



Licence
Appeal
Tribunal

Tribunal
d'appel en
matière de permis

3512 -- ONHWPA -- Claim

**APPEAL FROM A DECISION OF THE CORPORATION
DESIGNATED FOR THE PURPOSES OF THE ONTARIO NEW
HOME WARRANTIES PLAN ACT**

TO DISALLOW A CLAIM

TRIBUNAL: LYNDA TANAKA, Chair

APPEARANCES: THE APPLICANTS, unrepresented

NEIL ABBOTT, Counsel, NATALIE MULLINS, Counsel, and S.
POPOVICH, Student at Law appearing on behalf of Tarion
Warranty Corporation

Ms. M. M. MORIN, Counsel and VINCENT PETICCA, Agent,
appearing on behalf of the Added Party, Fernbrook Homes
(Hampstead) Limited

**DATES OF
HEARING:**

October 9, 11, 12, 15, 17, 18, and 19, 2007
March 26, 27 and 28, 2008

Toronto

REASONS FOR DECISION AND ORDER

BACKGROUND

The Applicants appealed from the Decision Letter of Tarion Warranty Corporation (Tarion) dated March 28, 2006 with respect to a home they purchased from a builder, Fernbrook Homes (Hampstead) Limited ("Fernbrook"), in which Tarion denied the Applicants' claim for warranty on their home.

The Applicants' complaint is with respect to the heating, ventilation and air conditioning system ("HVAC system") in the home, which is a high velocity combination domestic hot water and heating system ("high velocity combo system").

The Applicants say that the high velocity combo system as installed in their home cannot heat the house to an appropriate temperature. The expert evidence on which they rely is to the effect that the HVAC system does not comply with the Ontario Building Code (OBC), has defects, and is not properly installed. They claim a payment from the compensation fund in the amount of \$90,000 to replace the HVAC system with one that does comply with the OBC and is properly installed. Fernbrook's position is that the HVAC system is installed in compliance with the OBC and so long as a comfortable temperature is reached, that is the limit of their responsibility. Tarion requests an order of the Tribunal under Section 14(7) that it perform additional investigation and perform or arrange for performance of work to rectify the problems.

PRELIMINARY MATTERS

This appeal was the subject of several pre-hearings before the Tribunal, including motions by the parties with respect to the procedures to be followed. The appeal was consolidated with the appeal by a homeowner of another house in the same development. As a result of the consolidation, the Applicants assumed that evidence admissible in one appeal would be relevant and admissible in the other, without any question being raised as to admissibility. On the eve of the hearing the applicant in the other appeal was hospitalized on an emergency basis. These Applicants were prepared to go ahead with the hearing, though they wished an adjournment to allow the other appeal to proceed as consolidated. No date was provided to the Tribunal as to when the other applicant could proceed. Following argument of the issue of adjournment, for reasons delivered orally, the Tribunal granted a two-day adjournment and separated the two cases. Both of the appeals had been outstanding on file at the Tribunal for 18 months, a period longer than most cases take from appeal receipt to completion. In addition, the time set aside for hearing was two weeks, a very long period of time for this Tribunal, which was therefore not available for other appeals. The hearing was scheduled to commence on October 9, but was adjourned until October 11 to permit the parties to reorganize their evidence as required, due to the fact that the other applicant's evidence would not be going forward at that time.

On October 11 Tarion's counsel requested that the evidence of the experts be limited to examination in chief until such time as the other applicant's case was ready to proceed. The purpose of this was to prevent the experts from "going to school" on the cross-examination in this case and changing their answers in the next case to give answers more appealing to the Tribunal. The Applicant objected and the Tribunal rejected the request for reasons given orally.

As part of the unlinking of the two cases, the Tribunal ruled that evidence of the other appeal would only be admissible on a limited basis so as to minimize prejudice to the other applicant, whose case was ultimately scheduled some months later. As the case proceeded, evidence of the other applicant's home and evidence of other homes in the development and in other developments with the same heating system was admitted. Some of the bound exhibits contained experts' reports that related to the other matter, and these and any other unproven documents relating to the other matter have not

been referred to in the course of preparing this decision, just as they were not referred to in the evidence.

The other appeal with which this appeal had been consolidated was subsequently settled by the parties without the need for a hearing.

The Applicants requested that their names and the address of their home not be published. Tarion objected to this constraint on the basis that the warranty legislation is consumer protection legislation and the public should know the details with respect to this home. The ruling was reserved. In accordance with the requirements of the Freedom of Information and Protection of Privacy Act, the Applicants' names and address are not included in this decision. If Tarion believes that its mandate to protect the public requires the publication of the information, it can take whatever steps within the law it believes is appropriate.

The Tribunal wishes to express its thanks to the parties for the presentation of very interesting engineering issues as well as a lengthy history of events. The evidence included careful review of manufacturer's specifications for the components of the HVAC system installed, as well as of the Ontario Building Code and other associated documents including guidelines and standards for designers and installers of HVAC systems in residential buildings. These reasons contain a summary of the evidence and the opinions expressed, rather than a recitation of all the evidence heard. The Tribunal has carefully reviewed all the documents that were filed as exhibits, including the expert reports, and the evidence heard in arriving at its decision.

EVIDENCE

The Applicant testified and called to testify as experts John R. Kokko, P. Eng. and Dara Bowser. In reply evidence, the Applicant called to testify John D. Hubbert, P. Eng. and another homeowner.

The Applicants signed an agreement of purchase and sale on October 3, 2001¹. The transaction closed in March 2002, but the Applicants did not move in immediately. Problems with the HVAC system arose quickly in the form of difficulties cooling the house in the spring of 2002².

In the summer of 2002, after moving in, the Applicants made frequent calls to the contractor who installed the HVAC system without arriving at any solution to the cooling problems. Their complaint forms indicate that the air conditioner originally installed was smaller than required under the agreement of purchase and sale and it was subsequently replaced. Even with the replacement air conditioner, the HVAC system still could not cool the house to a temperature below 80 deg F. For further mitigation, the Applicants installed 2 ceiling fans, wood shutters on the windows, table fans and tinted sheeting on the windows.

¹ Exhibit 7, Tab 1

² Exhibit 7, Tabs 4, 5 and 8

It became clear to the Applicants in late 2002 that the house was also not heating as they expected. Despite significant efforts, and the use of gas fireplaces continuously, the HVAC system was, according to the Applicants, unable to meet the heating requirements at a comfortable temperature in the house.

The Applicant testified that she has bought at least four other new homes covered by the Tarion warranty system and she was pleased to see in her agreement of purchase and sale that the system in this home included a high efficiency furnace. The specific wording of the agreement clause was:

HIGH EFFICIENCY FEATURES.

- Gas fired, forced air HIGH-EFFICIENCY FURNACE complete with ELECTRONIC IGNITION
- Ducting to accommodate future air conditioning"

In addition, the home was to include the following:

- "high efficiency water tank is a gas rental unit, power vented to exterior"³

The Applicant testified that in her home, if the thermostat is set at 68 to 69 deg F (the temperature range that they find comfortable), the temperature in the house is in fact in the range of less than 60 deg F. Since the winter of 2002 the Applicants have, on a day to day basis, coped with the inadequate heat by turning on the gas fireplaces on the main floor, the basement and the master bedroom, and running them continuously when the family is in that part of the house. They have also supplemented the HVAC system with portable heaters in the guest bedroom at the front of the house and in the basement. The gas fireplaces are all manually operated and do not have thermostats. The Applicants turn on the main floor fireplace as soon as they come in from outside in the cool weather to maintain a temperature in the main floor. The thermostat for the HVAC system is located in the dining room on the main floor, so that as that floor heats up, the HVAC system turns off, leaving the second floor bedrooms cool. The Applicants accommodate this by putting on the fireplace in the master bedroom. At the time of the hearing, one daughter and her infant were residing with the Applicants. The Applicant said that a portable heater is used in the front bedroom where the infant sleeps. Also, the heating overnight is such that in the morning on waking, she and her husband, figuratively speaking, "toss a coin" to decide who will brave the cold to turn on the gas fireplace in the bedroom.

In addition, the Applicant testified, and the other witnesses agreed, that the high velocity combo system is noticeably noisier than a conventional forced air system, apparently because the air moves through the ducts at high velocity and the ducts are smaller. The Applicant testified that when the system turns on, the noise in the master bedroom is loud enough that she is awakened by the sound in the night.

³ Exhibit 7, Tab 1

The high velocity combo system heats the house by drawing heat from the water in the domestic hot water tank and blowing the heated air by a fan powered by a ½ horsepower motor through a series of small diameter plastic tubes or ducts that run through the walls of the house with vents in each room. The system also requires return air ducts. The system is a variation on the conventional forced air heating system based on sheet metal ducts or vents throughout the house. In the high velocity combo system, the ducts are narrower than the conventional sheet metal vents. In addition, the conventional forced air system has a heat source that is a furnace that generates heat for the air, separate from the domestic hot water tank.

The subdivision in question consists of 52 linked townhouses. Vince Peticca is a manager with Fernbrook who was responsible for the development. Mr. Peticca testified that Fernbrook wanted to build the homes in an open concept, avoiding the space required for the bulkheads that accommodate the conventional forced air duct system to respond to customers who wanted the open interior concept. Oakville ("the City")⁴ had issued building permits based on the HVAC system design submitted by Fernbrook over the seal and signature of a professional engineer and on the basis of an HRAI⁵ form for combination systems such as this one.

Mr. Peticca testified that he had taken two officials responsible for inspecting heating systems installed in developments in the City to another subdivision to show them the proposed high velocity combo system in another development. The response of those City officials was that with proper design and installation, the HVAC system would be approved if installed in this development.

It is clear from the chronology that Fernbrook applied for approval of the high velocity combo system in 2000, long before the agreement of purchase and sale was signed by the Applicants. The Applicant testified that she was not advised of the change, nor aware of the differences between the two systems. She complained to Tarion about this substitution, but her complaint was made too late so she has not pursued that remedy and at this stage cannot. The substitution of the high velocity combo system for the conventional forced air high efficiency furnace system is, however, relevant to this matter, specifically with respect to the remedy sought.

The evidence establishes that a group of homeowners, who were also dissatisfied with Fernbrook's response to their complaints about the HVAC system, approached the City with their concerns. Since the City had issued building permits on the basis that the system complied with the OBC, the City agreed to undertake its own investigation and commissioned a study by John D. Hubbert, P. Eng., of J. D. Hubbert & Associates leading to a report dated April 14, 2005 (the "Hubbert Report")⁶. Mr. Peticca testified that Fernbrook had been part of the discussions leading up to the retainer of Mr. Hubbert and had complied with all the recommendations of that report.

⁴ Whether its legal status is as a town or a city, Oakville is referred to, as Mr. Peticca referred to it, as the City.

