



Staff Report

Community Services

Report To: Committee of the Whole
Meeting Date: November 17, 2020
Report Number: CSOPS.20.017
Subject: Craigleith Heritage Depot Reopening and Remediation Update
Prepared by: Ryan Gibbons, Director of Community Services
Aaron McMullen, Manager of Facilities/Beaver Valley Community Centre/Tomahawk Golf Course

A. Recommendations

THAT Council receive Staff Report CSOPS.20.017, entitled “Craigleith Heritage Depot Reopening and Remediation Update” for information purposes;

AND THAT Council acknowledge and forward a letter of thanks and appreciation to the Municipality of Grey Highlands for authorizing the secondment of Grey Highlands Museum Curator, Mr. Robert Lanterno to assist in the Craigleith Heritage Depot Remediation Project.

B. Overview

This report outlines the progress to date on the Craigleith Heritage Depot air quality and the associated building remediation that allows for the building to be re-opened to the public. The report also outlines a resource sharing opportunity with another municipality.

C. Background

On September 27, 2019, a report was submitted to the Joint Health and Safety Committee identifying an air quality concern brought forward by staff of the Craigleith Heritage Depot. Community Services facilities staff was notified and immediately contacted a certified and qualified Building Biology Environmental Consultant and Inspector to provide analysis of the air quality. The consultant was onsite and took samples on October 16, 2019. Preliminary test results showed high particulate counts in the basement area, minimal particulate counts in the upstairs area, and radon issues above Health Canada guidelines. Preliminary findings were provided to Community Services facilities staff on the evening of October 18, 2019, resulting in sealing off the entry way to the basement to prevent further exposure to all occupants as per the direction of the consultant. Community Services facilities staff was on site the morning of October 19, 2019 to seal off the basement entry way. Correspondence was sent to the Library CEO, Depot Curator and the Director of Community Services, noting the findings and direction at which staff was taking in relation to the recommendation of the consultant. The final report

was received by Community Services facilities staff on November 11, 2019, indicating that air quality issues were present, and a full facility remediation was required, consisting of cleaning and the removal of particulates.

Within the final report, information was provided detailing findings from the preliminary testing showing above normal levels of radon gas within the depot. Radon gas is a product of the decay of radioactive elements that naturally occur in rocks and stones in the soil. Local knowledge of the Craighleith area has identified Depot neighbours having dealt with radon gas within their homes in the past.

On February 26, 2020, the radon remediation in the Craighleith Heritage Depot was completed by a contractor certified by the Canadian National Radon Protection Program (C-NRPP) and membership in the Canadian Association of Radon Scientists and Technicians (CARST).

Upon completion of the radon remediation system, testing devices were provided from the Public Health Unit and placed in the basement in early June. Each device was placed for the minimum recommended testing evaluation of 91 days and sent to a lab for review, as per information from the Grey Bruce Public Health Unit website and the device manual. They were provided to the lab the week of August 9 and results received October 1. Information received from the test results show a reading of 15Bq/m³ (Becquerels per cubic meter). The radon test results are well below the EPA (Environmental Protection Agency) action level of 200Bq/m³.

Staff was able to expand the depth of the project team by seconding Robert Lanterno, the Municipality of Grey Highlands Museum Curator, on an hourly basis. Mr. Lanterno holds expertise in HVAC systems and museum operations. With his expertise, he provided advice to the facility team regarding technical requirements of the HVAC system.

Staff, along with the Depot Curator and Library CEO, met with Mr. Lanterno via a Microsoft Teams meeting and discussed the issues to date, the radon remediation project, and next steps for replacement of the existing HVAC system. During the discussion, Mr. Lanterno recommended that prior to replacing the HVAC system, facilities staff purchase a unit that will provide readings for air quality, radon, humidity, temperature, CO₂ and barometric pressure. An "AirThings" monitoring system was purchased and installed in the basement. Readings have been recorded and reviewed since the installation on April 14, 2020. Since that time, no air quality issues have been present with an average of .3pCi/L (Picocuries per liter of air, or pCi/L, one of the preferred measurements for the speed of decay in radon, is equal to one trillionth of a curie). This reading is well below the "No Action Needed" classification (any reading below 1.3pCi/L). If the existing equipment remained in the basement, it was also suggested that an exhaust fan venting outside be installed to provide fresh air pulled inside from outside and help balance the air quality. A pre-existing exhaust fan was in the basement and put into service.

On April 18, 2020, facilities staff and the Depot Curator met with Mr. Lanterno on site at the Depot. The intent of this meeting was to familiarize Mr. Lanterno with the layout, the HVAC system, the radon remediation process, and to get recommendations for the replacement of the HVAC system. During the discussion, Mr. Lanterno was provided the "AirThings" readings to

that point. The readings to date are shown in the Analysis below. Mr. Lanterno recommended that no actions be taken in replacing the HVAC system as the readings do not warrant any change.

