

SAFE HOMES CANADA HOME INSPECTION REPORT

ADDRESS: xxxxxxxxxx, ON

BUYER: Michael and xxxxx

INSPECTOR: Andrew Christie, CET (civil), PHPIC

DATE: July 31, 2020

AGE OF HOME: less than one year

Scope of the Report

This inspection is a Tarion Warranty inspection for a new home.

This inspection is intended to assess the structure (including foundations, floors, walls and roofs), building envelope (including roofing), mechanical systems (including heating and plumbing), the attic space (including insulation), electrical systems and windows.

It is a visual inspection only. The inspection was carried out on behalf of, and as a service to, the buyer. Any non-visible elements, including buried pipes and any water conditioning and filtering equipment are excluded from the inspection.

Occupant safety – including alarms and means of egress – are completely excluded from the inspection. Safety notes are provided as a courtesy.

To provide a frame of reference, the ‘front’ of the home is the side facing xxxx



FOUNDATIONS

Access:

The foundation walls are fully observable outside.

In the basement the foundation wall is not fully observable due to insulation.

Type of Foundation:

Poured concrete

Stability/Condition:

The poured concrete foundation walls are completely stable, as observable.



Settlement/Stress Cracks:

One normal settlement/stress crack is observable.

The crack is normal.

The quantity of cracks is less than normal.

It would be completely normal to see half a dozen cracks at a house of this age, size and configuration. This inspector feels confident that most cracks result from the foundations being loaded at the time of construction.

No action is required to seal the crack here.



Water Infiltration:

The basement is wet! Standing water and water stains are observable at various locations in the basement.







There should be no standing water in the home. The water has likely infiltrated through specific entry points. It is unlikely that the standing water is from the time of construction. If it was, it should have been cleaned up/dried out by now.

Moisture is observable behind the poly vapour barrier, at the inner face of the insulation in the basement, at many locations. It is a major concern. The formation of moulds is a major concern. The impact upon air quality is a major concern. Damage to the insulation is a major concern. This moisture behind the vapour barrier is not 'o.k.', and is not 'normal'. The basement should have been effectively dried out before the vapour barrier was installed. At this point, it is strongly recommended that the entire insulation system be removed. Damaged insulation should be disposed of. The entire basement should be fully dried.



An examination of the entire inside face of the foundation can be carried out at that time, so all possible access points for water can be fully sealed.

Note that possible water infiltration up through the joints where the concrete floor slab meets the foundation walls is a definite concern. After all other work has been carried out to control water effectively away from the home and to seal possible entry points, further investigation will be necessary to determine whether water is infiltrating up through that junction.

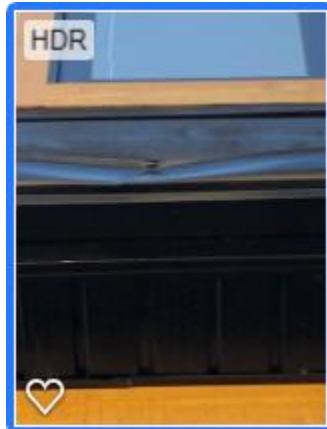


The buyer is concerned – quite reasonably – about standing water, a wet area that has been wet for some time, at the rear of the home. Some kind of drainage work – such as the addition of drainage material – may be necessary there.



The following steps are recommended to stop the probable water infiltration:

1. All eaves trough and sump water must be transported well away from the home, on top of the ground. A down pipe is missing at the back left corner of the home. One section of trough is damaged.



2. Open joints at basement windows must be fully sealed. Caulking is required at the front left basement window.



3. Formal flashings and fully caulked joints are required where a cementitious material/compound has been used informally at one of the right windows, where the opening in the foundation wall is larger than the window.



4. Formal sealant work – including flashing and caulking work – are required where the unit masonry system meets the foundation wall at the front part of the right wall.



5. The foundation wrap system has been pulled away from the wall at various locations; the fasteners are no longer connected to the system. Minimally, the entire top of the system should be formally re-fastened to the foundation. This inspector feels that the top edge of the entire system should be sealed against the foundation, but some specs do not require that work. The specification for the system should be examined, to determine whether sealant work is required at the top edge.



6. The concrete at some of the basement window sills has been finished such that a ridge of concrete extends up from the window sills, and will contain water against the caulking joints at the bottoms of the windows. This is not 'normal', and containing the water in this fashion will degrade the caulking prematurely. The ridges should be removed.



If it is felt that water is infiltrating through a crack in a poured concrete wall, the most practical, cost-effective way to seal a crack is to inject poly urethane at the inside face. It is rarely necessary/practical to dig down outside at poured concrete walls.

Buyers and all homeowners should know that it is normally possible to prevent and stop water infiltration by transporting eaves trough-captured water (and sump water) well away from the home, on top of the ground, and by sealing all possible/obvious entry points for water.