⁵ Heating, Refrigeration and Air Conditioning Institute of Canada

⁶ Exhibit 7, Tab 14

In the meantime, the Applicants continued to press Taron under the warranty. They requested conciliation, which occurred on September 23, 2004. The Warranty Assessment Report that flowed from that conciliation⁷, dated September 28, 2004, dealt with the substitution complaint and the complaint concerning the deficiencies in the HVAC system. The complaint on the substitution was held not warranted because it was too late (outside the one year period after possession), but the complaint concerning the air ducts in the basement, that the furnace does not heat the house sufficiently, that the air conditioner runs constantly and not sufficient vents was held to be warranted. The assessment was that under Section 15(2)(b) of Regulation 892, every vendor warrants that the electrical, plumbing and heating delivery and distribution systems (as defined) are free from defects in material and work. The observation in the Warranty Assessment Report was as follows:

"The homeowners were explained the process that has been undertaken with the two test repairs to similar homes on their street. The builder is working with Taron Warranty Corporation and the City of Oakville to resolve the heating concerns with many of the homes in this project. The homeowners were explained that the results of the two tested homes should be completed by middle of October and once a proper repair has been established then modifications to their system will be done shortly."

Despite this report, the cover letter to the Applicants reported that neither of their complaints was warranted.⁸

By e-mail dated August 4, 2005, from an administrative assistant at the City⁹, the Applicants were informed that repairs were scheduled for their home on August 11 and that the work to be performed was "balance return air and cavity return air". They were also advised that their water tank would be replaced. On August 8 the City sent out a further e-mail explaining the process to be followed and that after the upgrade of the tanks an engineer from the City would certify Code compliance and the Supervisor of Mechanical Inspectors for the City would "be in a position to sign off on Code portions on the homes."

On November 10, 2005, a year after the conciliation and six months after the City received the Hubbert Report, the Applicants were provided with the original heat loss calculations for their home by the City. Also, the City confirmed to them that the City's consultant, Mr. Hubbert, had concluded that the hot water tank had insufficient capacity to heat the house and provide for domestic hot water use and an additional 10 to 15 % heat loss/heat gain should be added. All homes in the development with over 45,000 BTU required a replacement tank.¹⁰ The new tanks were to provide the requisite heating capacity to heat the home to 22 deg C at a winter design temperature of 18 deg C, as stipulated in the OBC, and sufficient capacity for domestic water heating. The system was also to be capable of delivering the required cooling. The Applicants' home had a heat loss of 53,604 BTU according to the calculations provided to them by the City. The Tribunal notes at this time that there have been various calculations of heat loss for

⁷ Exhibit 6, Item 3

⁸ Exhibit 6, Item 3 Letter Mark Roccatagliata, Warranty Representative, Taron, to the Applicants

⁹ Exhibit 31

¹⁰ Exhibit 6 Item 4

homes in this development, but Exhibit 45 which shows the revised heat loss calculations for other homes, in the development, as calculated by Mr. Hubbert, does not include a heat loss calculation for this home. In any event, the parties are agreed that the original calculation of 53,604 BTU was inaccurate (too low), as were the heat loss calculations for many of the other homes in the development.

The Applicant testified that she had difficulty getting information from the City, but Exhibit 4 contains a series of e-mails between the Applicant and Mr. Hubbert in October 2005, dealing with the Town's insistence on the installation of the new hot water tank. Despite the fact that the Applicant testified that she could not get a copy of his report until much later, Mr. Hubbert set out in a lengthy e-mail the basis for the conclusion that the new hot water tank would solve the capacity issue. He concludes his e-mail of October 14, 2005 as follows:

"The system that has been installed is one in which there are some shortcomings, but with the upsized tank, a lack of heating capacity will not be one of them."

Mr. Hubbert advised that the heating coil at 160 deg F water entering the coil would provide more than enough BTU/hr to cover the heat loss in the unit, even with the air leakage that is present in the units. He acknowledged the complaints of some homeowners that the shower would go cold or the washer failed to wash properly, because the hot water was being called on to provide enough heat to heat the home on a cold day. In essence, the fix for the lack of capacity for the heat loss in the houses was to increase the capacity of the tanks to produce enough water and increase the temperature from the 130 deg F that was previously produced to 160 deg F to produce hotter air.¹¹

The City, then acting on Mr. Hubbert's recommendations, required that new hot water tanks be installed in the homes. The homeowners were not required to pay for the new tanks.

Dara Bowser undertook testing in another home in the same subdivision in November 2005, which indicated that the new hot water tank and changes made under Mr. Hubbert's recommendations made little difference. The Applicant was very concerned and, as will be noted in the evidence of Homeowner #3 later in these reasons, she contacted the City to no avail.

Exhibit 17 is a copy of a letter dated November 16, 2006, over a year later from J.D. Hubbert & Associates to certify, with the seal of Mr. Hubbert as a Professional Engineer,

"that with the upsized hot water tank set for 160F heating water operation, the heating system is now capable of heating the home to 22C at winter design of -18C as stipulated in the Ontario Building Code."

The letter goes on to state that the system has sufficient capacity to meet the domestic water heating requirements as stipulated in the appropriate Guidelines, namely house

¹¹ Exhibit 4, pages 8 and 9

heating load plus 20%. The letter also goes on to say that the system has the capability to deliver the required amount of cooling to the upper floor, and all returns were functioning as designed.

The Applicants were reluctant to accept the installation of the new hot water tank, referred to as the "Polaris tank", the chosen substitution, unless the City would agree to come back to their home to test the system with the new tank in place. The tests conducted by Mr. Bowser in November 2005 on another home in the subdivision certainly supported their skepticism. When the Applicants resisted the installation of the Polaris tank, they received an order to comply from the City under the OBC section 6.2.1.2(1), which required them to replace the domestic hot water tank in these words:

"The existing combo hot water tank has insufficient capacity to meet the heating and domestic water heating obligation "

The order to comply required the following:

"Replace existing tank with one with sufficient capacity that will cover the heat loss and domestic loads. For example: Polaris PR 100-34"

According to the Applicant, they arranged to have the Polaris tank installed in their home. It was not large enough to produce sufficient water for their bathtub, which is a Jacuzzi, and it made no noticeable difference in the heating of the home

The Applicants appealed the order to comply to the Building Code Commission with a view to having the issue of whether or not the HVAC system complied with the OBC determined by that Commission. The Building Code Commission issued a decision in December 2006¹², in which it declined to accept jurisdiction to deal with the appeal, because the City, on hearing that the Polaris tank had been installed, withdrew the Order to Comply. The Building Code Commission made clear that even though it was agreed that the Polaris tank was in fact removed from the home and the Applicants were no longer compliant with the Order to Comply that had been issued, the Commission did not have jurisdiction to deal with the complaint unless the City issued another order to comply and the Applicants filed a new appeal. The City's position on the Building Code Commission proceedings was that the Tribunal was the proper venue for determining the issues raised in the Notice of Appeal to the Commission which extended beyond the issue of the water tank.

The Applicants' claim on the warranty was ultimately denied by Tarion in the Decision Letter issued March 28, 2006. The reason given for the denial of the warranty claim includes the following:

"While Tarion finds that the original HVAC system installed appears to be non-compliant with the OBC, Tarion also finds that repairs in accordance with the Hubbert recommendations are an acceptable resolution of the defect..."

¹² Exhibit 19

The Corporation (Tarion) had full agreement from Fernbrook Homes to complete all warranted work as required by the Town of Oakville in accordance with the Hubbert recommendations. Your refusal to allow those repairs to be conducted to your home amounts to an interference with section 14(7) and also is a denial of reasonable access to Fernbrook Homes.

Based on your refusal to allow Fernbrook to effect performance of work to mitigate the defects associated with the HVAC system, Tarion finds you are not entitled to any further compensation from the Guarantee Fund."

At this point the Tribunal notes that the allegation of lack of access was withdrawn about a year after the appeal to the Tribunal was commenced, at a pre-hearing before the Tribunal in April 2007.

The Tribunal also notes the following statements under the heading "Observation" in the Decision Letter:

"The homeowners expressed concern that the performance of the HVAC system does not meet the design specification and OBC requirements. Tarion with agreement from the builder performed testing in the summer of 2004. These tests indicated that the system was not producing enough BTU to satisfy the heating requirements for this home. Based on the testing minor alterations were done to the system and additional supply vents were installed by the builder. These alterations did increase the system output but a concern remained as to whether the system was producing sufficient BTU.

The builder then worked directly with the Town of Oakville to assess the issue as the builder's position was that the HVAC unit had previously approved [sic] by the municipality. Oakville retained an expert, J.D. Hubbert & Associates to investigate the HVAC system and issues. Under the Town's [sic] direction Mr. Hubbert made recommendations to Fernbrook to perform repairs to the system to meet the requirements of the OBC."

There is no evidence before this Tribunal that in this home additional supply vents were installed as a result of any study in 2004, and Tarion did not provide any expert evidence from 2004 to support the statements above.

Despite Mr. Hubbert's explanation in the e-mail in Exhibit 4 referred to above, the Applicants believed then and remain of the view that the "fix" for the problems with their HVAC system imposed on them by the order to comply is not a fix at all. The Applicants observed no increase in the ability of the system to generate more heat. In addition, the new tank cost an additional \$33 per month in rental, double the rental cost of the original tank. In September 2006, John R. Kokko P. Eng and Dara Bowser conducted tests on the HVAC system with the Polaris tank in place, leading to their reports which will be referred to later.

The original tank, a 75 gallon Rheem, was subsequently put back into the home until August 2007. The Polaris tank was then reinstalled at Tarion's request in order to permit their experts to run tests in September 2007, pursuant to an order of the Tribunal. Tarion agreed to pay the additional utility costs that flowed from this reinstallation and as at the October commencement of the Applicants' case, that tank was still in place.

The air conditioning system is also alleged to be inadequate but because the appeal does not refer to the air conditioning, the Tribunal does not have jurisdiction; however, the inadequacies of the air conditioning system add fuel to the Applicants' strong feeling that the HVAC for this house is not functioning as it should. In addition, the experts are agreed that if you can push hot air through the house, you should be able to push cool air through the same vents.

In the course of trying to solve the problem of why their HVAC system is inadequate the Applicants have reviewed the manufacturer's specifications for the equipment. The air handler is manufactured by Energy Saving Products Ltd. and the manual for the HV100 system was filed as Exhibit 3, Tab B. The manual is intended, according to the note on page 1, to be read prior to installation. Notable on the first page is the following:

"Energy Saving Products Ltd.'s Hi-Velocity Soft-Aire comfort system is not meant as a direct replacement to conventional forced air systems, but more as an engineered comforte system especially designed to your specific requirements."

