

PROJECT STATUS REPORT

To:	Village Of Lytton	Contact:	CAO- Michael Baker
Project:	Lytton Recovery	From:	Recovery Project Manager – James Heigh
Report Period:	October 2022	Date Issued:	November 24, 2022

1. Project Dashboard

Current Project Phase:



Status	Overall Status	Scope	Budget	Schedule
Last Period	High Risk	Moderate Risk	High Risk	High Risk
This Period	High Risk	Moderate Risk	High Risk	High Risk

Project Status Executive Summary

Matcon

Actions this month include:

- Sewer and water capping completed on 10 additional properties, resulting in a total of 140 different properties completed.
- Contaminated soil removal from 45 properties, resulting in a total of 100 different properties complete.
- Vegetation Management in Village
- Danger Tree removal throughout Village.

As of October 31, 95% of Notice of Independent Remediation (NIR) have been submitted and an additional 20 properties can now be remediated. A total of 5 properties currently have archaeological issues or awaiting the final NIR completion. These 5 properties are high-risk sites per the MOE. Due to the volume of contaminated materials for removal, as well as the quantity of chance finds during the archaeology investigation, the project schedule is anticipated for completion of backfilling at the end of January 2023. A decision to shovel-test the remediated properties to delineate the extents of future registered archaeology sites will be decided in the upcoming weeks during discussions with the Kumsheen Heritage Committee, the Province and Village Council. The intent of the delineation is to reduce the area of impact that newly registered archaeological sites will have on private properties. This decision carries the risk of extending the completion date of the project and adding additional costs to the project.

As of October 31, the following quantity of debris has been removed:

Debris (metal & concrete)

- Tonnage removed - 7,050 MT Concrete, 520 MT metal
- No. of properties - Approx. 130 properties
- Estimated tonnage remaining - 300 MT Concrete, 40 MT Metal

Asbestos contaminated material

- Tonnage removed – 9,050 MT
- No. of properties – 140 properties
- Estimated properties remaining to be addressed – 2 remaining

Soil remediation (all levels)

- Tonnage removed – 11,500 MT
- No. of properties – 100 properties complete, 28 remaining

IBI Group

IBI Group was concurrently completing the following activities in the VoL during this time period:

- Issuing Notifications of Independent Remediation (NIR)
- Monitoring remedial contractor (Matcon Environmental) works
- Collection of samples of anthropogenic materials that have undergone combustion (debris samples) for laboratory analysis
- Collection of soil samples for laboratory analysis

A brief description of the works completed for each activity is presented below:

Issuing Notification of Independent Remediation (NIR)

Notifications of Independent Remediation (Initiation) have been issued to the BC Ministry of Environment and Climate Change Strategy (ENV) in accordance with the requirements of the Environmental Management Act (EMA) and Contaminated Sites Regulation (CSR) for properties throughout Zones 1 to 7 as follows:

- Zone 1 (18 properties in scope) – 14/14 NIRs submitted, 4 properties not contaminated
 - Zone 2 (20 properties in scope) – 18/19 NIRs submitted, 1 property not contaminated
 - Zone 3 (17 properties in scope) – 15/15 NIRs submitted, 2 properties fully paved (no contaminated soils)
 - Zone 4 (18 properties in scope) – 18/18 NIRs submitted
 - Zone 5 (21 properties in scope) – 16/19 NIRs submitted, 2 properties fully paved (no contaminated soils)
 - Zone 6 (17 properties in scope) – 14/17 NIRs submitted
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- Zone 7 (29 properties in scope) – 16/23 NIRs submitted, 6 properties not contaminated

Remedial Works Monitoring

IBI Group has been monitoring debris removal works at these properties which include the following activities:

- Monitoring of the tackifier spraying and management of the asbestos-containing material (ACM) being completed by Matcon's subcontractor, Actes Environmental.
- Monitoring removal of ACM debris that is disposed at Campbell Hill Landfill located in Cache Creek, BC. All ACM debris is transported under a manifest signed by IBI Group field staff.
- Monitoring the segregation of metal from the waste debris for subsequent offsite recycling. Metal is transported to Lindsay Ventures located in Surrey, BC for recycling.
- Monitoring the segregation of other waste items from the debris fields such as vehicle batteries, computer boards, electronics, etc.

Remediation of contaminated soil by excavation and offsite disposal has been substantially completed in the following zones:

- Zone 1 – 14/14 properties
- Zone 2 – 12/19 properties (note 2 properties not being completed as per Owner direction)
- Zone 3 – 13/15 properties (note 3 properties not being completed as per Owner direction)
- Zone 4 – 13/18 properties
- Zone 5 – 8/19 properties
- Zone 6 – 7/17 properties
- Zone 7 – 9/23 properties

Excavated soils were classified as waste quality (IL+) and were disposed at the Campbell Hill Landfill.

