Structural Condition Assessment – Old Irwin Inn 2-Storey Dwelling – 1386 Irwin Road, Lakefield

November 7, 2025

Prepared for:
Christina Laing and Aaron Goldstein

Cambium Reference: 21537-001

CAMBIUM INC.

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As requested, Cambium Inc. (Cambium) has prepared a Structural Condition Assessment report for the above property.

Respectfully submitted,

Cambium Inc.

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1.0 Introduction

This report was prepared for Cristina Laing and Aaron Goldstein. Our scope of work included:

- Review of drawings and documents made available to us (e.g. drawings, reports, repair/replacement quotes/invoices, etc.)
- Up-close review of structural elements and connections, using a ladder
- Visual walk-through of the property to evaluate overall structural conditions and identify building envelope deficiencies adversely affecting the structural system
- Discuss the performance and history of repairs with designated representatives (e.g. facilities management, maintenance staff, service contractors, etc.)
- Provide a sealed, written report that describes the structural systems, the history of deterioration and trends, our observations, and a summary of our findings and recommendations, as well as the purpose, methodology, assumptions and limitations

1.1 General Description

The property at 1386 Irwin Road, Lakefield consists of a 2-storey inn and a 1-storey dwelling with a boathouse on the north side. The age of the buildings is unknown. According to arial imaging, the Old Irwin Inn and Boathouse have gross floor areas (GFA) of about 2,600 ft² and 950 ft², respectively. This report covers the 2-storey Old Irwin Inn.

The structure is a cast-in-place concrete foundation with conventional wood framing for the superstructure.

The cladding includes a combination of horizontally-oriented vinyl siding and brick masonry veneer. There roof is sloped with a combination of sheet metal and asphalt shingles. Windows are typically punched, consisting of both single-glazed units with aluminum storms and double-glazed insulating glazing units (IGUs) in vinyl or wood frames.

Site overview (via Google Earth)

1.2 Land Acknowledgement

We acknowledge that the property is on the traditional lands of the Anishinabewaki, Wendake-Nionwentsïo and Mississauga peoples.

1.3 History and Reported Performance Problems

The purpose of the assessment was to identify building/structural elements that are structurally sound, require repair/replacement, and/or are suitable for re-use in redeveloping portions of the property.

Based on aerial imagery, a portion of the north and east sides of the Old Irwin Inn were demolished between 2018 and 2023.

We understand there are plans to redevelop the site, including demolition and new construction of the old inn. The buildings have been unoccupied and not in service for several years.

1.4 Information Provided

The Site Representative(s) listed below provided information about building systems.

- James Macgillivary, Architect

We reviewed the following documents:

- Site Survey, prepared by Elliot and Parr

1.5 Structure Description

Where exposed, we note the following:

Superstructure: wood planks on wood joists supported by conventional wood framing.

Ground floor: wood planks on log joists spanning east-west.

Foundations: cast-in-place concrete. There is a crawl space and basement access at the north elevation with exposed bedrock and dirt floors.

There is an addition on the west side of the original structure. The structure consists of rough-cut timber beams and columns and concrete block walls. The west cast-in-place concrete foundation wall of the original structure is also exposed in this area.

Typical view of wood framing (main floor)

Typical view of wood framing (roof)

Wood planks supported by logs spanning east-west (crawl space)

sement overview, west addition

Foundation wall at northwest corner

1.6 Building Envelope Description

1.6.1 Exterior Walls

The exterior walls are primarily clad with horizontally-oriented vinyl siding. Secondary elements include brick masonry veneer on the west side at the addition. Cast-in-place foundation walls are covered with parging. North and east exterior walls are generally un-clad and have exposed wood sheathing.

Where observed, the wall assembly of the original structure includes the exterior cladding (where present), plywood sheathing, fiberglass insulation, structural wood framing, polyethylene vapour barrier, and drywall.