The manual contains specific instructions for the installation of the system including duct work and insulation in order to provide sound attenuation. The specifications for the different models are on p. 9 and indicate for the HV-110 unit 82,000 BTUH at 160 EWT (entering water temperature) with 1100 CFM (cubic feet per minute). The manual also specifies the minimum and maximum number of outlets, the fan coil size and motor size ($\frac{1}{2}$ horsepower and 7.5 amps). On page 12, the manual provides for the location of the vent outlets, i.e. vents should be 6" on centre from finished walls, corners or drapes.

Also, Exhibit 8 is the Hi-Velocity Systems Design Assistance Manual for Model HV100 (and other models) published by Energy Saving Products Ltd. Appendix A has the Hi-Velocity Fan Coil Specifications, which mirror those in Exhibit 3, Tab B.

The manual also provides information on conditions to avoid, such as kinks or tears in the flexible duct and making sure the ducting is not crushed or crimped. All leaks are to be sealed with tape or sealant in accordance with the building code requirement. The duct sizes are also specified.

The Applicant believes that the wrong size of ducts have been installed and produced measurements in support of this. She also produced photographs of the vents in her home indicating that the vents are not located in accordance with the manual¹³. With respect to the manufacturer's requirement of sealing leaks in the duct work, the documents at Tabs 2, 3, 4, 5, 6, and 7 of Exhibit 7, which span a period from pre-delivery well into 2003, contain references to gaps in duct work in the basement that are left open and unsealed for months. Tab 9 is a letter dated June 21, 2004 from the Applicants to Tarion documenting that the Applicants have had no response to their complaints about air leakage in the furnace room air ducts and asking Tarion to assist in getting action from Fernbrook, "who throughout this time has simply ignored our concerns." The letter cites frequent service visits from the HVAC installer.

¹³ Exhibit 3, Tab E, last four pages

With respect to the sealing of the leaks, there is tape in place, but there is an issue as to whether or not the tape meets the requirements of the OBC (Section 6.2.4.9).¹⁴ The Tribunal accepts the evidence of the Applicant's witness Mr. Bowser that the tape does not comply.

There is therefore evidence on which the Tribunal can conclude that the installation of the HVAC system was not done in accordance with manufacturer's specifications and further may not be compliant with the OBC. The manual is clear throughout in references¹⁵ that it is the responsibility of the installer to address the issue of local code compliance on the installation of the system.

HOMEOWNER EVIDENCE

Three purchasers (including the Applicant) of three different houses in this subdivision testified in the hearing. One of them had difficulty with the system until adjustments were made to vents. The other two homeowners, including the Applicant, were unhappy with the system as installed – its ability to heat and cool their homes and the noise emitted. Another homeowner in another development with the same HVAC system also testified as to problems he had with the same system installed in his townhouse.

Homeowner #1

Homeowner #1 was called to testify by the Applicants. He owns a home in a condominium townhouse development in another municipality. The home is around 4,000 sq. ft. and the development has won awards. The homes range in size, and in dollar value (up to \$2,000,000). Homeowner #1 is a professional engineer (electrical), who has in the past headed a billion dollar corporation. The expert for Tarion, Mr. Gerald Genge, relied on his involvement with this other development to establish his (Mr. Genge's) credentials to give expert evidence on the high velocity combo system.

Homeowner #1 testified as to the problems with the HVAC system in his home, which reflect similar issues as in the Applicants' home, and the months of investigation that he undertook with respect to the high velocity combo systems. Because of the size of his home, he has two such systems, which did not provide a proper level of heating or cooling for his townhouse and were noisy. He testified the system was also very expensive, more expensive in utility costs on a monthly basis than his larger single family home had been. Mr. Genge had been retained to provide and did provide recommendations for solving the HVAC problems when the condominium corporation complained to Tarion about the issues. Homeowner #1 testified that his understanding is that Tarion has many complaints on file about this HVAC system. He also testified that Tarion undertook the work recommended by Mr. Genge, which included adding

¹⁴ Exhibit 40 "Tape used for sealing joints in air ducts, plenums and other parts of air duct systems shall meet the flame-resistance requirements for fabric in CAN/ULC-S109, "Standard for Flame Tests of Flame Resistant Fabrics and Films."

¹⁵ Such as "Check your local building code for the ruling in your area" on page 4 under "Plenum Duct Location".

outlets and adding ducts, but none of the solutions Mr. Genge recommended were successful. After that effort to correct the problems failed, Dara Bowser was retained by the builder of that development, who was co-operative with the homeowners.

Homeowner #1 undertook his own testing using his own expertise and the results of the months of investigation he undertook into high velocity combo systems. He testified that when it was -23 deg C outside, it took 30 hours for the HVAC system to get his house to 68 deg F, even though the outside temperature got up to -3 deg C in the course of that 30 hours. When it was warm, 30 deg C outside, the house's cooling system could not maintain a 23 deg C temperature inside.

Because of a flood in an upper floor bathroom of his house, Homeowner #1's unit suffered severe water damage. The interior walls of the townhouse had to be replaced. In the course of that work, many problems in the HVAC system installation were revealed:

- none of the noise attenuation measures recommended by the system manufacturer had been implemented by the installer,
- an elbow joint in the duct was not connected, and
- air returns were misaligned, leading to the return air capacity being 50% of what it should have been.

Homeowner #1 testified as to the costs which he had incurred, partially supported by the insurance that responded to the flooding damage. His home had two systems installed from the outset because of the size of the townhouse; on the lower part of the house he replaced the entire system and for the upstairs, he replaced the mechanical components. He indicated the cost of a single system plus an extra duct was \$18,000. The cost of removing the drywall and existing system and rebuilding following installation of the new system would cost another \$18,000. He identified Exhibits 21 and 22 as reports prepared by Mr. Bowser on the HVAC systems in the condominium development where he lives.

Homeowner #2

Homeowner #2 was called to testify by Fernbrook as an owner in the same subdivision as the Applicant. Her agreement of purchase and sale was filed as Exhibit 38. It was executed in May 2000 and she testified that she took possession early in 2001. She testified that initially she had problems with the heating in the home. She acknowledged her own ignorance of how to manage the system. She obtained assistance and once certain adjustments to valves were made and she had the explanation, she had no further problems with the system. She likes her home to be warmed to 74 to 75 deg F and she had no difficulty achieving and maintaining that. She sold her home after three years in 2004 and no longer lives in the subdivision in part because of the aggressive neighbours who were concerned about their inadequate HVAC systems. The Tribunal notes that she did not participate in the inspections and work done by Mr. Hubbert or any subsequent discussions or events.

Exhibit 38, the agreement of purchase and sale package for her home, includes an extended 5-year warranty applying to all mechanical, electrical and plumbing systems against defects in materials and workmanship given by Fernbrook. The covered components include the furnace, central air conditioning, gas fireplace and heat recovery system, the central vacuum and electrical wiring. Schedule A to the agreement of purchase and sale is the same wording as is contained in the Applicants' agreement of purchase and sale referred to above.

In reviewing the Hubbert Report and the tables provided in Exhibit 45, for Homeowner #2's lot, the Tribunal notes that Mr. Hubbert's investigation in April 2005 indicated that an inadequate heat loss calculation (deficient by over 10%) had been done by Fernbrook's engineer on this property and further that the home required a new hot water tank and an adjustment of the return air in order to be OBC compliant.

Homeowner #3

Homeowner #3 was called in reply by the Applicants. Mr. Genge had testified that his opinion on the probable cause of the problems in the Applicants' home, subsequent to his reports Exhibits 27 and 28, was being influenced by his observations of the work in this homeowner's home in the fall of 2007 after he had completed those reports.

Homeowner #3 described the attempts to provide her home with consistent heating and cooling at a satisfactory level, which she said included four years of testing that ultimately led to testing in the other 51 homes and replacement of the entire system in her home in the fall of 2007.

She testified that she had met with Mr. Peticca in 2002 with other homeowners to discuss the problems that the homeowners were having with the HVAC systems in the homes, including the difficulties heating the homes. The contractor used by Fernbrook made several attempts in four years to rectify the situation. Homeowner #3 had been active in the homeowners group, which had gone to the City when they could not get any satisfaction from Fernbrook or Taron on their complaints.

Her home was one of the three homes initially looked at by Mr. Hubbert on the retainer by the City. The Hubbert Report had concluded that the heat loss calculations in her home were wrong, that she needed a larger hot water tank and additional duct work. She was an active participant in the investigative work done in July 2005 by Mr. Hubbert and his firm in the individual homes. Her task was to count the number of outlets in each home while Mr. Hubbert took airflow measurements. One of the City staff also participated in the investigation. She prepared a system of survey sheets to be filled in by each of the homeowners. A copy of the form was made available to the City, Mr. Hubbert, the builder or contractor and the homeowner. Exhibit 44 is a copy of the form for the Applicants' home indicating the date of inspection, the model of the house, the air handler model, the number of outlets, etc. and observations on the remedial work.

Exhibit 45 is a table which Homeowner #3 prepared showing in summary form the results of the survey and the work done including the measurements of the airflow and

air return, the number of outlets, the original heat loss calculation on file with the Town, the new heat loss calculation by Mr. Hubbert's firm and the remedial work to be done. For eight of the addresses there is no notation. The heat loss calculations were different in all cases where both existed, with Mr. Hubbert's being the higher figure.

Though she worked with Mr. Hubbert, she was dissatisfied with the results of his work for her home. She testified that on November 1, 2005 he tested the airflow from the outlets and then sent a letter, essentially signing off from any further work. She testified that after the remedial work was done, on November 8, 2005 she had Mr. Bowser re-measure the airflow. Mr. Hubbert had measured 727 CFM before the work was done and Mr. Bowser measured 758 CFM after all the work had been done. This work had included installation of an enormous new commercial size hot water tank that required the removal of door frames to get it in the house, and the addition of outlets and adjustments to return air.

Given that the level of CFM according to the manufacturer was supposed to be 1100, she contacted Tarion again, only to be told that its hands were tied because the City had agreed that the system was OBC compliant based on Mr. Hubbert's work.

Exhibit 42 is a copy of a letter sent to Tarion January 9, 2006 and signed by various homeowners, including both the Applicants and Homeowner #3. The letter cites the City's order to comply requiring the installation of new water tanks and the testing by Mr. Bowser establishing that the installation does not bring the HVAC systems into compliance. The letter also refers to a letter received by all the homeowners from the City dated May 19, 2005 identifying three issues that need to be addressed, one of which was the insufficient capacity of the hot water tank. The other two issues were:

- The engineer has identified that the air handler does not deliver the airflow capacity to handle the cooling systems without special coils and controls, and
- Balancing the system needs to be done to determine if sufficient air can be delivered to the 2nd floor.

