

November 10, 2020
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Attention: **Mr. Roberto Campagna**

Subject: **Building Evaluation and Assessment
1 Maple Lane and 1112 Lisgar Road - Ottawa**

www.patersongroup.ca

Dear Sir,

Further to your request and authorization, Paterson Group (Paterson) conducted a visual assessment of the building condition along with a limited asbestos sampling program of the abandoned residential building located at the aforementioned site.

1.0 Background

Paterson was retained to conduct a visual assessment and collection of limited asbestos sampling throughout the of the residential building.

The subject building is a three-storey, duplex residential building with a full basement level. The building was abandoned for several years and was not maintained over that period. The building was subjected to extensive water damage due to the deteriorating condition of the roof. As a result, the building was impacted with significant mould growth. In addition to the mould growth and the age of the building, the presence of asbestos containing materials are expected.

The condition of the subject building is being evaluated. An evaluation consisted of a visual assessment of the existing condition along with a photographic record of these observations and collection for potentially asbestos containing materials was conducted to aid in this evaluation process. This assessment is also being done in conjunction with a structural assessment by another firm.

2.0 Site Inspection and Observations

Paterson conducted a walkthrough of all accessible areas of the building during a site visit on October 22, 2020 and documented the condition of the building materials and collected multiple samples for asbestos content analysis. The observations from the site visit are detailed below. Photographs documenting our visual observations are attached to this report.

The building exterior consisted of a stucco and wood finish. An addition on the western portion of the building had an exposed foundation that was deteriorating (Photograph 1). The roof was sloped and shingled. However, the roof did not appear to have been regularly maintained. Deterioration was observed on the stucco finishing on the façades of the building.

The interior of 1112 Lisgar Road consisted of a mostly carpet flooring and plaster and lath walls. Throughout the eastern dwelling of the building water damage was evident as walls and ceilings were degraded to the point of structure failure and have collapsed on the second and third floors (Photographs 1 to 5). The water intrusion had also resulted in significant mould growth throughout the dwelling (Photograph 6).

The interior of 1 Maple Lane consisted of hardwood flooring while the ceilings and walls consisted of a mixture of drywall, plaster and parging. Water damage was also evident throughout the western dwelling of the building. Ceilings and walls had also deteriorated to the point of structural failure on the ground and second floors (Photographs 7 to 10). Mould growth was also observed throughout the dwelling.

3.0 Asbestos Sampling

Asbestos is prescribed as a designated substance under O.Reg. 490/09 of the Occupational Health and Safety Act. Asbestos-containing materials (ACMs) are defined under O. Reg. 278/05 of the Occupational Health and Safety Act as having a concentration of 0.5% or more by dry weight of fibrous asbestos (i.e. chrysotile, amosite, crocidolite and/or other amphiboles). Asbestos was commonly used in residential and commercial construction between 1930 and 1980.

Paterson collected and submitted 14 bulk samples of building materials during the site visit on October 29, 2020. All samples were submitted to Paracel laboratories in Ottawa, Ontario for analysis. The potential asbestos containing materials were analyzed to determine the presence, type and content of asbestos, as shown in Table 1. The laboratory certificates of analysis are appended to this report.

Table 1 - Summary of Asbestos Testing 1 Maple Lane and 1112 Lisgar Road - Ottawa October 22, 2020				
Sample No.	Description	Location	Fibrous Asbestos Content	Other Materials
DWJC1	Drywall joint compound	Ground floor - 1112 Lisgar Road	1% Chrysotile	99% Non-Fibers
DWJC4		Ground floor - 1 Maple Lane	None	100% Non-Fibers
PIPRUN1	Pipe run insulation (Air Cell)	Basement - 1112 Lisgar Road	65% Chrysotile	10% Cellulose 25% Non-Fibers
PIPRUN2		Basement - 1112 Lisgar Road	Not analyzed (Positive stop)	
PIPRUN3		Basement - 1112 Lisgar Road		
PIPBOW1	Pipe elbow insulation (Parging)	Basement - 1112 Lisgar Road	50% Chrysotile	50% Non-Fibers
PIPBOW2		Basement - 1112 Lisgar Road	Not analyzed (Positive stop)	
PIPBOW3		Basement - 1112 Lisgar Road		
STUC1	Exterior stucco finish	Exterior facade	None	100% Non-Fibers
STUC2		Exterior facade	None	100% Non-Fibers
STUC3		Exterior facade	None	100% Non-Fibers
STUC4		Exterior facade	None	100% Non-Fibers
STUC5		Exterior facade	None	100% Non-Fibers
STUC6		Exterior facade	None	100% Non-Fibers
STUC7		Exterior facade	None	100% Non-Fibers
Notes: Bold – Asbestos containing material as defined under O.Reg. 278/05 as having a concentration of 0.5% or more by dry weight fibrous asbestos.				

