

KONTEK ENGINEERING LTD.

R.R.#4, 1012 N. Portage Road
Huntsville, Ontario, P1H 2J6

Date: May 14, 2008

Mr. Morris Bryant
Facilities Manager
Township of Lake of Bays
Baysville Arena
Baysville, Ontario

Dear Morris:

Find attached copy of building report for 1 Baysville Terrace.


We have looked at what would be required to make the building usable for rental residential or commercial use.

In both cases the structural integrity of the building is in our opinion inadequate and the mould abatement which will be required to make the building usable leave the building with little or no value.

It is our recommendation that the building be demolished and if desired replaced with a new structure.

If you have any questions do not hesitate to call.

Regards,

A handwritten signature in black ink, appearing to read 'Kip Coggins', with a long horizontal flourish extending to the right.

Kip Coggins P. Eng.
Principle

BAYSVILLE HOUSE

AT

1 Baysville Terrace, Baysville, Ontario, P0B 1A0

GENERAL REVIEW FOR

STRUCTURAL

MECHANICAL / ELECTRICAL

BUILDING ENVELOPE

REVIEW BY

KONTEK ENGINEERING LTD.

Huntsville, Ontario

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A) BACKGROUND

Kontek Engineering Ltd. was contacted by Mr. Morris Bryant of the Township of Lake of Bays to do an engineering evaluation for the house located at 1 Baysville Terrace, Baysville, Ontario, POB 1A0.

A site visit was performed on January 8, 2008 with Mr. Morris Bryant and Mr. Kip Coggins of Kontek Engineering Ltd. A second visit was made on May 7, 2008 to verify some of the previous observations.

B) FOUNDATIONS

Foundations are poured concrete walls. There is no floor in the building basement.

Foundations are in various states of deterioration. The back wall of the building falls apart when kicked.

There is no floor in the basement. Vapour barrier covered with sand is the basement floor.

Additional support posts have been added to support the main floor and they are supported on concrete blocks on the floor of the basement.

C) STRUCTURAL

The building is a 2" x 4" wood construction with drywall or lath and plaster interior. The exterior is a board sheathing covered by vinyl clapboard covering.

Floors are undressed 2" x 8" joists on 24" O.C. covered by 3/4" tongue and groove flooring. Spans for the joists are approximately 10 - 12 feet.

Floor loads calculate to 25 to 30 pounds per square foot.
Residential by code is to be 40 psf.
Commercial Office by code is to be 100 psf

If the building was to be considered for rental purposes an upgrade of the floor would be prudent. Should the building be considered for commercial office space then a structural upgrade of the floors would be a necessity.

There are several areas showing structural cracking in the lath and plaster in the upstairs area. Many of the window have peripheral lath and plaster cracking due to building movement.

The roof shows signs of sway back along the ridges. This is usually the result of the walls no longer supplying the diaphragm or lateral support need by the roof framing. Cracking in the upstairs area mentioned earlier will also support this argument.

D) INSULATION

The basement walls are insulated and vapour barriered with 4" of yellow bat insulation and 4 mil vinyl. This gives an R value of approximately R7.

The main part of the building is probably 4" bat insulation. Roof or attic area is probably 8" of bat insulation. Insulation is minimal as there was no snow on the roof during the winter. This gives an R value of approximately R14.

Several areas of the ceiling in the upstairs are showing water leakage and the telltale black spots of mould.

E) HEATING

The heating is supplied by a forced air oil furnace. The Hunter Comfort is late 1980 or 1990's vintage, and expected future life is hard to predict.

Generally, I would say that heating system is in the expected condition for its age and immediate expenditures would not be required for residential use.

However the system is not designed for commercial use and if the building was to be utilized as office space, it would have to be upgraded.

The oil tank is located on the back of the building. It does not meet the present MOE regulations for a double wall tank.

The building as it stands has no mechanical ventilation.

F) PLUMBING

The water system appears to draw its water from the river. A pump and pressure tank system are located in the basement area.

The water system has no disinfection or filtering as required for either rental residential or commercial uses.

There is an electrical 45 gallon hot water tank.

The system is copper piping. The age of the building points to a lead base solder being used.

G) WINDOWS

The windows appear to be relatively new vinyl windows, double pane and operable.

H) ELECTRICAL

The panel supply is 100 amp 120/240 volt single phase system.

The electrical system appears to have been upgraded. Wiring is all NMD 90 nylon coated and properly insulated.

The panel is a 36 slot panel with approximately half the slots used.

With oil heating and no air conditioning the panel has sufficient capacity for the building.

I) CONCLUSIONS

1. Structural foundations are deteriorating and must be replaced.
2. Main frame of the building is showing structural movement and would require shoring.
3. Building structure does not meet the present loading requirements for residential use nor does it meet the loading requirements for commercial use.
4. Building is full of mould and to continue healthy use will require a mould abatement program.
5. The water system is taking water from the river. Either a filtration disinfection system must be installed or the building changed over to town water.
6. The septic system does not appear to be in any danger, however if the building was to be used for commercial use it would have to be looked at.
7. The heating system may be adequate for residential use but will be totally inadequate for commercial use.
8. The windows have been changed out in the last 15 years and are adequate for residential or commercial use.
9. The electrical system may be adequate for residential use but will be totally inadequate for commercial use especially if A/C is required.
10. Insulation and building envelope are far below expected code requirements of today.
11. The copper piping would require a pressure check to see if it is still usable.

J) RECOMMENDATIONS

It is this author's recommendation that the cost to upgrade the building structure and to do the mould abatement program cannot be justified.

Cost for Residential Use	\$123,000.00
Cost for Commercial Use	\$200,000.00

(see Appendix #1)

Cost to remove building and build a new structure similar to the existing would be about

Cost for Residential Use	\$125,000.00	based on \$125.00 per sq. ft.
Cost for Commercial Use	\$200,000.00	based on \$200.00 per sq. ft.

K) APPENDIXES

- 1) Costing for renovation to bring building up to residential or commercial standards.

APPENDIX #1

Costing of repairs to the Baysville House

Item	RESIDENTIAL Est. Installed Cost	COMMERCIAL Est. Installed Cost
Mould abatement	\$15,000.00	\$15,000.00
Foundations:		
Raise and support building	\$15,000.00	\$15,000.00
Footings and basement walls	\$18,000.00	\$18,000.00
Upgrading of building structure	\$15,000.00	\$25,000.00
Building Envelope:		
Re-caulking	\$2,500.00	\$2,500.00
Insulation replacement for mould	\$7,500.00	\$7,500.00
Vapour Barrier	\$1,500.00	\$1,500.00
Sheeting replacement for mould	\$2,000.00	\$2,000.00
Replacement of drywall	\$20,000.00	\$20,000.00
HVAC		\$25,000.00
Relocation and replacement of oil tank	\$1,500.00	\$1,500.00
Electrical		\$12,000.00
Plumbing	\$5,000.00	\$15,000.00
Kitchen facilities upgrade	\$2,500.00	\$2,500.00
Washroom facilities upgrade	\$2,500.00	\$7,500.00
Parking		\$10,000.00
Architectural and Engineering costs	\$15,000.00	\$20,000.00
Total Cost	\$123,000.00	\$200,000.00

- NOTE: 1. The costs shown are estimates only and are not to be construed as fixed quotations.
 2. The general costing assumptions are that the building will be upgraded to present day conditions for either residential or commercial use.