These two items remained outstanding, some 8 months after the City's letter. The letter of January 9, 2006 contained attachments as described, though Exhibit 42 was a copy only of the cover letter. The letter goes on to state that the City's Chief Building Official would only state that the modified HVAC system (with the new hot water tank) is capable of achieving the performance requirements of Section 6.2.1.2(1) of the OBC but he had refused to state that the HVAC system complies with other sections of the OBC.

She testified that in her home under the Hubbert Report recommendations 13 outlets were added to the outlets in the system and additional duct work was also connected to the unit in the basement.

Homeowner #3 took photographs of the HVAC system including what was revealed to be behind the walls when the drywall was removed to expose the duct work. Exhibit 41 is a set of photographs with her comments, showing original installation problems as

well as repair work that Fernbrook's contractor had tried to do to fix the HVAC system deficiencies.

In the fall of 2007 the whole HVAC system was replaced. The removal of the drywall in the course of that work revealed problems in the installation of the ducts including kinks in the ducts where there should be none, a piece of plenum pipe that was taped at the end, rather than connected, and what she described as twists and turns in the ducting and disconnects of return air. She testified that she paid \$15,900 towards the repairs, but because of the special arrangement she had made, another party absorbed the lion's share of the cost, which she understood to be \$120,000. Her family had moved out of the home while the work was done and the home was completely repaired and restored after the work was completed. She did not provide any invoices to support the cost figures.

EXPERT WITNESSES

The Applicants retained John R. Kokko who is a Professional Engineer (Mechanical) who specializes in HVAC systems. He is the Vice President and Director of Commissioning Services of Enermodal Engineering Limited. He is registered as a Designer under the OBC with respect to "Houses HVAC", though most of his work and other qualifications relate to commercial rather than residential buildings.

As is clear from his position title, he is frequently retained to commission HVAC systems newly installed. In addition, he examines existing systems to determine if work is required in both the commercial and residential situations. He also designs HVAC systems and he has worked with manufacturers and Natural Resources Canada to design and approve designs of air handling equipment for residential situations. Since high velocity systems such as the one installed in this home are high energy users, he does not frequently work with such systems as his work is in trying to reduce energy use in buildings. He has never testified in a case in court, but has given expert opinion evidence on the Ontario Hydro 25 year plan for new generation capacity. He is not familiar with the Tarion warranty system, but he is familiar with the air handling and HVAC system installed in the Applicants' home.

He has experience in assisting HVAC system manufacturers and their customers in putting in new or fixing problems in installed HVAC systems. In those latter circumstances, his efforts are directed to make the system work, rather than to determine who is at fault. He was critical of the refusal of Tarion's expert, Mr. Genge, to participate in a joint inspection and analysis of the Applicants' home that might have resulted in a joint recommendation on how to modify the system or to replace the system to resolve the issues.

His letters of opinion are Exhibit 5, Tab D, (a report dated October 24, 2006 following an on site visit), and Tab E (letter dated November 20, 2006). Exhibit 9 contains the appendix to the report with the calculations. Between preparation of the two documents, Tabs D and E, he obtained access to manufacturer's specifications.

His site visit of September 24, 2008 was to take airflow measurements of the system and to identify the heating capacity of this unit in this house. His tests took approximately six hours. This retainer was initiated by Dara Bowser who had been retained by the Applicants to assist them. To undertake this work Mr. Kokko followed a test protocol designed to ensure that the components of the system were operating properly and using equipment designed for the purpose of making the measurements he needed. His report and his evidence included a description of the steps he took in that regard. His evidence and his report set out the protocol for his testing and will not be reproduced here in detail as Mr. Genge, the expert for Tarion, had no dispute with the testing methods or the outcomes recorded. It is, however, important to note that he took his measurements when the limiter on the water heater was set at 140 deg F and also when the limiter was off and the temperature was as high as the gauge would set, something in excess of 160 deg F. The measured water temperatures were 116 deg F on the first test and 133 deg F on the second test.

His conclusions were that the measured output of the air handling system was less than the calculated heating load and less than what the OBC requires. The result means that the airflow from the HVAC system cannot meet the demands due to loss of heat in the home. His opinion was that the system in the home cannot meet the requirements of the OBC of maintaining a temperature of 22 deg C when the outside temperature is -18 deg C. Given the substantial difference between the measured output and the calculated heating load that he estimated to be in excess of 20%, the result of his test is consistent with the observations of the Applicants that the house was cooler than it should be. He testified that the system is not able to put out the heat that is required to keep the house at 22 deg C based on the measurements he took and the heat loss calculations.

His conclusions specifically were:

- With the water heater set to 140 deg F, the output capacity was well below the heating load of the house.
- Raising the water heater to a temperature over 160 deg F raised the output but not sufficiently – it was still well below the heating load.
- The heating system is not delivering the heating capacity required by the heat loss calculations.
- Airflow in the house is significantly below the manufacturer's rated 1,100 CFM for the unit.
- There is a significant shortcoming with the fan capacity and static pressure provided by the air handler, which is only providing 693 CFM at 1.3" E.S.P.
- The ducting system, as installed, has too much restriction and is not capable of delivering the 1100 CFM at 1.5" E.S.P. even if the air handler could do it.
- The existing ducting system will never deliver all the required airflow at anywhere near the operating point that the design should have been for, with the manufacturer's ratings on the air handler.
- It is impossible for the existing fan to move the design airflow of 1100 CFM against the external static pressure required by the existing duct design.

He also noted that some points had not yet been proven:

- That the fan coil in the air handler is capable of operating at the manufacturer's rated output capacity if the airflow is increased to the rated 1100 CFM.
- The water flow through the unit.
- The exact entering water temperature from the water heater.

He indicated that these three points are not the limiting factors in the performance; rather, it is the combination of the air handler not being capable of providing the required airflow and the duct work not being capable of carrying the required airflow at a static pressure near the required design value.

His recommendations were:

- Verify an accurate room by room heat load calculation to ensure the heating and airflow requirement for each room is known.
- Get a new heating system that has an air handler to replace the existing one that can provide the airflow and heating capacity required for the house. The replacement unit could be either a higher heat output and airflow capacity air handler with hot water coil fed from the hot water heater or it could be a conventional high efficiency furnace.
- Replace the existing duct work to increase the number of runs, probably by 50%. He noted that adding this many ducts would not likely be a practical solution and it would be easier to simply install a more conventional ducting system.
- Finally, balance the systems to verify that they are working as expected and that every room obtains its airflow and heating capacities required.

He likened this work to redesigning and reinstalling the heating and ducting systems.¹⁶

Mr. Kokko explained the theory behind the air handling system and the high velocity system and identified components that must work at the correct level and consistently in order for the system to meet the heat loss requirements of the home. He testified that the test he conducted involved pushing as much air as hard as the equipment was designed to push. Putting in more ducts reduces the resistance to the air flow, just as kinks or bends may provide more resistance.

He was never asked to do a detailed design of modifications to the system. He estimated a cost of \$8,000 for the work. He was cross-examined as to his experience with costing of contracts and, while it has been three years since he provided costing for an HVAC system for a home, he is knowledgeable about labour rates for mechanical installations, albeit in a commercial context. His firm does provide estimates on installations of systems.

¹⁶ Exhibit 5, Tab E

In cross-examination he confirmed that if the heat loss were less, then the HVAC system theoretically could maintain the temperature required by the OBC.

He did not conduct the same tests as the Tarion consultant.

Dara Bowser

Mr. Bowser is a Certified Architectural Technologist. His qualifications and experience are outlined in Exhibit 14A. His firm, Bowser Technical Inc., is a small consulting firm, which specializes in HVAC systems. He is personally and his firm is qualified under the Ministry of Municipal Affairs and Housing certification system for the OBC as a designer and is designated as qualified for HVAC systems for houses and small buildings as well as other qualifications¹⁷. He has taught courses on the OBC to municipal building officials. His firm designs custom HVAC systems at a rate of at least one a day and does fault investigations at a rate of about one per month. His own home has a combo system. He has been accepted as an expert witness at the Tribunal in the past on a retainer by Tarion. He has knowledge and expertise in the OBC requirements for HVAC systems, and he files plans and designs for approval by Chief Building Officials in municipalities. He is an instructor for HRAI.

Tarion objected to his being accepted as an expert witness on the basis that he was identified as the agent for the Applicants to the Building Code Commission on the appeal of the order to comply launched in late 2006. Expert witnesses are supposed to be independent and impartial and not advocates of their clients' causes. Mr. Bowser completed the form for the appeal, which requires detailed information on the OBC sections in dispute and a concise statement concerning the nature of the dispute. In this appeal there were 9 items under the OBC. The Tribunal rejected this objection to Mr. Bowser testifying as an expert. An analogous situation might be the filing of an application for approval under the Planning Act for rezoning, which is normally done by an expert land use planner on behalf of a landowner, and the planner thereafter testifying as to his opinion before the Ontario Municipal Board on the appeal from the municipality's refusal to grant the application. These specialized applications are clearly beyond a reasonable expectation for the knowledge of a member of the public or lay property owner to complete. Tarion's suggestion that the homeowners, with the exception of those such as Homeowner #1 who have expertise that is pertinent, realistically could have gone forward with the appeal without expert assistance and that Mr. Bowser must thereafter be seen only as an advocate is untenable. The Tribunal does not find that Mr. Bowser, by completing the form as agent and assisting the Applicants with the process in a very technical tribunal environment, has tainted his independence as an expert, and the Tribunal accepted him as qualified to give opinion evidence on HVAC systems.

Mr. Bowser testified to his considerable experience with the type of system installed in the Applicant's home. He was retained by the builder on the problems in Homeowner #1's condominium townhouse development. He was retained by Homeowner #3 to

¹⁷ Exhibit 14B

assist her with respect to the HVAC problems in her home. He has been involved in the problems with the HVAC system in this development for the longest period of time and in the most depth, of any of the experts called.

Mr. Bowser was clear that his retainer by the Applicants was to advise with respect to OBC compliance. He was not retained to conduct a detailed investigation of the installation and the problems in it. At first blush, one might be critical of the Applicants in not expanding the retainer to that stage, but in the context of Tarion's emphasis on compliance with the OBC and the adversarial position with the City on that very issue, the limited retainer makes a great deal of sense.

Mr. Bowser's reports with respect to the Applicants' home are contained in Exhibits 3, Tab C and G. Exhibits 21 and 22 are the reports relating to the condominium development of Homeowner #1. Exhibit 37 relates to Homeowner #3's home and testing conducted there. Mr. Bowser testified that he brought Mr. Kokko into the case because he thought that he needed to have a professional engineer do the air flow calculations and assessment.

