

## **SAFE HOMES CANADA HOME INSPECTION REPORT SUMMARY**

**ADDRESS:** xxxxxxxx, Ontario

**BUYER:** xxxxxxxx

**INSPECTOR:** Andrew Christie, CET, RHI

**DATE:** August 3, 2006

**AGE OF HOME:** 13 years (approximately)

### **Scope of the Report**

This inspection is intended to assess the structure, building envelope, interior finishes, and the mechanical and electrical systems. It is a visual inspection only. The inspection was carried out on behalf of, and as a service to, the buyer. The furnace's heat exchanger and any water conditioning and filtering equipment are excluded from the inspection.

### **FOUNDATIONS**

The poured concrete foundation walls are sound and stable, as observable. One normal settlement/stress crack is observable at the front wall under the deck. There is no evidence of current moisture entry at any location in the basement. Work is not recommended to seal the crack at this time. Be aware that minor cracking is completely normal, and there may well be cracks in places that are not observable on this date. Be aware that water may well enter at some future point. If it infiltrates through a crack, normal settlement/stress cracks can normally be sealed quite easily and inexpensively. It is rarely necessary to dig all the way along a wall or around a structure to perform 'weeping tile' or 'face-coating' work. Dig down and seal normal cracks (if necessary) by applying hydraulic cement followed by a bituminous (tar) waterproofing system at the crack location only. (First shape the crack into a 'v' by grinding, so the hydraulic cement will adhere.) Then cover the repair with poly plastic sheeting, and protect it with a piece of rigid insulation. Alternatively, at poured concrete walls, cracks can be fully sealed by poly urethane injection at the inside face. The concrete slabs, including at the basement and garage, are quite sound. It is key to transport all rainwater and sump water well away from the structure; extend down pipes as required. The sump pump is functional, but its performance should be vigilantly monitored. When the float was lifted to test the unit, the pump would not initialize, but it did initialize shortly afterward. The reason for that delay is not known. Invite a qualified plumber to investigate if necessary. If the sump pump cycles often, at any time of the year, be sure to extend the outlet pipe well away from the structure, and install a backup pump at a higher float elevation. It is also recommended – again, if the pump cycles often – that a battery backup power supply and a water level alarm be installed, to help prevent flooding. The sump outlet is currently connected (it would appear) to the sanitary drain, which is inappropriate. A parging/stucco system has been applied to the outside face of the wood member that forms the junction between the top of the foundation wall and the underside of the bottom log at the wall assembly. The parging/stucco does not completely cover the steel mesh near the underside of the log, which may expose the parging/stucco system to premature, easily-preventable failure. The metal flashing that is in place along that junction does not provide a full seal to

prevent water and insect/rodent infiltration. While not urgent work, it is recommended that a qualified contractor be invited to install a fully-sealed flashing to prevent water and insect/animal infiltration, and to protect the top section of the stucco/parging system. Similarly, a fully-sealed flashing has not been provided at the junctions where the decks meet the home. While not urgent work, it is recommended that a fully-sealed metal flashing be installed, perhaps when the deck members are being replaced in the future, to prevent possible water infiltration, and to prevent possible moisture decay at the bottom of the log assembly. See the Wall section.

## **WALL SYSTEMS**

The logs and wood siding systems are sound and stable. There is no evidence of significant moisture decay or other failure at any location. The key to preserving the wall system is to maintain a full seal at all joints and junctions. It is also critical that a protective sealant application be maintained (a stain) at all exterior wood. Be sure to maintain the caulking joints around all windows and doors, and the sealant at the log junctions with each other. Note that a ladder was placed at multiple locations around the home so the logs, mouldings and wood siding could be thoroughly prodded to confirm soundness. The bottom logs around the home are the most susceptible to moisture decay, due partly to contact with snow. Those logs require extra care, and should be re-stained without delay. Further, the bead of caulking at the bottom of the bottom logs, where they meet the metal flashing, requires re-sealing at various locations. A number of checks, which are normal shrinkage cracks at logs and other wood members, require re-sealing. A product specific to (and manufactured for) log homes should be utilized to re-fill the checks. It is recommended that the exposed tops of logs at the corners of the home be coated with new stain to protect them. A small cavity has been filled with spray foam at one of the higher logs at the back right corner. Simply maintain some form of sealant there to prevent water infiltration and moisture decay. Some of the wood siding requires re-staining including at the front of the home, which faces toward the west, exposing it to the prevailing west wind. Immediate caulking is recommended at the tops of all horizontal wood mouldings, some of which were not caulked where they meet the wood siding. This includes the mouldings above the second floor windows. Caulking is also required at some of the vertical joints where the logs meet windows and doors, most notably at the rear door. Sealant work is required at some of the joints where the metal flashings meet each other along the bottoms of the left side second floor windows. Additional fastening and sealant work is required at some of the joints, at the corners of the home, where the low roof metal flashings terminate. Simply focus on sealing all joints that appear to be a possible water entry point. It appears as though the low roofs may have been installed at a date later than the initial construction date for the home. The junctions where the low roofs meet the log walls are quite sheltered; they are located well under the overhanging front and rear eaves. Therefore, sealant work is not recommended at this time.