Matcon has begun stabilizing hazardous waste soils and/or debris through the addition of Portland Cement at the following properties:

- 84 Main Street
- 58 Main Street
- 144 Main Street
- 279 Fraser Street
- 280 Fraser Street
- 319 Main Street
- 320 Main Street
- 339 Main Street
- 379 Main Street
- 478 Fraser Street
- 255 Fourth Street
- 541 Fraser Street
- 260 Fifth Street
- 557/575 Station Street

- 558 Alonzo Street

IBI is in the process of collecting post-treatment samples following the implementation of Matcon's stabilization process to determine the efficacy of the stabilization program. These samples are analyzed for leachable metals (based on TCLP analysis) to determine subsequent waste classification.

Debris Sample Collection and Analysis

The collection of burned debris samples is considered substantially complete. Approximately 300 samples of burned debris have been collected from properties within Zones 1 to 7 and submitted to CARO Analytical Services (Richmond, BC) for analysis of potential contaminants of concern (PCOCs) including metals, leachable metals (based on TCLP analysis) and asbestos.

Soil Sample Collection and Analysis (Site Investigation)

The collection of site investigation soil samples is considered substantially complete. Over 1,000 soil samples were submitted to CARO for analysis of PCOCs including metals, benzene, toluene, ethylbenzene, xylenes (BTEX), volatile petroleum hydrocarbons (VPH), polycyclic aromatic hydrocarbons (PAH) and/or sodium chloride.

Soil samples collected below burned debris halos typically contain contaminants (metals, BTEX, PAH and/or chloride) at concentrations elevated above environmental standards developed under the BC CSR for the protection of human health and/or the environment and are classified as 'waste' (exceeding CSR industrial land use standards). Samples with high metals concentrations have been submitted for TCLP metals to confirm whether metals are leachable under acidic conditions and to determine if these soils would be classified as Hazardous Waste. All Hazardous Waste will be excavated, handled, manifested, and disposed of offsite at a facility which can accept Hazardous Waste.

Soil sample data is being used to develop remedial action plans for each property which Matcon will use for subsequent remedial excavation and offsite disposal.

Soil Sample Collection and Analysis (Confirmatory Samples)

Post-remedial confirmatory soil samples are being collected by IBI field staff from completed remedial excavations in general accordance with the BC Ministry of Environment Technical

Guidance 1. Confirmatory soil samples are analyzed for contaminants of concern previously identified during the site investigation component.

Confirmatory soil samples have been collected from the following zones and submitted for analysis with the project laboratory:

- Zone 1 – 13/14 properties
- Zone 2 – 8/19 properties (note 2 properties not being completed as per Owner direction)
- Zone 3 – 4/15 properties (note 3 properties not being completed as per Owner direction)
- Zone 4 – 7/18 properties
- Zone 5 – 1/19 properties

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- Zone 6 – 0/17 properties
 - Zone 7 – 0/23 properties

A.E.W LP

In October, AEW conducted 18 days of monitoring contractor debris removal, screening/raking material for potential heritage artifacts, and testing material. Currently, 151 properties have been approved for monitoring of which AEW is actively monitoring work or has monitored those that have been clear for remediation. Around 85 potential archaeology sites have been uncovered on 92 properties.

Forecasting November work, the power screener may only be needed until mid-November (weather dependent) and crew size will depend on if there is screening and the number of machines in use. Further, the number of machines is expected to reduce for the backfill phase.

AEW is submitting a cost estimate and schedule update for the shovel testing program.

Colliers has created a streamlined SAP Schedule A amendment sign-off process.

Field Directors Brittany Lynas and Luke Kowalski are currently active and co-directing the project. Additional Field Directors have been brought in as needed. Brittany and Luke split the time on the ground in Lytton and provide office support when not in Lytton.

The weekly AEW and Colliers project management call allows issues and concerns to be raised and dealt with.

AEW crew size averaged 14.4 people per day.

Number of properties being monitored 144/151

Number of potential arch sites uncovered 85

Number of sites with potential arc sites 92

Infrastructure

The new VFD has been installed in Well #2 by Com Com. This will provide a backup source of water to the Village in the event of high turbidity in Lytton Creek. With the new VFD installed and running, work is being completed to troubleshoot water flow up to the WTP. Additionally, the VFD kiosk will be investigated for ventilation and cooling over the winter for completion in the spring.