Mr. Bowser prepared a one page report dated September 22, 2006 (Exhibit 5 Tab C) setting out that the system with the new Polaris tank only provides 71% of the heating capacity required under section 6.2.1.1(1) of the OBC¹⁸ and does not meet the capacity required under section 6.2.1.2. (1).¹⁹

Tab G of Exhibit 5 is his Expert Summary Report dated December 18, 2006 in which he sets out in detail his position that the HVAC system as installed does not comply with the OBC. He also expresses the opinion that there are workmanship deficiencies and defects in materials identified in his report Exhibit 5 Tab C, as follows:

- The loop between the air handler and the water heater does not contain the throttling valves recommended by the HRAI Combo Guide²⁰.
- The speed controls on the face of the air handler are difficult for an ordinary person to adjust to achieve a predictable result.
- Many of the outlets are located closer than 6" to the walls, contrary to the system supplier's installation manual.

He recommended the replacement of the entire system and installation of a system of conventional design and construction. He rejects the modification of the existing system and the adding of a system for the attic because it is not possible to say for certain whether that modification would be successful or less costly than replacing the original system with a code-compliant system.

¹⁸ "Heating, ventilation and air-conditioning systems... shall be designed, constructed and installed to conform to good engineering practice appropriate to the circumstances such as described in..."

¹⁹ "Buildings classified as Group B, Division 2 or 3 occupancies or Group C residential occupancies that are intended for use in the winter months on a continuing basis shall be insulated and equipped with heating facilities that are capable of maintaining an indoor air temperature of 22 deg C (72deg F) at the outside winter design temperature referred to in Article 6.1.2.8."

²⁰ Exhibit 20

In addition, Mr. Bowser produced an estimate from a contractor for the recommended remedial work. He testified that he has had five to ten jobs with this contractor without any complaint. He described the estimates as a good starting point. The scope of work is the demolition and removal of the existing system, and replacement of the HVAC system with a conventional forced air heating system with sheet metal ductwork and the restoration of the house thereafter. The cost includes commissioning of the HVAC system after installation, repair of the building, boxing, painting and redecorating as well as a design fee and a fee to commission and balance the system. The total cost is \$90,000.²¹

Gerald Genge

Gerald Genge was retained by Tarion a few weeks prior to the hearing. His firm is Gerald R. Genge Building Consultants. He is a Civil Engineer by training and received his P. Eng in 1977. His curriculum vitae is Exhibit 25. His main focus during the years between 1977 and 1993 appears to have been on the building envelope, that is walls, windows and doors, roofs, structural integrity and components such as parking garages. Unlike Mr. Bowser and Mr. Kokko, he has not maintained his BCIN for himself with the Ministry of Municipal Affairs and Housing and at no time sought the qualification under the OBC as a designer for "House HVAC", as they did and have.²² He relies on his qualification as a professional engineer to support any applications for building permits that he may be required to submit for a client, rather than the BCIN from the Ministry as provided for under the Ontario Building Code Act, 2006.

Mr. Genge was accepted as qualified to give opinion evidence on building deficiencies subject to the concerns that were raised as to the limited exposure he has had to HVAC systems. It was clear from his evidence that he is not and does not purport to be a mechanical engineer with a specialized knowledge of HVAC systems. His main business is in analyzing problems in buildings and recommending iterative processes for uncovering the cause of the problems. He obtains expertise from others, as he requires it to address particular problems. He acknowledged that in the course of any work to specify the problems causing the insufficient heating in this home, he would consult a professional engineer specializing in HVAC systems.

Mr. Genge's knowledge of the high velocity combo systems, such as the one in this home, comes from his retainer on two disputes, the first being the townhouse development of Homeowner #1 and the second being the subject house and another property in this development more recently (Homeowner #3). The first dispute dates back approximately three years when he was asked to advise on the heating/cooling problems in the townhouse development. He wrote a report with his recommendations, but has not been involved since.

²¹ Exhibit 3, Tab G; Exhibit 5, Tab F

²² See Exhibit 26

On the development in this case, he visited the Applicant's home in the company of G. Wade Graham, P. Eng. who undertook certain measurements of the HVAC system. Mr. Graham was allowed access to the home to conduct tests by order of the Tribunal at a motion August 30, 2007.²³ While the order specified Mr. Graham's attendance, Mr. Genge also attended and, according to the Applicants, they had little choice but to let him in. In the course of that site visit, Mr. Genge took rough measurements of the rooms on which he based a heat loss calculation, which he fairly characterized as an estimate to determine if the heat loss calculations already done were within a reasonable range. He took photographs of the equipment and recorded information noted by Mr. Graham.

Despite the fact that Mr. Graham had conducted the tests that were done on the mechanical systems of the air handler and tank and had signed the original report, he was not called to testify. The reason given was that he had resigned his part time contract with Mr. Genge's company in the intervening period. Mr. Graham is not a mechanical engineer with HVAC system expertise, as is Mr. Kokko.

Mr. Genge also has had access in the fall of 2007 to the home of Homeowner #3 where substantial work was being undertaken to address heating/cooling issues. He acknowledges that his conclusions since he wrote his reports on the Applicants' home in September 2007 have been informed by his involvement since then at the other property. Specifically, he is aware that installation problems with the HVAC system in the other home in this development have been identified as a result of the work being done, and he believes that the return air supply may be a factor in the Applicants' home, as it appears now to be a factor in the other home.

Mr. Genge prepared a report dated September 14, 2007²⁴ and a cost estimate contained in a letter dated September 17, 2007²⁵. He had no criticism of the methodology or conclusions arrived at by Mr. Kokko, with the exception that Mr. Kokko's measurements of the return air and his conclusion that the return air is not the problem. Mr. Genge, based on what he has seen in the other house, believes that return air may be an issue.

Mr. Genge's report includes a recital of the history of the approval of the building permit for the house and HVAC system design dated April 6, 2000. He provides a brief analysis of the OBC requirements for heating and air conditioning. He then reviews the Ontario New Home Warranty Plans Act and includes the following statement:

"Based on the two complaints of structural integrity of the foundation walls and the settlement of the east wall, we believe that the warranties that apply are..."

Clearly this statement does not relate to this property.

²³ See Order of the Tribunal August 30, 2007, released August 31, 2007.

²⁴ Exhibit 27

²⁵ Exhibit 28

The report goes on to describe the home and the HVAC system design. When he did his inspection in September 2007, the Polaris hot water tank with a storage capacity of "117.2 USG" was installed²⁶.

At this point it is important to note that the report contains yet another error, this time with respect to the motor. In the process of describing the system, he reviewed the published performance information provided by Energy Savings Products Ltd. in a manual that the Applicants had provided to him. He noted in his report the ½ HP motor in the system operating at 7.5 amps.

In the inspection, the current drawn by the blower motor was measured and found to be 6.5 amps. He noted in his report at page 4:

"This is less than the rated amperage at full load (7.5 amps); as such, the fan is producing less than the required volume of air flow."

Exhibit 36 consists of two photographs of the motor indicating it is a ½ hsp 6 amp motor. While the manufacturer's specification was for a 7.5 amp motor, the motor in fact was a 6.0 amp motor and the fan was in fact measured at a current in excess of the rated amperage.

Mr. Genge then proceeded to do heat loss calculations. He referred to the calculations done by the original designer of 53,604 BTUH which all agreed were inaccurate. He calculated a heat loss of 52,000 BTUH (which he expressed as "BTHU", reversing the last two letters) though he noted certain exclusions to his calculation. He concludes with respect to heat loss as follows:

"The installed heating system with a hot water temperature of 140 dg F and sufficient air movement through the fan coil should be able to produce 65,000 BTUH and thus be capable of meeting the needs of this home, calculated by others at 53,604 BTUH plus 10% and thus 59,000 BTUH."

It is important to note that Tarion had already taken the position that whatever deficiency existed in the capacity of the system had been rectified by the work following on Mr. Hubbert's investigation. The importance of Mr. Genge calculating a heat loss figure less than the original calculation was that this relationship supported Tarion's position as to the adequacy of the system.

Mr. Genge then proceeded to conduct temperature readings in the actual vents themselves, even though the outdoor temperature was 32 deg C and the air conditioning was on. He took the temperature readings at the nozzle (or outlet) on the floor to assess existence of faults in the distribution system such as inconsistent supplies. The temperatures in the nozzle all ranged between 9.5 and 13.6 deg C. He did not measure the temperature in the house beyond the nozzles, something that would be impacted by having too few nozzles or having air not properly distributed through the house. As a result of his temperature readings, he found an anomalous

²⁶ Mr. Genge later corrected this figure indicating that the 117.2 was in litres and that the Polaris was a 34 USG tank.

higher value (19 deg C) in the TV area of the basement level. He concluded that this value indicated that the distribution duct to that nozzle is either disconnected or kinked so that supply is incomplete. Despite this obvious problem and without referring to the temperature in the rooms, his overall conclusion was that the air conditioning system was performing satisfactorily.

He then went on to deal with the issue of sound level readings, information which is not helpful since the noise levels are acknowledged to be higher than other systems but outside the appeal.

Mr. Genge concluded as follows:

"The system as observed during our site visit is apparently configured to provide adequate heat to the home except there is insufficient air volume at the supply fan as determined by the amperage measurement drawn by the fan motor. We do not know the operating conditions or the performance of the system during winter design condition as our inspection was scheduled [sic] for a hot day in September. The system appeared to be functioning adequately for air conditioning at an outdoor temperature above the design temperature. It is therefore, probable that the air supplied by the fan, though less than the design maximum, is sufficient to heat the home as well as cool the home."

He recommended that temperature measurements be taken over weeks in January and February to capture the values during potential periods of design temperature (-18 deg C). His opinion was that until such measurements were taken, there was no clear evidence that the home heating system is not working as required.

Mr. Genge disputed the solution proposed by Mr. Bowser that the entire system should be replaced at an estimated cost of \$90,000. He recommends an iterative process beginning with correction of the problem causing the fan speed to be less than required to deliver the design volume of air. He said that the water temperature delivered to the coil should be increased to deliver more heat to be extracted by the fan coil unit. He regarded the replacement of the fan coil unit with a larger one as the worst case scenario. He acknowledged that with the larger unit, the supply pipe would require upsizing to 1 in. diameter and additional nozzles would be required to accommodate the increased air supply. Mr. Genge was of the view, based on his personal experience in modifying the system to allow acceptable performance, that the existing system could be modified. He stated that the modifications in that case were to add additional vents and correct the wiring of the fan motor. His personal experience was the townhouse development of Homeowner #1 referred to above.

