

PROJECT STATUS REPORT

To:	Village Of Lytton	Contact:	CAO – Michael Baker
Project:	Lytton Recovery	From:	Recovery Project Manager – James Heigh
Report Period:	November 2022	Date Issued:	December 22, 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	High Risk	High Risk	High Risk

Project Status Executive Summary

Matcon

Actions this month include:

- Sewer and water capping completed on all but 2 properties.
- Contaminated soil removal from 45 properties, resulting in a total of 110 different properties complete.

As of December 7, all but 2 Notice of Independent Remediation (NIR) have been submitted. Of the 15 properties still requiring remediation, nine are awaiting Archeological approval, one is a high-risk environmental site, one needs geotechnical guidance for the retaining wall, and the remaining four properties are in the process of remediation. These four properties are expected to be complete by Dec 15.

A decision to shovel test the remediated properties for archeological purposes has yet to be decided, if approved, the schedule will be increased to suit this work. There is also additional schedule risk due to winter conditions.

IBI Group

Arcadis 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 works completed for each activity is presented below:

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 (18 properties in scope) – 18/19 NIRs submitted (note: includes 125 & 145 Fraser, now on stop work order), 1 property not contaminated
- Zone 3 (17 properties in scope) – 15/15 NIRs submitted, 2 properties fully paved (soils not impacted by the wildfire)
- Zone 4 (18 properties in scope) – 18/18 NIRs submitted
- Zone 5 (20 properties in scope) – 18/18 NIRs submitted (note: includes IHA, 475 Main), 2 properties fully paved (soils not impacted by the wildfire)
- Zone 6 (16 properties in scope) – 16/17 NIRs submitted (note: includes IHA, 575 Main)
- Zone 7 (29 properties in scope) – 21/22 NIRs submitted, 7 properties not contaminated

At this time, there are only two properties remaining that require NIR submission:

- 441 Old Trans-Canada Highway
- 141 Seventh Street

NIR's for these two properties will be submitted when it is confirmed that they can be remediated within the required 90 days.

Remedial Works Monitoring

At this time, debris removal works have been substantially completed by Matcon on all properties that had burned debris except the following:

- 141 Seventh Street
- 810 Main Street

Arcadis IBI Group has been monitoring debris removal works at these properties which includes 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 of at the 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 on the following zones:

- Zone 1 – 14/14 properties
- Zone 2 – 15/17 properties
- Zone 3 – 12/15 properties
- Zone 4 – 17/18 properties
- Zone 5 – 15/18 properties
- Zone 6 – 13/16 properties
- Zone 7 – 13/22 properties

Excavated soils were classified as waste quality (IL+) and were disposed by Matcon 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
- 243 Main Street
- 360 Fraser Street
- 255 Fourth Street
- 319 Main Street
- 320 Main Street
- 339 Main Street
- 379 Main Street
- 421 Fraser Street
- 478 Fraser Street
- 255 Fifth Street
- 541 Fraser Street
- 260 Fifth Street
- 557/575 Station Street
- 558 Alonzo Street
- 650/666 Main Street
- 810 Main Street
- 822 Station Street
- 848 Station Street
- 140 Sixth Street

Arcadis IBI is in the process of collecting post treatment samples following 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

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)

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 offsite at a facility which can accept Hazardous Waste, unless stabilized.

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 – 14/14 properties
- Zone 2 – 11/17 properties
- Zone 3 – 7/15 properties
- Zone 4 – 9/18 properties
- Zone 5 – 7/18 properties
- Zone 6 – 7/16 properties
- Zone 7 – 8/22 properties

Note: confirmatory samples can only be collected following removal of all burned debris, in-situ contaminated soils and ex-situ (stockpiled) contaminated soils. Available sample analytical results (draft) are summarized in tables attached at the end of this memorandum.

AEW LP

Through November 28th, AEW conducted 17 days of monitoring contractor debris removal, screening/raking material for potential heritage artifacts, and testing material. There was 1 day of no work (Nov 11), and 1 day (Nov 23) with reduced AEW crew due to a company function. Currently, 151 lots have been approved for monitoring of which AEW is actively monitoring work or has monitored on all these that have been clear for remediation. Around 89 potential archaeology sites have been uncovered on 92 lots.

A high risk assigned to budget due to additional crew utilized; AEW submitted Change Order request #2 of \$470k to cover October actuals and November estimate to mitigate the budget risk. During November work, the power screener was used throughout the month. November averaged a 13-person crew vs Octobers which averaged a 14.4 – person crew. Further crew size will depend on a screening program and the number of machines in use.