It is critical that all joints be vigilantly maintained (sealed) at basement windows, and at door sills.

Other work required:

The container for the backflow prevention device is not fully sealed against the concrete slab; it should be to help prevent water/insect entry. Further, the cover is broken.



The form ties at the front foundation should be removed and the resultant cavities patched.



Sump Systems:

The sump pump could not be easily tested, as the cover is bolted in place, and a two piece plug has not been provided by the builder. A two-piece plug enables testing of the pump.

Be sure to extend the sump outlet pipe well away from the home, on top of the ground.

If the sump cycles often, be sure to install a backup pump, and a battery backup power supply (or generator).

Maintenance:

Eaves troughs require periodic re-fastening, re-caulking and cleaning.

Again, be sure to fully seal/maintain all joints at door sills, basement windows and at all mechanical penetrations/covers.

WALL SYSTEMS**Access:**

All wall sections were fully observable.

Type of System:

Unit masonry.

Wood siding.

Condition of Walls:

The unit masonry is stable, and was well-constructed.



The wood siding is stable.



Settlement/Stress Cracking and Other Damage:

There are no – even normal – settlement/stress cracks at the masonry system.

Work Required:

Caulking is required at the horizontal mortar joints in the masonry sills. It is normal that builders caulk such joints, which helps prevent cracking and degradation at the mortar.



It is difficult to assess whether the aluminum flashings should be fully sealed against the masonry sills. This inspector feels if the flashings are very tight against the sills, caulking is less important. But at locations where a gap is observable, such gaps present obvious, possible entry points for insects and

water. They should be sealed, including here, at the front left corner of the home.



Caulking is required at the rear side of one of the left windows, where it is incomplete.



Significant cleaning is required at the siding and at a window or two.



Insect entry and possible habitation within the siding is always a concern, when the bottom of the siding and mouldings is not fully sealed. The system is open at a number of locations. While a drip edge flashing along the bottom would be a benefit, the important thing is to seal the locations where cavities or open joints can be felt up inside the system. Examples can be found at the right siding, and at the back left mouldings.



Caulking is required at the main electrical feed, where it meets the siding.



Maintenance:

Be sure to maintain all caulking at joints around windows, and at the entire building envelope.

Be sure to maintain a protective seal at all exterior wood.

FLOOR STRUCTURE

Access:

The underside of the main floor assembly is fully observable.

Condition/Stability:

The floors are sound and stable underfoot.

There is no evidence of significant deflection.

Type of Floor Assembly:

Waferboard sheathing bears upon engineered joists.



The joists bear upon the foundation walls and structural steel beams.



The beams bear upon structural steel posts and the foundation walls.

Moisture Decay:

There is no evidence of moisture decay at floor members.

Deficiencies at the Floor Assembly:

There are no obvious deficiencies at the floor assembly.

ROOFING AND THE ATTIC

Access:

All areas of the roof were fully observable.

A ladder was moved to all sides of the home to facilitate thorough observation of the roof and associated elements.

Type of Roofing System:

Asphalt shingles

Condition/Age:

The shingles are obviously new.

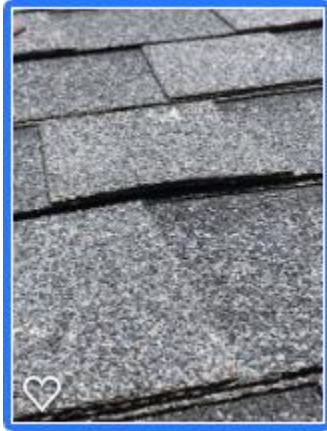
They were well-nailed overall. See Deficiencies below.



Re-shingling will not likely be necessary for about 20 years, best estimate.

Deficiencies:

A dozen or so nails were not fully sunk at the shingles. The roofer/builder should be invited back to fully sink all nails to help prevent shingles from blowing off the roof.



One shingle is damaged at the right strip of roof.



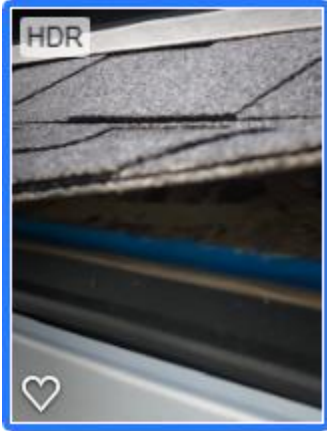
The shingles should be fastened down at the very bottom of the back left ridge.



The bottom edges of the vent flanges have not been sealed to the roof; they should be, and water/insect/wildlife entry is a concern.



The shingles are not supported by a drip edge flashing where they extend over the eaves troughs. Because of that, they are susceptible to cracking. Drip edge flashings should be installed to prevent cracking.