After Mr. Genge and Mr. Graham conducted their tests, the fan motor on the Applicants' system stopped working. This motor is critical to the heating of the house and functioning of the systems. Tarion provided assurance that the replacement of the motor with the same or a comparable model would not void the warranty and Fernbrook agreed to pay for the motor because there was an extended warranty on that motor beyond the Tarion warranty. Mr. Genge made some inquiries as to whether or not the tests that his firm conducted could have caused the motor to fail. The technician who viewed the motor to try to get it into working order was of the view that the motor had

burned out and that nothing that Mr. Genge or Mr. Graham did would have caused this outcome as the tests were described to him. The motor supplier indicated that they have some experience with the motors not being properly wired in these units, with the wiring being done so that the motor will not be connected properly to the knob for the higher setting.

Exhibits 34 and 35 are the records of the motor replacement. The motor was replaced at the end of October and on December 1 it had broken down again. On December 3rd a technician from Downsview Hearing and Air Conditioning Ltd., the original installer, got the fan working again, but on December 6, the motor had stopped and was replaced again.

At this point the Tribunal notes that Mr. Kokko was called in reply evidence to testify as to the result for the motor of the door being opened, the potential for the motor to have been working at a rate that would burn out the insulation and cause it to fail prematurely, and to clarify that the motor was in fact rated at less than the manufacturer specified for the air handling system.

Mr. Genge frankly concluded that he had been called in with very little time to do the work, admitting that he had been handed a bundle of reports which he had not reviewed, and that the figures in his report were based on what another engineer had told him. One of the most blatant errors was in misreading the size of the motor for the fan in the HVAC system, but other errors noted above indicate a lack of attentiveness to detail and therefore undermine the weight that can be put on his evidence.

Mr. Genge did acknowledge that he had seen the demolition at Homeowner #3's property and he believed that the Applicant's property might also have an issue with the return air. He noted in cross-examination that the return air is a very important part of the system, but not part that is included in the Energy Savings Products Ltd HV100. He explained that the system would have problems in heating the home if the supply side has excessive back pressure created by crimps or blocks in the ducts or if the return ducting is bent or not large enough. He testified that he saw obstruction in Homeowner #3's return air in the course of that work. He indicated that with the water temperature set above 140 deg F a mixing valve could be used and that device, he estimated, at about \$20 to buy.

One of the major difficulties in accepting Mr. Genge's conclusion that the return air is a problem is that both Mr. Kokko and Mr. Hubbert are of the view that the return air is not the problem, or at least in Mr. Hubbert's case that it was fine when he was through his work in 2005-06.

Mr. Genge insisted that the system was producing 800 to 900 CFM even though Mr. Kokko had measured 693 CFM. He remained resistant to the idea of replacing the old system, though he added the important qualifier in saying that he did not know if the system had to be replaced yet. He testified that he contacted the manufacturer in Edmonton who told him that a lot of equipment in Ontario is not wired properly so he would want to check that. He stuck to his opinion set out in Exhibit 28 of starting an

iterative process, with the fan coil, at a cost that he estimated at less than \$8,000 and going forward if that fix does not work. He estimated an additional \$2,000 for a thermographic test of the duct system and interpretation and about \$800 for a camera to be snaked through the duct system plus an additional amount for analysis of the results. He confirmed that his estimate of \$8,000 did not include anything outside the furnace room; yet any work involving the duct in the basement for which the anomalous temperature reading had been made would include additional work outside the furnace room.

With respect to compliance with the OBC, Mr. Genge testified that his view was that the system did not specifically contravene a performance requirement, but he could not say if it complied with the OBC in all aspects. He testified that his view was that there was air leakage out of the plenum, the main duct carrying the warm air through the house and that that should be fixed. He said under cross-examination that he and Mr. Graham concluded that there is something amiss in the system. Again the Tribunal is left with his opinion that work outside the furnace room is required, but no figure from him estimating the cost has been produced.

Mr. Genge acknowledged that the installation of the new hot water tank should have complied with the 2006 OBC rather than the earlier OBC. He also agreed that it would be prudent to obtain a permit if the HVAC system were replaced.

With respect to the townhouses in Homeowner #1's development, Mr. Genge recalled that there was a misalignment of the cold air returns in the system so that the return air was blocked by 50%. He testified that he produced what he called a punch list for the builder to use with the townhouses, based on four units that he inspected. The punch list included steps to be taken on all the units in the development and he was to be called back if these fixes did not work. He did not know the outcome because he was not asked back. He could not, therefore, provide any contradicting evidence to that of Homeowner #1 or Mr. Bowser.

While Mr. Genge had reviewed the Hubbert report, he could not advise of any follow-up that had been recommended by Mr. Hubbert, i.e. a certification of the air handling system and further follow up to assess the issues that were leading to the problems of heating the home. He was aware that the City had issued a compliance order under the OBC that required replacement of the water tank. He was not aware of what had occurred between the receipt of the Hubbert report and the issuance of the compliance order.

Mr. Genge fairly acknowledged that he is not an expert in HVAC systems and does not design them. He does not use on a regular basis the standard documents that designers use and that are referred to in the OBC. He showed a general familiarity with the principles on which the analysis of the capacity of the HVAC system rested.

No explanation was given as to why, in the period of two years since this appeal was filed, Tarion had not involved Mr. Genge sooner or conducted tests in the winter time, or involved an engineer with HVAC qualifications and expertise.

Both Mr. Kokko and Mr. Genge identified components other than the water tank which were potential causes of the heating issues. The City ordered the Applicants to install a new larger capacity hot water tank to bring their home into compliance with the Ontario Building Code. Neither Mr. Kokko or Mr. Genge knew how the City had gone from the recommendations of the Hubbert Report to a determination that the hot water tank needed to be replaced in order for the system to be Code compliant. Mr. Bowser was also not able to clarify this apparent leap in logic. This lack of communication is genuinely surprising to the Tribunal, given the clarity of the evidence of Mr. Hubbert when he was called under summons on March 27th. Much of the time spent in the evidence in October 2007 could have been saved if any one of the parties had obtained the information from Mr. Hubbert. The Tribunal notes that the issue of which of the parties would call Mr. Hubbert to testify was canvassed before the Tribunal in a motion to add the City as a party to the proceedings, heard on September 6, 2006. As noted in the order that issued from that motion, it was open to the Added Party to call Mr. Hubbert, especially as Mr. Peticca on that motion was "particularly concerned that the recommendations of the expert hired by the municipality and who made recommendations for repairs which the Added Party intended to carry out, be put before this Tribunal."

At that motion in September 2006 the City had argued that Tarion did not have to rely on the municipality's reports since they had had their own experts examine the claims of the Applicants and they could bring the City's reports forward by way of summons.²⁷

The Hubbert Report was filed as Exhibit 7, Tab 14 and was reviewed in detail in the hearing during the testimony of the engineering experts called by the Applicants and Tarion. In Reply, the Applicants called Mr. Hubbert to testify on summons on less than 24 hours notice.

John D. Hubbert

Mr. Hubbert testified that he was retained by the City to produce revised heat loss calculations and to conduct investigations and make recommendations to bring the homes into compliance with the Building Code. His tests were conducted first in three "guinea pig homes" and later in all the homes in the subdivision. The tests and heat loss calculations established that in only one case was the system producing required airflow of 1100 CFM.

In the Hubbert Report, Mr. Hubbert gave his opinion as to the deficiencies in the HVAC systems. He concluded that the heat losses of the units were larger than was used as the basis of the designs and that the hot water tanks had only a limited output and insufficient capacity to meet the heating and domestic water heating obligations. Also he found that the Hi-Velocity air handler used to heat the air does not deliver the airflow capacity necessary for adequate heating in the larger homes nor sufficient air to handle the larger cooling systems. His Report contained recommendations that certified ratings

²⁷ Reasons for Decision, released September 12, 2006

the heat loads based on the ambient conditions, and rework the heating distribution and reapportion the outlets accordingly.²⁸

Mr. Hubbert further testified that the City gave him a limited retainer to bring the systems to OBC compliance. He achieved this in his view with various steps and recommendations. He testified that on detailed investigation he and his team found that in some homes there were vents missing and in other homes the duct work was not sufficient to meet the manufacturer's specifications for minimum number of ducts. In other homes the return air ducts had to be fixed. In almost all the homes he recommended that a larger size of hot water tank be obtained. He testified that he went to the supplier that Fernbrook had used and asked them for the next size up from what had been installed, and the supplier indicated that the Polaris water tank was the appropriate tank one size larger. The purpose of getting a larger capacity hot water tank was to increase the temperature of the air that could be produced to improve the potential that the system would heat the house and overcome the fact that the system was not producing the CFM's required. He testified that he was not surprised that the investigation results had indicated the shortfall, especially as there was no certified rating for the equipment in the system.

Based on these recommendations, the City apparently issued the order to comply noted above.

Mr. Hubbert testified that in fact Fernbrook did not implement the recommendations of the Hubbert Report. The investigation undertaken by the City had included discussions with the distributor of the system who advised that no certified ratings were available from the manufacturer, despite representations from the manufacturer as to the capacity of the system.

Mr. Hubbert testified that at the conclusion of his retainer, which extended into the winter of 2005-06, all the houses in the development were OBC compliant. He also testified that being OBC compliant did not mean that every room in a house at all times would have a temperature of 22 deg F (assuming the thermostat is set to that temperature), especially with multi-level homes such as the Applicants'. In fact, the expectation is that there will be variations in temperature as between the rooms and levels and as impacted by weather particularly and other factors that relate to heat transfer and loss within a building. He testified that there are good, better and best systems and that this system is not top quality. The system is designed to heat the homes, to do a job, but it does not even give floor by floor heating. He said that there were improvements that could be made and that what he could not fix as a homeowner he would live with. He cautioned against a solution that involved replacing the entire system including tearing out walls, unless one has investigated to determine exactly where the problems are and unless one is prepared for the tremendous cost involved. He was clear that there is a difference in quality of systems, and that you can get an adequate system that meets the requirements of the OBC, but does not heat the house well.

²⁸ See Executive Summary, Exhibit 7, Tab 14

He was also clear that his retainer had not been to fix the heating problems in the houses and, when pressed to offer an opinion, he indicated a process of analysis of the installed system to determine if the components were properly installed and operating as designed and intended as a system.

The Tribunal appreciates the candour of Mr. Hubbert who is clearly an experienced engineer. He believed that by fixing the heating capacity to heat the air to a higher temperature, the system would be compliant with the OBC and provide the heating needed. He did not conduct the tests undertaken by Mr. Kokko or Mr. Genge. He refers to the problems of the air handler but the issue appears to have been dropped after his report. He did not seem surprised in the course of his testimony at the potential that the Applicants still had problems with heating the home. His recommendations in the witness stand to investigate the ongoing issues mirror the iterative process put forward in a more limited way by Mr. Genge.

It is clear from the evidence that of the expert witnesses called, Mr. Kokko is the best qualified and that, with Mr. Bowser, the Applicants' experts have conducted the most intensive examination of the Applicant's home. Mr. Kokko's opinion was clearly influenced by his experience in being brought in to try to solve problems in heating systems so that the owner of the building has a working system, completely in accord with the intent of the legislation that provides the warranties for new homebuyers.

