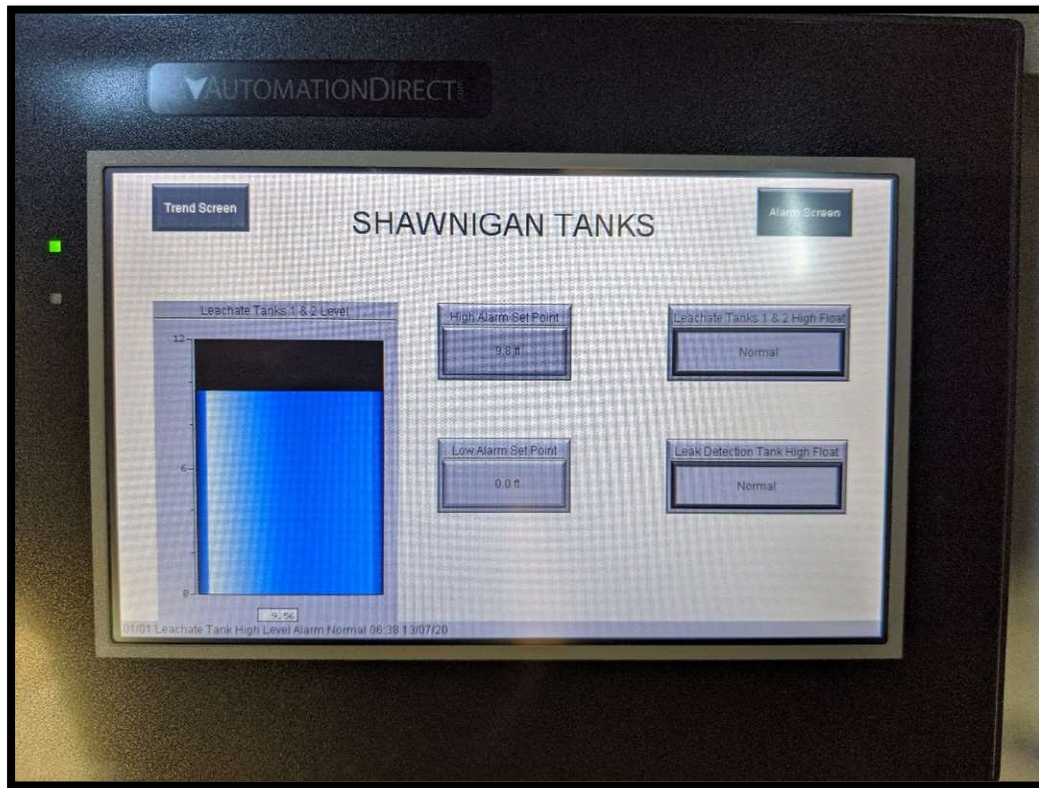


**Picture # 3:** Stockpiled topsoil material being loaded onto a rock truck to on-site transportation.



**Picture # 4:** Looking west along the north slope of the PEA towards the contractor installing a drainage control ditch. Geofabric was placed along the ditch prior to placing clear crush material. Drainage ditches are expected to be completed by tomorrow.





**Picture # 5:** Leachate display – 9.56 ft per tank.

Report prepared by:



Joel Clarkston, Grad Tech.  
Islander Engineering Ltd.



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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Joel Clarkston, Grad. Tech.

**Date:** August 27, 2020

**Time:** 8:00AM – 3:00PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Mainly Sunny

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Mainly Sunny

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 27, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.



**Picture # 1:** Hydroseed contractor was on site for the duration of the day hydroseeding the previously placed topsoil over the PEA. View is to the southwest.

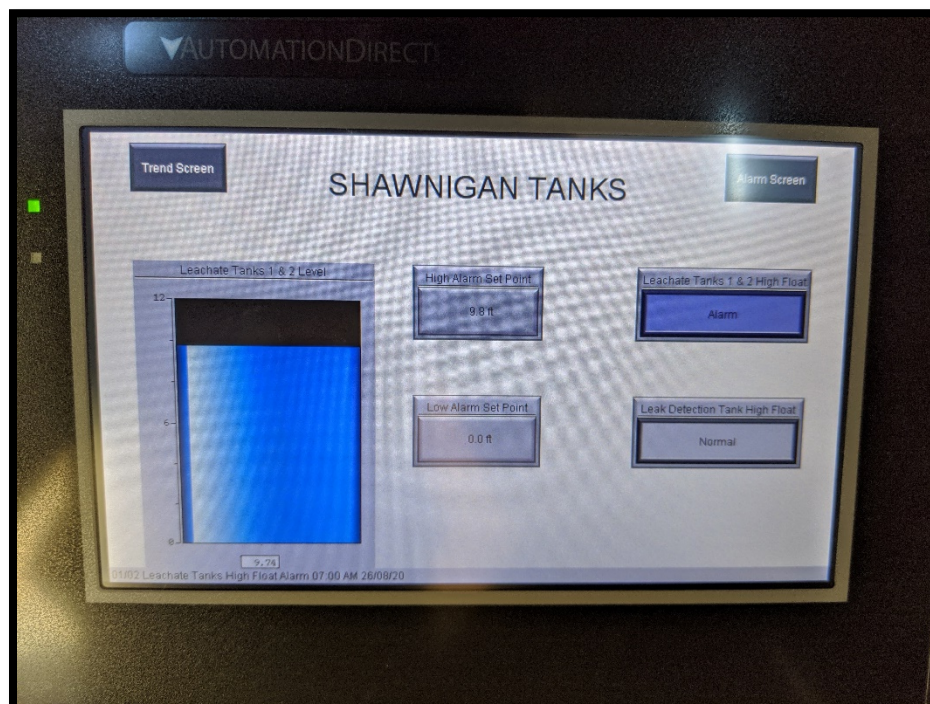


**Picture # 2:** Looking southwest from the northern toe of the PEA towards placed hydroseed.





**Picture # 3:** Looking southeast from the northern toe of the PEA towards placed hydroseed.



**Picture # 4:** Leachate display – 9.74 ft per tank.



Report prepared by:



Joel Clarkston, Grad Tech.  
Islander Engineering Ltd.

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# **SITE INSPECTION REPORT**

## **Cobble Hill Landfill Closure**

**PROJECT # : 2307**

**IEL REPRESENTATIVE:**

Gabrielle Swann, EIT.

**Date:** August 28, 2020

**Time:** 8:00AM – 1:20 PM

**Owner:**

Cobble Hill Holdings Ltd.

**Weather**

**Morning:** Sunny

**Contractor:**

Allterra Construction Ltd

**Afternoon:** Sunny

### **Construction Activities:**

Islander Engineering Ltd (IEL) performed a site inspection on August 28, 2020 at the Cobble Hill Landfill (Landfill) to assess the site construction progress and the implementation of the Closure Plan design. This report summarizes the Landfill site inspection findings and concludes by identifying action items, if applicable.



**Picture # 1:** Looking south towards hydroseeded PEA and rip rap that has been placed to delineate the edge of the road.





**Picture # 2:** Rock truck dumping rip rap to be placed along the toe of the PEA on the north end.



**Picture # 3:** Looking east along a drainage ditch that runs along the 5:1 slope of the PEA.



**Picture # 4:** Looking southeast, the PEA has been smoothed out and hydroseeding completed. Tires can be seen protecting the cleanouts and monitoring wells.



**Picture # 5:** Leachate display – 9.81 ft per tank.



Report prepared by:



Gabrielle Swann, EIT  
Islander Engineering Ltd.