North elevation

East elevation

South elevation

West elevation

1.6.2 Windows

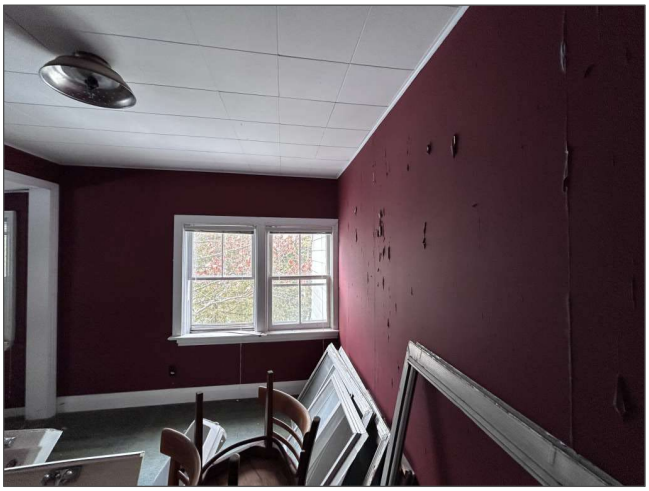
Windows are typically punched, consisting of a combination of fixed double-glazed insulating glazing units (IGUs) on the main floor and fixed single-glazed units on the second floor. Windows are in vinyl or wood frames. Operable units are a combination of horizontal and vertical sliders. Aluminum storms are present throughout. There are full-height windows in a strip configuration at the west side of the north elevation.

Where checked, the IGUs are dated 1979, 1982 or 1994 indicating varying manufacturing dates.

Double glazed IGU (basement)

Double-glazed full-height windows

Double-glazed IGU



Single-glazed IGU

1.6.3 Exterior Doors

The following exterior doors were present on Level 1:

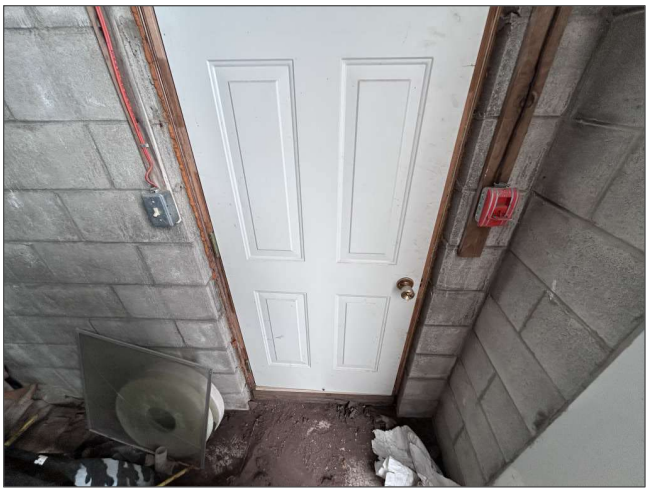
- Two (2) wood swing doors in wood frames at the south side.
- One (1) wood swing door in a wood frame at the south side, west end.
- One (1) vinyl sliding glass door with double-glazed IGUs in a wood frame on the east side.
- One (1) vinyl sliding door in a wood frame at the north side.
- Two (2) wood swing doors in wood frames on the north side.
- One (1) wood sliding door in a wood frame on the north side.

- Basement: one (1) metal clad wood door in a wood frame at the west side, north end and one (1) wood frame with a missing door at the north side, west end.

Typical wood door in wood frame

Double-glazed sliding door in a vinyl frame

Wood swing door and sliding door in wood frames



Metal clad wood door in a wood frame, basement

1.6.4 Sloped Roofing

The roof is sloped and primarily covered with asphalt shingles. Sheet metal roofing was installed following the partial demolition at the north and east sides.

Drainage is provided by eavestroughs to downspouts that discharge at grade.

The attic space is ventilated by perforated metal soffits and gable vents.

There is no permanent access to the sloped roof.

Sloped roof overview as seen from grade

Perforated metal soffits and downspout

Gable vent

2.0 Conditions and Recommendations

During our review, Cambium observed widespread structural and building envelope deterioration. Frequently observed deficiencies included, water-stained wood framing, unsealed door/window assemblies, step-cracking in brick masonry veneer, and broken glazing at doors and windows.