Fernbrook Homes (Hampstead) Limited

Fernbrook participated fully in this hearing through Mr. Peticca who is employed by them and who attended the hearing and cross-examined witnesses. Counsel appeared on behalf of Fernbrook for the last three days of the hearing. Mr. Peticca testified and Homeowner #2 was called as part of Fernbrook's case.

In the course of his cross-examination of the witnesses called by Tarion and by the Applicant, Mr. Peticca raised various issues. In essence, the basis of Fernbrook's case was that

- it had installed a system that was of a design that could function properly,
- it had met the OBC requirements,
- the City agreed with them that they had met those OBC requirements, and
- OBC compliance was the limit of their obligations to the Applicants.

At the conclusion of Tarion's case, Mr. Peticca made a statement that the starting point for the analysis should be to see if the system could meet the OBC requirements at -18 deg C. He acknowledged that there was information that the airflow was inadequate and that there were possibilities that could be explored to improve the airflow. He indicated that he would be making measurements and monitoring the temperature with sensors, but he acknowledged at that point in the hearing that other things did not jibe. His position ultimately was that if the end result is that the system is heating the house, then "so what if the numbers are not met." He indicated that the manufacturer should

be the first person to look at this and that he would be going to the manufacturer for input to solve the problem.

When the hearing resumed in March 2008, Mr. Peticca's evidence did not deal with any monitoring of air temperature, any follow up with the manufacturer, or any ideas on improving the airflow. There was no acknowledgement of anything being wrong. When Mr. Peticca took the stand, now with counsel in attendance for Fernbrook, his evidence centered almost entirely on undermining the credibility of the Applicants as "Johnny-come-lately" complainers who do not really have a problem, but who see an opportunity because of the problems of their neighbours.

The correspondence in Exhibit 7 is directly to the contrary. The Tribunal accepts the evidence of the Applicants that they were open in their complaints to Fernbrook's staff, various of whom received documents from the Applicants on outstanding issues including the repairs required to the vents in the basement and that similar complaints were widespread among the homes built. The Tribunal does not believe Mr. Peticca's protestation of ignorance of the problems the Applicants were having. Such a position is inconsistent with his position that Fernbrook proactively went to the City with respect to the concerns of the homeowners about the HVAC system.

There are significant contradictions between Mr. Peticca's evidence and those of the other witnesses. First, his evidence was that whatever Fernbrook had been required to do under the Hubbert Report recommendations had been done by Fernbrook. This evidence was directly contradicted by Mr. Hubbert's evidence. Specifically, Mr. Hubbert recommended that certified ratings for the equipment should be obtained; no certified ratings for the equipment were provided by the supplier, the distributor, the manufacturer or the installer. If Fernbrook had intended to fulfill the recommendations, it had the opportunity to do so and had the expertise or could acquire the expertise to do so.

Also, Mr. Hubbert recommended that the heat loss calculations be redone to reflect the built condition of the homes since it was acknowledged that the heat loss calculations underestimated heat loss either by treating at least one wall as a "warm" wall or party wall rather than as a wall without an adjacent building (Mr. Peticca's explanation), or by treating basement walls as if they were buried when in fact the units had walk out basements with exposed walls (Mr. Hubbert's explanation). The retainer of the engineer to complete the heat loss calculations properly was by and at the cost of the City, not by and at the cost of Fernbrook.

Mr. Peticca also took the position that the HVAC system that was installed was in fact the system as described in the agreement of purchase and sale. This position flies in the face of his evidence as to his dealings with the City officials in getting their agreement that the high velocity combo system would be approved and the evidence of the forms used to obtain the City approval dated April 2000. The Tribunal also notes that Homeowner #2 signed her agreement of purchase and sale in May 2000 (Exhibit 38) and was in possession in early 2001. The Applicants signed their agreement of purchase and sale in 2001 and took possession in 2002. Both homes have the same

38) and was in possession in early 2001. The Applicants signed their agreement of purchase and sale in 2001 and took possession in 2002. Both homes have the same HVAC system and in both agreements of purchase and sale the HVAC system is described in the same inaccurate way. Therefore, Fernbrook made no effort to amend the schedule to the agreement of purchase and sale description of the HVAC system long after it had made the decision not to use the conventional furnace based system in this development, but to use instead the high velocity combo system.

Mr. Peticca also claimed to have gone to the City in advance of the homeowners to discuss the complaints concerning the HVAC system, implying a proactive approach to solving the problems. His evidence was rebutted by the evidence of Homeowner #3.

Finally, Mr. Peticca in his testimony claimed that the system that had been installed was in fact \$400 to \$500 more expensive than the conventional system described in the agreement of purchase and sale. The purpose of this evidence was to imply that the builder had in fact given the owners a benefit over and above what the purchasers were entitled to receive under the agreement and the purchase price. When asked whether this figure was net of the costs saved on installing a conventional forced air system with the bulkheads to accommodate the larger ducts and vents, Mr. Peticca did not answer the question directly, saying only that they did not build bulkheads; yet his evidence had been that using the high velocity combo system had avoided the construction of bulkheads and the walls that accommodated the larger ductwork to permit the open concept floor plan.

ISSUES

1. Is the Applicants' claim for warranty denied in the Decision Letter of March 28, 2006 warranted?
2. If the claim is warranted, should the Applicants be awarded compensation on the basis of a breach of warranty and proven damages, or should Tarion be ordered to undertake further investigation and perform any work necessary to provide an HVAC system that fulfills the requirements of all the warranties under the Act?
3. If compensation should be awarded as requested by the Applicants, how much should the compensation be?

THE LAW

The sections of the Act relevant to this decision are set out below.

The *Ontario New Home Warranties Plan Act* states:

13. (1) Every vendor of a home warrants to the owner,

(a) that the home,

- (iii) is constructed in accordance with the Ontario Building Code...
- (c) such other warranties as are prescribed by the regulations.

Exclusions

- (2) A warranty under subsection (1) does not apply in respect of,
 - (a) defects in materials, design and work supplied by the owner;
 - (b) secondary damage caused by defects, such as property damage and personal injury;
 - (c) normal wear and tear;
 - (d) normal shrinkage of materials caused by drying after construction;
 - (e) damage caused by dampness or condensation due to failure by the owner to maintain adequate ventilation;
 - (f) damage resulting from improper maintenance;
 - (g) alterations, deletions or additions made by the owner;
- 14.(3) Subject to the regulations, an owner of a home is entitled to receive payment out of the guarantee fund for damages resulting from a breach of warranty if,
 - (a) the person became the owner of the home through receiving a transfer of title to it or through the substantial performance by a builder of a contract to construct the home on land owned by the person; and
 - (b) the person has a cause of action against the vendor or the builder, as the case may be, for damages resulting from the breach of warranty.
- 14.(6) In assessing the amount for which a person is entitled to receive payment out of the guarantee fund under this section, the Corporation shall take into consideration any benefit, compensation, indemnity payable, or the value of work and materials furnished to the person from any source.
- 14.(7) The Corporation may perform or arrange for the performance of any work in lieu of or in mitigation of damages claimed under this section.
- 16.(3) Where a person or owner gives notice in accordance with subsection (2), the Tribunal shall appoint a time for and hold the hearing and may by order direct the Corporation to take such action as the Tribunal considers the Corporation ought to take in accordance with this Act and the regulations, and for such purposes the Tribunal may substitute its opinion for that of the Corporation.

The Tribunal's remedial powers are set out in the Act and include the power to direct a payment out of the compensation fund or to order Tarion to perform work or arrange to perform work.

Part VI of R.R.O. 1990, Regulation 892, Section 15(2) provides for the warranties pursuant to Section 13 (1) (c) as follows:

- Every vendor of a new home warrants to the owner,
- (a)

- (b) that the electrical, plumbing and heating delivery and distribution systems are free from defects in material and work; ..
- (d) that the home is free from violations of the Ontario building Code regulations under which the Building Permit was issued, affecting health and safety, including but not limited to fire safety, insulation, air and vapour barriers, ventilation, heating and structural adequacy;...

The legislation is consumer protection legislation and is to be given a broad and liberal interpretation. *Mandos v. Ontario New Home Warranty Program* 1995 CanLII 3158 (ON C. A.), *Markey v. Tarion Warranty Corporation* [2006] O. J. No. 2929 (ON S.C.D.C.)

Tarion's counsel provided three cases to the Tribunal to review, including *Cecilio v. Tarion Warranty Corp.* [2007] O.J. No. 1692 (ON S.C.D.C.), which will be discussed later in these reasons.

In *Re Boldt* [2007] O.L.A.T.D. No. 83, the homeowner complained that the well that the builder had provided was contaminated and claimed under the warranty. The builder's septic system subcontractor contacted the homeowners, showed them the approved plan for the sewer system and offered to relocate the septic bed as required by the approved plan. Tarion had requested that the homeowners permit the builder and his subcontractors access to complete the necessary work. The experts agreed that the water from the well at the time of purchase was seriously contaminated and unfit for human consumption with a variety of causes including the location of the septic system. The Tribunal found as a fact that the well had been constructed in a location contrary to the Building Code and that it did not comply with the design plans on which the permit for construction was approved. The homeowners proceeded to bring in water from a commercial water service and had three new wells drilled before a productive one was in place. The sewer leaching bed was improperly installed within 30 metres of the well and not set in the in-ground trenches required by the plan. Also a treatment system called for in the plan was not installed. The Tribunal found that the homeowners knew these facts and in addition that the builder and his subcontractors were anxious to rectify the defects at the builder's expense. The homeowners refused access to the property and on that basis Tarion refused the warranty claim. The Tribunal found that the warranty had been breached and found that some of the damage claims fell within the warranty scheme. It also held however that the homeowners were disentitled to further warranty coverage for all claims arising out of the well and septic system. The builder in fact did relocate the sewer system and installed the water treatment system at its own expense.

In *Re Gorscak* [1999] O.C.R.A.T.D. No. 22, the Tribunal ordered that work be done as outlined in experts' reports submitted by Tarion in evidence. The Builder was willing to do the work at its own expense so the work to rectify the problems would not cost either the homeowner or Tarion anything. The Tribunal ordered that the work specified in the experts' report, specifically work on exterior brickwork, filed by Tarion and that if the applicants failed to provide access, the claim would be disallowed in its entirety.

The Applicants referred the Tribunal to a decision of Vice Chair Weary, August 16, 2007 *Re 3468-ONWHP – Claim and Re Pisignani & Costa*, LAT March 10, 2005 a decision of Vice Chair Jepson.