D. Analysis

This report was prepared to provide council and the public with the information on the status of the Craighleith Heritage Depot air quality remediation. All existing mechanical equipment has been deemed to operate within the acceptable parameters for the operations of that facility as per Mr. Lanterno. Depot staff have sealed all artifacts that can physically be sealed to assist in reducing air quality concerns.

The chart below shows the “AirThings” air quality readings since April 14, 2020.

Air Quality Measurements							LEGEND		
Date	Radon	VOC	CO2	Humidity	Temperature	Pressure			
							Radon	■	0 - 1.3 pCi/L
								■	1.4 - 2.6 pCi/L
								■	2.7 - 4 + pCi/L
14-Apr	0.3	281	519	30	66	996			
16-Apr	0.4	250	451	30	65	999			
							VOC	■	<250 ppb
20-Apr	0.4	173	470	30	64	989		■	>250 and <2000 ppb
28-Apr	0.4	55	434	30	65			■	>2000 ppb
4-May	0.4	62	447	38	65	989			
26-May	0.3	96	425	52	67	994	CO2	■	<800 ppm
19-Jul	0.3	107	533	65	67	992		■	>800 and <1000 ppm
3-Aug	0.4	132	526	57	69	991		■	>1000 ppm
24-Aug	0.29	76	483	65	64	923			
14-Sep	0.3	83	521	51	63	945	Humidity	■	< 30%
29-Sep	0.4	106	574	51	70	990		■	> 30 - < 70%
								■	> 70%
							Temp	■	< 64 F
								■	>64 F - < 77 F
								■	> 77 F

The readings within the chart are all within the acceptable levels. The largest concern within the air quality, and health and safety of staff and patrons was the radon, which is far below the acceptable levels. Clearance testing was provided though the Public Health unit with results returned at 15Bq/m3 which is well below the EPA action level of 200Bq/m3.

With the recommendations of Mr. Lanterno and test results showing acceptable levels, staff is not recommending an HVAC replacement and continuing to monitor the air quality of the facility. Air quality is measured constantly by the devices. The devices have warning lights on them for on site staff and they are formally reviewed by maintenance staff monthly.

The benefit of the process completed in the project is evidently in the cost of the effectiveness of the measures. Initially, \$25,000 was identified for the engineering, where costs were limited to actual remediation.

E. Strategic Priorities

1. Communications and Engagement

We will enhance communications and engagement between Town Staff, Town residents and stakeholders.

2. Organizational Excellence

We will continually seek out ways to improve the internal organization of Town Staff and the management of Town assets.

3. Community

We will protect and enhance the community feel and the character of the Town, while ensuring the responsible use of resources and restoration of nature.

4. Quality of Life

We will foster a high quality of life for full-time and part-time residents of all ages and stages, while welcoming visitors.

F. Environmental Impacts

This report identifies very little environmental impact. Radon remediation measures took place which has reduced the radon levels within the facility to acceptable levels.

G. Financial Impact

To date, the Town has spent \$9,000 of non-budgeted funding on the remediation work at the Craigleith Heritage Depot. These repairs and maintenance will be funded from the Town's Facility Asset Replacement Reserve Fund.

Library and Depot staff spent approximately 300 hours moving, tracking and containing artifacts.

The preliminary report for this issue requested a budget of \$25,000 for engineering to design an HVAC (Heating Ventilation Air Conditioning) system that would support the programming within the depot. Through consultation with Mr. Lanterno, it was suggested that the existing HVAC system did not require replacement if programming was modified to contain the artifacts. The programming has been modified and the HVAC system was not replaced.

H. In consultation with

Curator of the Craigleith Heritage Depot Museum

Deputy Treasurer / Manager of Accounting and Budgets

Director of Human Resources

Library CEO

Manager of Facilities/Beaver Valley Community Centre/Tomahawk Golf Course

Manager of Purchasing and Risk Management

A working group consisting of the Manager of Facilities/Beaver Valley Community Centre/Tomahawk Golf Course, Library CEO, Director of Human Resources, Curator of the Craigleith Heritage Depot Museum, and the Director of Community services met 9 times from December 2019 through April 2020, collaboratively finding the solution that was implemented.

I. Public Engagement

The topic of this Staff Report has not been subject to a Public Meeting and/or a Public Information Centre as neither a Public Meeting nor a Public Information Centre are required. Comments regarding this report should be submitted to Ryan Gibbons, directorcs@thebluemountains.ca . Also available is a frequently asked questions section on the Craigleith Heritage Depot page <https://www.thebluemountainslibrary.ca/museum.cfm>.

J. Attached

None

Respectfully submitted,

Ryan Gibbons
Director of Community Services

Aaron McMullen
Manager of Facilities/Beaver Valley Community Centre/Tomahawk Golf Course

For more information, please contact:
Ryan Gibbons
directorcs@thebluemountains.ca
519-599-3131 extension 281