Based on Matcon's proposed shovel testing schedule, AEW submitted a cost estimate for a post-remedial shovel testing program.

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.

November summary:

AEW crew size averaged 13 people per day;

Number of properties being monitored: 151/151;

Number of potential arch sites uncovered: 89.

Infrastructure

Well #2 is now fully operational and water quality will be confirmed for use once water quality tests from December 7th are returned. Additionally, the VFD kiosk will be investigated for ventilation and cooling over the winter for completion in the spring/summer.

DFA continues to review the additional funding requests for the Lytton Creek debris pond and intake pond, and various Water System restoration related works. No timeline on approval is available but require an onsite review prior to the spring if the creek and water intake are not frozen over.

Phase 2 leak detection will commence in the Village core in January once Cloudburst Water is available. At this time all services are capped and confirmed closed on remediated lots.

The recovery team is working with BC Hydro to develop a plan for their mobilization into the Village. They are continuing to install new poles and will update the Village on an energization timeline in December.

Staff continue to work to complete the Master Service Agreement with the Geotechnical Consultant in order to bring them on board and continue 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 village's fire flow to meet the fire flow demands. These reports are currently under review and in discussion to discuss a 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 was brought to Council in November and defeated. A business study is being conducted exploring options that are available in the village to get an interim Village office function as quickly as possible.

Colliers Project leaders is working on developing several RFPs including Sanitary line works, water systems upgrades, alternative energy studies, and several more to have required work lined up as remediation works is beginning its final stages and the village get ready for infrastructure works. A report on current RFPs' will be brought to Council on Dec 14th.

2. Key Risk Changes

Risk Title	Impact on Scope / Schedule / Budget	Mitigation Strategy
Archeological Delays	Schedule and Budget	Increase Arch Crews and Machinery, if possible, add winter frost fighting equipment to continue to work in the winter months
Backfilling Delays	Schedule and Budget	Acquire confirmatory soil samples asap and confirm strategy for compaction during winter conditions
Shovel testing program	Schedule delay and / or cost increase	Review AEW recommendations and work closely with Regulator to move the program through priority properties. Focus on properties with Building Permit applications to reduce delays for residential rebuild.
Heritage Site identification	Increase in the budget.	Budget increase. Increase the number of monitoring days.

Increase in the number of monitoring days
Increase in back-end reporting

3. Budget Status

Matcon increased excavator and trucking, capacity has been added to complete remedial excavations and screening. 98% of the NIR's and ROEP's have been approved and can be completed by end of month December 15. Properties that are awaiting environmental or archaeological approval (10 properties) may be delayed until the New year to begin remediation. Some properties will require additional remediation once more confirmatory soil samples are completed and failures 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 most recently November 5. 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. In addition, if archeological shovel testing is approved the backfilling process will be delayed and additional costs will occur particularly for site facilities costs being extended out at least two months.

Three options for remediation and archaeological work continuing in 2023 have been prepared and will be presented to Council on Dec 14th. Each of these three options will have a schedule and cost impact to the project and will be further elaborated in the December Status Report.

Current Project Status	Cost	Comments
Baseline Budget	\$19,190,500	Planned Budget
Committed	\$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

The schedule has been readjusted to add the insured properties to the scope as well as adjust the time to screen the contaminated soils for artifacts. An additional 2 months have been added to the schedule for these properties and activities with an estimated end date of February 2-23, not including backfill. Shovel testing could extend the schedule to a completion date in the spring/summer of 2023.

It is anticipated that all remaining NIRs (2 properties) will be submitted to the BC ENV by end of December. Focus is on 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.

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
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	Feb, 2023	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	December 30, 2022		0
18	Leak Detection Phase 2		December 9, 2022	Jan 2023	0
19	Substantial Performance	Sept 30, 2022	January 30, 2023		8
20	Water system online	April 1, 2023	April 1, 2023		



5. Project Photos



Photo 1 – Zone 1-3 scrapped and confirmatory samples taken



Photo 2 – Metal Debris 90% removed, some retaining walls remain pending geotechnical evaluation



Photo 3 – Retaining wall works in progress west of Highway 12.



Photo 4 – Zone 7 works started in approved properties



Photo 5 – Retaining walls still pending removal



Photo 6 - Zone 3-6 ready for backfill