Additional fastening is required at the junction flashings, including where the front low roof meets the higher wall.



Roof Structure:

Plywood sheathing bears upon a truss assembly.

There is no observable damage at the sheathing.



Insulation:

The insulation here is loose cellulose. There is no spec sheet at the access point, which would show the exact required depth for this product to provide R60, the current building code requirement.

The depth as measured near the upper access varied from 12 inches to 16 inches, so the insulation is definitely deficient. Ask the builder to provide the exact spec for the product. Based upon a brief internet search, it takes between 19 and 22 inches to provide R60 at a cellulose system/product. Thus, the insulation is likely about 6 to 8 inches low, approximately, on average.



At the cathedral ceilings, batts of insulation have been used, but the depth is inconsistent, and possibly inadequate. The exact required depth should be determined by asking the builder to provide a formal specification. Based upon known thermal resistance of glass fibre batts, the R-value provided is likely between R40 and R50 only.

Further, one pot light was observed at a gap in the batts from the back left low attic. There was very little insulation between the light and the attic space. R60 must be provided at every light, and throughout all attics, including throughout the cathedral areas. The following photo shows a pot light's plastic cover.



Ventilation:

In the cathedral areas, the ventilation appears to be adequate, and includes high venting and soffit skirts.

At the four lower attics, there is no 'high' venting, such as surface venting, which should be in place to facilitate effective function of the 'low' soffit baffles. At least one surface vent (perhaps two) should be installed at the low attic spaces.

Further, there are no soffit baffles or high venting at the front left low attic.

WINDOWS

Type of Windows:

All windows are thermal units.

Thermal Seals:

None of the thermal seals have failed.

The ensuite bathroom window is broken.



Mechanical Function:

The windows are mechanically functional.

However, both windows at each of the front and rear pairs at the right wall are fixed; normally, one of the two windows at each pair would be openable.

Maintenance:

See the Wall section.

ELECTRICAL

Total Power:

The total power service is 200 amps, which is adequate for this home, notwithstanding unusual occupant requirements.

The fasteners are not fully sunk at the main power feed conduit.



The distribution panel is at the front right corner in the basement.

None of the contactors have been doubled, and there are no obvious hot spots.



Type of wiring:

All wiring is likely copper, based upon the age of the home, and by removing the distribution panel cover.

Electrical circuit details:

All receptacles are grounded.

Ground Fault Circuit Interrupter Protection:

GFCI (ground fault circuit interrupter) protection is in place for the exterior power, beside the kitchen sink, beside the laundry tub, and at the bathroom receptacles.

HEATING/COOLING

This section is incomplete.

Air Conditioning:

The air conditioner is functional.

PLUMBING

Water Supply:

The water supply is municipal.

Sanitary Disposal:

The sanitary disposal system is town sewers.

Main Shutoff:

The main shutoff valve is at the front wall in the basement. It is functional.

A second valve should be added on the 'house side' of the pressure relief tank, to minimize water flow quickly in the event of a pipe failure.



Plumbing Fixtures:

The fixtures are functional.

Drains:

Drains are ABS plastic.

Supply Pipes:

Supply pipes are copper and Bow Superpex Pex plastic.

There are no signs of leakage at the fittings.

Work Required:

A leak requires repair at the kitchen sink drain.

Hot Water Tank:

The hot water tank is vented through a modern PVC pipe.

The plumbing vent system, hot water tank and hose bibs are excluded from the inspection.

INTERIOR FINISHES

Imperfections are observable at various locations.

Be sure to maintain a full seal at the key joints in the bathrooms.

Interior finishes are – for the most part – excluded from the inspection.

WATER CONTROL AND SITE DRAINAGE

Make sure the down pipes transport water well away from the structure, as noted. Extend down pipes at least about 6 to 8 feet from the foundation walls.

Expect cleanout, re-caulking and re-spiking over the years at the eaves trough system.

See the Foundation section.

HOUSEHOLD APPLIANCES

The appliances were not tested. Be sure to test all appliances and alarms on the date of possession.

The garage door opener is functional.

HOME AND CHILD SAFETY

See the Foundation, Fungi, Heating and Electrical sections.

Beware the child/toddler and general falling hazard at the front landing, where the step does not extend the full width.



OUTSIDE STRUCTURES

Fences and sheds were not inspected.

FUNGI, WILDLIFE AND INSECTS

There is no evidence of significant insect/wildlife activity.

See the foundation section regarding work to carry out to dry the basement and prevent mould production

The bathroom and kitchen exhaust fans are functional.

Note that the ducts that serve the heat recovery ventilator (HRV) have been choked significantly by the clamps that fasten them to the underside of the floor assembly.



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