Drywall Joint Compound

A total of 2 samples of drywall joint compound were collected and submitted for analysis. One sample analyzed was found to contain **1% chrysotile asbestos**. **Based on the analytical test results, the drywall joint compound in the residential building is considered to be an asbestos containing material.**

Pipe Insulation

A total of 3 samples of pipe length insulation were collected and submitted for analysis. One sample analyzed was found to contain **65% Chrysotile asbestos**. **Based on the analytical test results, the pipe length insulation in the residential building is considered to be an asbestos containing material.**

Pipe Elbow Insulation

A total of 3 samples of pipe elbow insulation were collected and submitted for analysis. One sample analyzed was found to contain **50% Chrysotile asbestos**. **Based on the analytical test results, the pipe elbow insulation in the residential building is considered to be an asbestos containing material.**

Stucco

A total of 7 samples of exterior stucco finishing were collected and submitted for analysis. No asbestos was identified in all samples analyzed. Based on the analytical test results, the stucco finishing on the exterior façade of the residential building is not an asbestos containing material.

4.0 Assessment

The current condition of the building poses health and safety concerns which are described as follows:

Water Damage

The building has sustained significant water damage that has deteriorated the structural integrity of building materials causing them to collapse at various locations. This current condition causes a safety hazard for access within the building interior.

The water infiltration has saturated many of the materials causing softening and sagging ceiling materials to drop to the floor. The water damage has also affected the deterioration of wall components both interior and exterior due to frost penetration.

Moisture reduces the insulation capabilities of wall sections causing further damage when freezing during winter months.

Mould Growth

The long term effect of water infiltration is elevated moisture levels that create a significant amount of mould growth on the surface of wet materials and within wall and floor cavities which are saturated.

The water damage has also caused significant mould growth within the building resulting in hazardous air quality conditions throughout the interior. The moisture in most of the materials will result in a lack of recoverable materials once the mouldy materials are removed. Even with the removal of these materials, the air quality will be affected even afterwards.

Asbestos Containing Materials

The analytical test results from this investigation identified the presence of friable asbestos containing materials (ACMs) in poor condition requiring removal by a licensed contractor. With the friable ACMs present and the moisture saturated condition of the building materials, it's expected that the removal of the ACMs will be a considerable exercise.

Worker Safety Access

The neglect of the building over several years has affected the structural integrity of the building interior. Prior to any future entry into the building, a structural assessment should be completed to verify that the building is safe for worker access and during any work programs.

5.0 Rationale and Justification for Demolition

Based on the current condition of the building, the extensive mould throughout the interior and the asbestos containing materials, in our opinion, there is extensive impact to the building that would require the bulk of the building to be demolished. Based on worker safety access and the compromised condition of the building interior, the building should be condemned and demolished from a safety perspective.

The rationale and justification for demolition is presented as follows:

- Extensive mould throughout the building due to moisture penetration has deteriorated much of the building interior.

- The air quality is negatively impacted by the mould condition and air borne spurs associated with mould growth.
- The removal of ACMs will be required to remove friable asbestos and avoid impacting the air and worker safety.
- Due to the extent of the various impacted areas, there is no value remaining in the building that can be salvaged.
- For the suggested demolition program, it's suggested that the building structure be taken down using a hydraulic shovel and that a dust suppression program be implemented during the process. Once demolished, the building debris should be loaded in appropriate waste containers and be hauled to an approved waste disposal facility.

We trust that this information satisfies your requirements.

Best Regards,

Paterson Group Inc.



Mark St Pierre, B.Eng.



Carlos P. Da Silva, P.Eng., ing., QP_{ESA}



Report Distribution

- Roca Homes (1 copy)
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Attachments

- Site Photographs
- Laboratory Certificates

Site Photographs

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1112 Lisgar Road and 1 Maple Lane – Ottawa

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Photograph 1: Deteriorating façade on the north façade of 1112 Lisgar road.



Photograph 2: Collapsed ceiling on second floor of 1112 Maple Road.

Site Photographs

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1112 Lisgar Road and 1 Maple Lane – Ottawa

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Photograph 3: Ceiling material from collapsed ceiling on second floor. Showing signs of moisture staining indicated cause of failure was from moisture intrusion.



Photograph 4: Additional collapsed ceiling material within closet on third floor of 1112 Lisgar Road.

Site Photographs

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Photograph 5: Deteriorating ceiling and wall material from moisture intrusion on third floor of 1112 Lisard Road.



Photograph 6: Basement office of 1112 Lisgar Road showing extensive mould growth from moisture intrusion occurring on floors above.

Site Photographs

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Photograph 7: Collapsed ceiling material on ground floor of 1 Maple Lane.



Photograph 8: Deteriorating walls on ground floor of 1 Maple Lane due to prolonged moisture intrusion.

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Photograph 9: Collapsed ceiling on ground floor of 1 Maple Lane due to moisture intrusion.



Photograph 10: Ceiling material from ground floor ceiling of 1 Maple Lane. Signs of significant water intrusion is shown from buckling hardwood flooring material.