## **FLOOR STRUCTURE**

The wood floor members are quite sound; there is no evidence of excessive deflection at the floor assemblies. Plywood sheathing bears upon lumber joists at the main floor assembly. The joists bear upon the foundation walls and upon central beams or bearing

walls that are not observable. The second floor is comprised of wood planks that bear upon timber beams. That assembly is stable as well. Some normal squeaking and minor deflection are observable at the floor assemblies. An obvious ridge is evident at the middle section of the right side floor, adjacent to the balcony. The cause cannot be confidently assessed, but the 'buckling/lifting' may relate to the nature in which the beams in that area are (likely) connected to the wood-frame wall that separates the kitchen area from the dining room. Simply remove the floor boards so adjustments can be made, perhaps involving planing at the top of a beam, where the floor boards have lifted. The imperfection does not indicate a significant structural concern. The perimeter log assembly may well have settled at a different rate than the interior wall.

## **ROOFING**

The metal roofing is sound and stable. Note that metal roofing systems are not 'maintenance free'. The low roof structure is sound underfoot. The high roof was examined by standing on the low roofs. Some minor re-fastening is required at the roofing metal. Some minor caulking is required at the lower terminations of the valley flashings. It is recommended that a 'drip-edge' flashing be installed at the rear eave of the high roof. One is already in place at the front eave of the high roof. Some corrosion is evident at the roof fasteners; it may or may not be necessary to replace some of the fasteners over the years; further investigation is required. Re-fastening is required at one of the front fascia flashings. The noticeable but slight bend an inch or two from the bottom edge of the roof has caused some minor corrosion at the metal. The cause of the crease or bend is not known. It would be a benefit to apply a rust-inhibiting paint to prevent further corrosion. Existing insulation and ventilation could not be assessed due to the 'cathedral' ceiling configuration, and since there is no access into the small attic space. It will be necessary to replace the rusted fasteners at the fascia metal with corrosion-resistant fasteners.

## **WINDOWS**

There is no evidence of failure at the thermal seals, excluding at the high, front, semi-circular window above the front door. All windows are thermal units, excluding in the basement, where fairly tight-fitting single pane slider windows are in place. Because the single pane sliders fit well into their tracks they provide a reasonable amount of thermal resistance. See the Wall section. Be sure to keep the friction points clean.

## **ELECTRICAL**

The service is 200 amps. All observable wiring is copper. Ground-fault-circuit-interruption (GFCI) protection is in place for the outside and bathroom power. However, the exterior GFCI receptacle at the garage is not functional. The GFCI receptacle at the left exterior wall has been blocked by a pipe, and will not open. All plugs are grounded. Two of the contactors have been 'doubled-up' in the panel, which is located at the left wall. Each circuit should have dedicated protection.

## **HEATING/COOLING**

The gas-fired furnace is providing heat throughout, but direct air diffusers are not provided for the second floor. Consider asking the seller how effectively the main floor

heat radiates/transfers up to the second floor rooms, and how effective the uninsulated log walls perform as a thermal barrier. While it is difficult to confidently estimate, it will likely not be necessary to install room-specific heat at the second floor, especially if the wood stove can be utilized. Be sure to invite a qualified heating contractor to carry out a preventative maintenance (PM) inspection at the furnace and water heater annually. Note that the water heater and furnace are direct vented through the left wall. The wood stove was not inspected. If a current, WETT-certified report is not available from the seller, it will be necessary to invite a WETT-certified fireplace/wood stove specialist to fully inspect the chimney and wood stove, including all clearances to combustibles.

### **PLUMBING**

The water supply is municipal. The sanitary disposal system is town sewers. The main shutoff valve is at the back left corner of the front left utility room in the basement. It is functional. Drains are ABS plastic. Supply pipes are copper. Fixtures are functional. There is no evidence of leakage at any location. A small amount of rust-coloured sediment is observable at the top of the hot water tank; its cause and nature are not known. Have it examined by the heating technician when they are on site servicing the furnace, or by a plumber if necessary.

### **INTERIOR FINISHES**

Imperfections are observable at various locations, but the home is quite lovely. See the Floor section. Be sure to maintain a full seal at the key joints in the bathrooms. Some minor re-caulking is required at the base of the shower.

### **WATER CONTROL AND SITE DRAINAGE**

Make sure the down pipes transport water well away from the structure. Expect re-spiking over the years. Additional braces/support brackets are required at the troughs, and some of the fasteners are corroded. Replace the fasteners with corrosion-resistant ones. See the Foundation and Roofing sections. Some minor cleanout is required at the troughs.

### **HOUSEHOLD APPLIANCES**

The appliances were not tested. The switch for the kitchen food waste mulching device could not be located, so it was not tested. **Be sure to test all appliances on the date of possession.** The exhaust destination of the bathroom exhaust fans was not evident. The garage door openers were not functional.

### **HOME AND CHILD SAFETY**

Beware the child/toddler falling hazard at the decks, where the guard rails do not comply with current building code safety requirements. A key is required to unlock the rear door, from the inside, which will impede exiting during a fire, for example. A 'thumb-turn' dead bolt is required there.

### **FUNGHI, RODENTS AND INSECTS**

There is no evidence of significant mold production or insect activity. A small amount of probable mold is observable at the drywall under the laundry tub, but the wall is dry behind the mold. (It was possible to reach inside the drywall assembly.) Simply clean

away the (probable) mold, which likely resulted from the laundry tub faucet, with water and detergent. It may be necessary to run a de-humidifier in May, June and July to minimize relative humidity in the basement. Replace the drum style humidifier at the furnace with a vertical filter type unit.

### **OUTSIDE STRUCTURES**

The outside structures were inspected only briefly. Note that some of the stair stringers at the decks are supported by wood plates, which will eventually rot from earth/wood contact. The decks are stable, and free from significant weathering.

Andy Christie, CET, RHI