DFA continues to review the additional funding requests for the Lytton Creek debris pond and intake pond, and various Water System related works. No timeline on approval is available.

Phase 1 of the leak detection program was completed by Cloudburst Water. A major leak had been found in the Ponderosa area. Work is being completed to determine the scope required to repair this leak. Phase 2 will commence in the Village core once all services are capped and confirmed closed on

remediated lots towards the end of November. There is currently 17 services outstanding to be capped before the leak detection will proceed.

A Water Operator has been approved to join the Public Works staff and is anticipated to start on site November 16th.

The recovery team is working with BC Hydro to develop a plan for their mobilization into the Village. Currently we are targeting the commencement of their scope of work by mid – end of November. BC Hydro is currently mobilizing to site and beginning to bring materials to a temporary laydown area.

The OCP Consultant decision has been deferred until November when the new council is in place and ready for Council Meetings.

Staff are working to complete the Master Service Agreement with the Geotechnical Consultant in order to bring them on board and begin geotechnical assessments through the Village.

Staff continue to identify additional grant opportunities for future works, and Reports to Council will be provided for the approval to proceed with applications when eligibility is verified.

Engineering design reviews and recommendations have been provided with cost estimates to the VoL to get the villages fire flow to meet the fire flow demands. These reports are currently under review and in discussion to discuss path forward.

Options for the temporary firehall and temporary Village Office are under review. A decision to develop a piece of Village land for use of the temporary structures is to be brought to Council in November.

2. Key Risk Changes

Risk Title	Impact on Scope / Schedule / Budget	Mitigation Strategy
Archeological Delays	Schedule and Budget	<ul style="list-style-type: none"> Increase Archeological Crews and Machinery if possible
Homeowner Signoffs	Schedule and Budget	<ul style="list-style-type: none"> Get signoffs on Properties ASAP Council approval to proceed on properties without RoEP's
Backfilling Delays	Schedule and Budget	<ul style="list-style-type: none"> Acquire confirmatory soil samples ASAP and Awaiting KHC Decision
Shovel Testing Program	Schedule, Scope and Budget	<ul style="list-style-type: none"> Province to determine legislative requirements around shovel tests
Heritage Site Identification	Schedule and Budget	<ul style="list-style-type: none"> Increase the number of monitoring days
Misunderstanding between the prime contractor and subcontractors	Schedule	<ul style="list-style-type: none"> Colliers to ensure and lead the communication and coordination among all the contractors and subcontractors.

		<ul style="list-style-type: none"> • Matcon to coordinate bi-weekly construction/coordination meetings to ensure clear communications to all teams
Creek Turbidity increase will result in no water available	Scope	<ul style="list-style-type: none"> • Expedited troubleshooting of the Well #2 water flow for a backup water source in the event of a high turbidity event in Lytton Creek • Expedite the repairs to Well #3 to provide additional groundwater capacity for the Village.
Former gas stations and underground tanks	Scope & Budget	<ul style="list-style-type: none"> • Gas station and underground tanks are very old and could possibly impact the schedule. Limited investigation should be conducted ahead of the situation to avoid risk

3. Budget Status

Matcon has increased excavator and trucking, capacity has been added to complete remedial excavations and screening. 95% of the NIRs and ROEPs have been approved and can be completed by end of November. The plan is to have all soil remediation as a first pass completed by the end of November. A few properties are tied up in archeological permitting and will be delayed. Some properties will likely require additional remediation once more confirmatory soil samples are completed and soil criteria exceedances occur. It appears that there will be an increase in quantities from the original budget amounts, an estimate of these increased quantities has been provided to the VoL team. Original quantities were based on Matcon's findings during the LFN Remediation project. The increase in ACM debris, contaminated soils, concrete, HW soils and debris are attributed to the nature of the buildings and activities within the Village of Lytton as compared to the LFN properties. The VoL has many more commercial and municipal properties, the VoL buildings both commercial and residential are typically older than the LFN properties and likely contained more hazardous building materials which were more common in older construction.

IBI is working on submitting the remaining NIRs to the BC ENV by end of November. The focus is on the remediation of contaminated soils from all remaining zones. Remedial excavations will continue to be monitored by IBI and confirmatory samples collected in general accordance with BC ENV Technical Guidance 1.