The foundation walls are generally exposed at the west side, including some of the main floor wood framing from an access hatch and the basement at the west side. The north side foundation wall is covered by parging. There are some localized deficiencies, including random cracking. There are several areas with exposed wood framing at exterior walls, floor assemblies, and roof framing where interior finishes have been removed or are deteriorated. There is extensive water staining throughout, with missing floor joists.

Given the extent of observed deterioration of the building envelope, it is not likely possible or practical to salvage the above-grade structure. As such, demolition is recommended.

The structural integrity of the below-grade structure may also be compromised. Extensive exploratory openings, testing, and analysis would be required to confirm whether the structure could be repaired and re-used, but this is not likely to be practical or cost effective. Full demolition of the below-grade structure is also recommended.

2.1 Recommendations

Deficiencies are itemized in Appendix A, including description, recommended actions, condition rating, priority ranking, the probable cause of the defect, and the consequences of deferring remedial measures. Photographs are included for most items and are included in Appendix B.

Recommended actions for each deficiency are itemized in Appendix A. These typically include:

- Monitor: site staff should be intentionally checking for changes in appearance. Where appropriate, finishes should be restored (e.g., clean and repaint drywall, replace damaged drywall, replace stained ceiling tiles, etc.) to permit monitoring. Where this is not possible, reference photographs should be made readily available to check for changes.

- Investigate: further investigation is/may be required to evaluate concealed conditions. This typically involves an engineering assessment with the assistance of a contractor to complete removals and isolated repairs (e.g. drywall openings, roof test cuts, etc.).
- Repair: replacement of isolated components is typically referred to as a repair, whereby the overall system is generally maintained. Repairs may be required to address minor and medium defects (e.g., re-pointed mortar joints, etc.). Repairs are often completed as part of routine and preventative maintenance.
- Replace: deterioration is widespread, extensive, and/or significant, and it is not possible or practical to maintain the component. Replacement may be required to address medium, severe, and very severe defects.

2.2 Condition Rating

Conditions are classified qualitatively per Ontario's Structure Inspection Manual (OSIM):

1. Poor: severe and very severe defects are visible. Rehabilitation and/or replacement is required.
2. Fair: medium defects are visible and may trigger a "preventative maintenance" type of remedial action.
3. Good: minor defects are visible. These types of defects typically do not trigger any remedial action since the overall performance of the element is not affected.
4. Excellent: element is in "new" as construction condition and no visible deterioration or defects are present. No remedial action is required.

2.3 Priority Ranking

Each deficiency is given a priority ranking with respect to the urgency of remedial actions, as defined below:

1. Critical priority: there is high risk of structural failure. Immediate action is required. Typically associated with elements in poor condition.

2. High-priority: the likelihood of imminent structural failure is low; action is required as soon as is reasonably possible. Typically associated with elements in poor condition.
3. Medium-priority: remedial action is recommended within 2 to 4 years. Typically associated with elements in fair condition
4. Low-priority: remedial action is recommended within 4 to 5 years or more. Typically associated with elements in fair to good condition.

2.4 Probable Cause

The probable cause of the structural defect, damage, or deterioration is indicated below, if known.

- Buildings have not been occupied for several years; no maintenance has been completed since partial demolition.
- Unconditioned, unsealed building envelope has caused significant damage, including water leakage, mould, rodent infestation and missing/failed insulation, air/vapour barriers, windows, and doors.
- Damage or deterioration from surrounding environment includes:
  - Freeze/thaw cycles caused by seasonal changes for exterior components.
  - Exposure of ultraviolet (UV) light.
  - Thermal expansion/contraction, typically where one or both elements of a component are restrained.

2.5 Consequence of Deferred Action

As components age and are continually subject to more stresses causing deterioration, the risk of failure increases.

The structure is generally in poor condition. Much of the existing building components have failed, resulting in interior and exterior damage. Extensive structural and building envelope repairs would be required to reinstate the building to a serviceable condition. We expect costs

for investigations, abatement and reconstruction would be comparable to demolition and new construction costs. We understand there are existing plans to demolish and redevelop the current building footprint.

3.0 Scope of Work

3.1 Authorization

This report was authorized by Christina Laing per our proposal (21537-P) on November 15, 2024.

3.2 Mandate

The purpose of this report is to assess the condition of the structure at a specific point in time.

The scope of work was completed in accordance with the guideline published by Professional Engineers Ontario, *Structural Condition Assessments of Existing Buildings and Designated Structures Guideline*. Per the Guideline, the scope of work is considered to be a “preliminary assessment” that is qualitative in nature.

3.3 Methodology

Cambium completed a site visit on December 12, 2024. Our team consisted of:

- Site reviewer(s): Andrew Romig, P.Eng. and Jackson Whitter
- Report author(s): Andrew Romig, P.Eng. and Jackson Whitter
- Report reviewer(s): Jermey Taylor, P.Eng. and Bob Payne

4.0 Standard Limitations

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Appendix A

Deficiency List

Appendix A - Deficiency List

Ref. No.	Deficiency	Recommendations	Location	Photo Ref.	Condition	Priority	Probable Cause(s)	Consequences of Deferred Action
S01	Step-cracking in concrete block wall	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Basement - West wall	1	Fair	Low	Settlement below foundation wall	Severity of cracking likely to worsen, more extensive repair/replacement project required
S02	Wood log column not fully bearing on concrete pad; no anchorage between column and foundation	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Basement	2	Poor	High	Construction deficiency	Potential movement and localized failure at raised deck structure
E01	Missing exterior wall cladding and weather barrier	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - North and East walls	3-4	Poor	High	Temporary sheathing installed after partial demolition	Structural damage to wood-framed structure
E02	Missing insulation and vapour barrier at exterior walls and ceiling/attic	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Level 1 and 2	5-6	Poor	High	Building unsealed after partial demolition, rodent infestation	Structural damage to wood-framed structure
E03	Mould on ceiling and exterior walls	Investigate - Designated Substances Assessment for disposal recommendations - asbestos, lead, silica, mercury	Irwin Inn - Level 1	7-9	Poor	High	Building unsealed after partial demolition, snow melt and rain infiltration to interior	Structural damage to wood-framed structure
E04	Vertical crack at mortar and masonry veneer below window sill	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - West side	10	Fair	Medium	Differential settlement after construction at concrete block wall	Potential crack dimensions increase
E05	Broken window pane	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Main floor - Northwest corner	11-12	Poor	Medium	Impact damage, no maintenance since building is not operational	Injury, pest access, exposure to elements, water leakage
E06	Exposed door opening	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Basement - North side	13	Fair	Low	No maintenance since building is not operational	Injury, pest access, exposure to elements, water leakage
E07	Roof leaks, missing/damaged insulation and vapour barrier	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Throughout	14-18	Poor	Medium	Building unsealed after partial demolition, snow melt and rain infiltration to interior	Injury, pest access, exposure to elements, water leakage
E08	Exterior wall openings	Deficiency will be rectified upon demolition and reconstruction	Irwin Inn - Throughout	19-20	Poor	Low	Building unsealed after partial demolition	Injury, pest access, exposure to elements, water leakage

Appendix B

Photographs

Photo 1: Ref No. S01

Photo 2: Ref No. S02

Photo 3: Ref No. E01

Photo 4: Ref No. E01

Photo 5: Ref No. E02

Photo 6: Ref No. E02

Photo 7: Ref No. E03

Photo 8: Ref No. E03

Photo 9: Ref No. E03

Photo 10: Ref No. E04

Photo 11: Ref No. E05

Photo 12: Ref No. E05

Photo 13: Ref No. E06

Photo 14: Ref No. E07

Photo 15: Ref No. E07

Photo 16: Ref No. E07

Photo 17: Ref No. E07

Photo 18: Ref No. E07

Photo 19: Ref No. E08

Photo 20: Ref No. E08

Appendix C

Key Plans