Current Project Status	Cost	Comments
Baseline Budget	19,190,500	Planned Budget
Committed (includes Change Orders)	\$19,480,750	
Approved Change Orders	\$17,044,036	Matcon, IBI, AEW CO's
Forecast Cost at Completion	\$ 19,480,750	
Forecast Variance at Completion	\$290,250	

4. Schedule Status

Matcon continues with surface debris removal as the Village receives RoEPs. Once properties have been reviewed by the Kumsheen Heritage Committee (KHC) and added to the Heritage Investigation Permit by AEW, IBI Group will start subsurface soil sampling, and will develop NOIs based on the test results. Matcon will then proceed with subsurface soil and concrete removal. AEW will cease all mechanized work and contact VoL, NNTC and the Archeology Branch in the event of any unanticipated potential cultural materials or features (“chance finds”) are encountered by construction personnel or other individuals during development activities, or observed by heritage field technicians during monitoring. Matcon would continue work on other properties until the archeological assessment of any such finds is completed, minimizing schedule impacts.

The schedule is now considered at high risk due to the amount of unexpected chance finds encountered in the excavation of the insured and uninsured properties, and the required additional archeological screening required in assessing the sites. In discussion with Matcon, we are now projecting completion of most key task (i.e. surface debris, soil remediation and capping of services) to be completed by November 30, 2022. We expect that Archaeological work will continue past this date and continue into the new year.

A decision on post excavation shovel test requirements will further stress the schedule. Current forecast to complete backfill is the end of January 2023 which includes working through the winter, pending weather and trucking. Additional estimates on schedule impacts of shovel testing should be provided in the November status report.

BC Hydro has contracted Matcon to complete pole hole excavation and plans on installing electricity and light poles in the village in the Month of November and December. Based on the site safety requirements and Village preference, the poles may be energized on a later date.

Leak detection repair and critical infrastructure work is underway. This work will increase as the remediation work finishes and additional access is provided.

Fire flow infrastructure upgrade recommendations have been provided to the Village in a report. The Village is reviewing the report and additional review is required with Urban Systems in order to determine the final options to provide adequate water flows and capacity to the Village.

The WTP inlet creek is still awaiting DFA funding approval for repairs. With winter approaching this work may not be feasible to start until spring which may impact the water treatment plant with increased sediment in the water intake.

Dates for completion of remediation and backfill for zones 1 – 7 have been changed in the table below to reflect the anticipated current substantial completion date of January 30, 2023.

Row	Milestone	Planned Baseline	Current Plan	Actual/Forecast	Variance Current Plan – Actual/Forecast (weeks)
1	Procurement of Environmental QP	Mar 01, 2022	Mar 01, 2022	Mar 01, 2022	0
2	Procurement of Prime Contractor	Mar 01, 2022	Mar 01, 2022	Mar 01, 2022	0



Row	Milestone	Planned Baseline	Current Plan	Actual/Forecast	Variance Current Plan – Actual/Forecast (weeks)
3	Procurement of Archaeologist and Heritage Monitors	Apr 01, 2022	Apr 01, 2022	Apr 01, 2022	0
4	Construction mobilization	Mar 08, 2022	Mar 08, 2022	Mar 08, 2022	0
5	Completion of Work in Zone 1 and Hobo Hollow	May 19, 2022	January 30, 2023		6
6	Establish a safe corridor between Highway 12 and CN Rail bridge for public access	May 19, 2022	May 19, 2022	May 22, 2022	0.5
7	Completion of Work in Zone 2	June 6, 2022	January 30, 2023		0
8	Completion of Work in Zone 3	June 22, 2022	January 30, 2023		0
9	Procure Watershed Analysis Engineering Team	June 24, 2022	June 24, 2022	Dec, 2022	6
10	Completion of Work in Zone 4	July 8, 2022	January 30, 2023		0
11	UV System Repair and fully operational	July 8, 2022	July 8, 2022	July 11, 2022	0
12	Completion of Work in Zone 5	July 26, 2022	January 30, 2023		0
13	Completion of Work in Zone 6	August 11, 2022	January 30, 2023		0
14	Source Water Protection Plan Update	August 26, 2022	December 9, 2022		15
15	Completion of Work in Zone 7	August 29, 2022	August 29, 2022		0
16	Leak Detection Phase 1		September 16, 2022	Sept 16 th , 2022	0
17	Geotech Agreement signed	September 30, 2022	November 30, 2022		0
18	Leak Detection Phase 2		December 9, 2022		0
19	Substantial Performance	Sept 30, 2022	January 30, 2023		8
20	Water system online	April 1, 2023	April 1, 2023		

5. Project Photos



Figure 1 – Haz waste soil mixing has started.



Figure 2 –Remediated properties.



Figure 3 – Properties cleaned for confirmatory sampling.



Figure 4 – Properties cleaned for confirmatory sampling.



Figure 5 – Zone 1 has been cleaned for confirmatory sampling.



Figure 6 – RCMP site has been cleaned for confirmatory sampling.