Vice-Chair Weary was dealing with two claims. The relevant one relates to repairs to the home's heating and ventilation system. The issue was whether the repairs are sufficient to meet the Builders warranty obligations and if not, what appropriate remedy is reasonably justified. In that case the Tribunal was satisfied that there were deficiencies in the system and an expert provided opinion evidence that the Tribunal accepted as to the remedy. Tarion had arranged for work to be done, but the problems had not been fixed. The Tribunal found that the deficiency was a breach of Section 13 of the Act and a violation of the OBC. The Tribunal held at page 13:

"In this case the evidence demonstrated clearly that venting and duct work had been compromised such that CFM measurements fell far short of that computed according to the HRIC method for design CFMs. The Applicant is entitled to a warranted remedy for this breach of the OBC in accordance with Section 13 of the Act."

There were three options presented for resolution of the problems. The Tribunal directed Tarion to provide the sum of \$24,910 to complete the repair for the third and most expensive and intrusive option that actually repaired the failure that had caused the problem. The Tribunal held that the concept of repair included the concept of replacement both by definition and in accordance with the intent of the legislation (p. 14). The Tribunal also held that repair includes the reasonable expectation that any damage to property caused by that repair including any unsightly hole in a finished wall will not be the result and that the Applicant should not be put to additional expense to properly complete the repair without having been given clear advance notice that such was her responsibility (p. 15).

In Vice-Chair Jepson's decision on the *Pisignani and Costa* case, the issue was the water leakage in a basement stud wall. After much resistance, Tarion had agreed that the defect was warrantable and the builder was prepared to do the specific repairs that Tarion finally conceded were appropriate (p. 3). The issues related to what a reasonable method of repair was. Expert evidence was presented by the parties. The argument was put to the Tribunal that Tarion has the right to direct reasonable repairs to mitigate damages pursuant to Section 14(7). The Tribunal held at p. 18-19:

"While this is true, the Tribunal finds that what is reasonable is specific to the context and specific facts. This includes how long the problem has persisted, what theories there are as to the cause of a problem, what repair efforts have already been made and other events occurring with the passage of time. Included in these context-specific considerations must also be the fact that the matter has reached the appeal stage at this Tribunal. In most cases, it will not be practical for the tribunal adjourn and remain seized of a matter in order to see if a proposed repair will work.... All of this means that in most cases, the Tribunal's order must attempt to bring final resolution to any warranty issue. Such an approach also accords with the goal of efficiency and finality, both recognized goals of administrative justice.

Based on the above the Tribunal finds that what might have been a reasonable repair at an early stage may no longer be reasonable when events have progressed further. This is particularly so where the repair is one that is of a 'try and see how it goes' variety."

APPLICATION OF THE LAW TO THE FACTS

The Tribunal finds that the Applicants have established on the balance of probabilities that there has been a breach of the warranty under the Act with respect to the HVAC system and that they have suffered damages as a result.

The Tribunal finds that Tarion was wrong to reject the warranty claim, both on the evidence in this matter of the deficiencies in the system and also on the basis that the grounds that are articulated in the Decision Letter are inaccurate. Further, the Decision Letter did not refer to the warranties of the home set out in Section 13 (1) (a) (i) of the Act and Section 15(2) (b) of the Regulation, but only to the OBC compliance issue which is referred to in Section 13 (1) (a) (iii) of the Act and Section 15(2) (d) of the Regulation.

The wording of the legislation is clear. The warranty relates not just to OBC compliance but also to quality and completion of the work, in essence the installation and the components installed in the HVAC system. The OBC provides minimum standards. The warranty program is intended to establish a higher standard than that minimum set out in the OBC and to protect the consumer who does not have the specialized knowledge that the builder and the Building Code officials have.

The Tribunal accepts the expert opinion evidence of Mr. Kokko and Mr. Bowser that the system is not performing to meet the requirements of the OBC, is not performing satisfactorily, was not designed in accordance with the OBC and that major repairs including replacement of some parts of the system are required.

While a considerable amount of time was spent on the components of the system and the choice of the hot water tank, the evidence establishes on the balance of probabilities that installation of the system in the Applicants' home, including the duct work, is not done in a good and workmanlike manner and without defects in material and work. The Tribunal has evidence that point to the duct work or return air as at least a contributing factor:

- The Applicants' year end repair forms and correspondence identifying duct work problems where duct work was visible, and testimony as to inadequate heating and cooling.
- Homeowner #1's testimony concerning the shoddy duct installation revealed after the destruction of the flood in the home.
- Homeowner #3's testimony and photographs related to duct work installation.
- Mr. Genge's investigation that found one nozzle in the basement producing air at a temperature of 19 deg C.
- Mr. Hubbert's Report identifying in almost every property he looked at the requirement for additional ducts or adjustments to return air needed to bring the properties to OBC compliance.

- Mr. Hubbert's testimony indicating that duct work was a reasonable area to assess for the cause of the difficulties, if the system was not producing the air flow required.
- The evidence of failure to abide by manufacturer's specifications in the installation of the components of the system on the part of Fernbrook and the installer.

The potential for investigation and remedial work in the ducts and return air was recognized in the evidence of Mr. Hubbert, as well as Mr. Genge, Mr. Kokko and Mr. Bowser.

The Tribunal is not, however, convinced that Mr. Genge has correctly identified the problem as lying with the return air but cannot discount the possibility because the errors of the installers may have been consistent since both Homeowner #1 and #3 had issues with return air. Sloppy installation is by its nature inconsistent. Homeowner #2 could well have a system properly installed, though Mr. Hubbert's report suggests to the contrary. Installation may, however, be consistently wrong, leading to repetition of the same problems in home after home.

More important in assessing the proper outcome for this case is the fact that Mr. Genge latched onto this solution of the return air on seeing the issue arise in the walls of Homeowner #3. This is an illustration of the very problem posed by acceding to Tarion's request that it be ordered to undertake investigation and remedial work. Mr. Genge in the townhouse development described by Homeowner #1 created a punch list. None of his suggestions proved to be the solution. The Tribunal's impression of Mr. Genge is that his iterative process might well lead to a latching onto the first defect that appears without a principled and structured approach to analyzing the whole problem. These homeowners deserve better than a repeat of the problems created by the order to install the Polaris water heater.

The Tribunal rejects the Applicants' claim that the high velocity combo system as designed by the manufacturer is somehow deficient, as it accepts the evidence that the high velocity combo system can be installed in a good and workmanlike manner with properly operating components. However, the Tribunal notes the caution in the manufacturer's manual as to the proper use of this system, i.e. that it is not a direct replacement to conventional forced air systems but an engineered comfort system especially designed to specific requirements and, as well, the Applicants' difficulties in finding trained persons to maintain it.

Mr. Bowser recognizes the value of a process of analysis of the various components to separate what is interrelated but functioning and what is not functioning, but he recommends that the entire system be torn out. His evidence was that his recommendation is based on the likelihood that his clients will end up with a system that is satisfactory for them and OBC compliant.

Tarion argues that there was ample time for the Applicants to undertake the cost of a snake with a camera at the end to be sent through the duct system to see the

deficiencies and to undertake further and other investigation. Tarion relies on the onus on the Applicants to establish on the balance of probabilities that the warranty has been breached, that the Applicants have suffered damages and the quantum of those damages, to justify it not undertaking such an investigation itself.

Based on the qualifications and expertise of Mr. Kokko, the Tribunal finds on the balance of probabilities that this heating system is not compliant with the OBC and is not free of defects in material and work, contrary to the warranty provided under Section 15 of the Regulation and is likely not installed in a good and workmanlike manner. While the Tribunal cannot specify, based on the evidence, that the deficiencies are only those identified by Mr. Kokko, the Applicants have provided sufficient evidence to call on Tarion to provide evidence that the system is without those defects. Instead, Tarion's expert has reported that the system is performing satisfactorily despite detecting deficiencies; he has nonetheless outlined a process to identify what the precise defects are.

Tarion has put forward the position that on the basis of the decision of the Divisional Court in *Cecilio v. Tarion Warranty Corp.* [2007] O.J. No. 1692 (ON S.C.D.C.) the Tribunal should exercise its powers to order further testing in a process to determine what components of the HVAC system have been installed in a good and workmanlike manner, what components are functioning in accordance with the manufacturer's specifications, and what components need to be replaced or repaired either by virtue of their being inappropriate by size or power or by virtue of them being poorly installed and/or not functioning. This power was utilized in the *Gorscak* case referred to above.

The Tribunal rejects this request by Tarion and adopts the reasoning of Vice Chair Jepson. Given the particular facts of this case, it is not appropriate to order Tarion to carry out further investigations and undertake repairs. Such a process for study and testing and unidentified future work does not provide any closure to the Applicants who must have some assurance that the process will result in a rectification of their current situation.

It is clear that the process of investigation and pursuit of the warranty claim have been extensive, drawn out, and frustrating for the Applicants. It has also been expensive in that two experts have been retained and the Tribunal has no jurisdiction to award them recovery of those costs. The builder has not come forward with a response based on engineering expertise and evidence. These homeowners have become skeptical of engineers retained by others and the exercise of power to force them to have repairs that are ultimately useless or that cause further problems.

The Tribunal finds that the Applicants have not disintitled themselves to the warranty protection, as the homeowners did in *Re Boldt* referred to in the Law section of this decision. In the *Boldt* case the problem for the homeowners was that the builder was not only aware but anxious to do the remedial work but they denied access. The builder cannot now say that he is ready and willing to rectify the problem when he left the rectification to the City and now gives conflicting evidence about it. The work done under Mr. Hubbert's direction has not, on the basis of the investigations done by the

experts retained by the Applicants, resulted in an HVAC system that complies with the OBC or that is done in a good and workmanlike manner. Similarly the *Gorscak* case is distinguishable in that the builder has not in this case indicated a willingness to make repairs – instead the builder consistently rejects any argument that there is something wrong with the system and, despite posturing about doing monitoring and whatever is required by the City, the builder's fundamental approach is to reject the need to build anything to any further standard than the OBC.

COST OF REPAIR

The Applicants brought forward evidence of the cost of repair including the cost of total replacement of the system. The Tribunal's powers under the warranty are very limited and do not include the full panoply of damages that can be awarded by the Court. While there is some concern that the solution put forward by the engineers may need to be expanded on the completion of investigation, there is agreement that the air handler is inadequate for the task at hand, identified both in the Hubbert Report and in Mr. Kokko's report. In addition, as noted above, there is evidence, including that of Mr. Genge for at least one duct, that the duct work and perhaps the return air needs to be reviewed and assessed. The engineers agree that undertaking investigation of the remaining duct work and return air supply for installation defects and probably adding additional duct capacity is involved in remedying the problems.

Mr. Bowser estimated the costs of total demolition of walls to expose duct work, replacement of the system, and repair work to the home resulting from that demolition and replacement at \$90,000, based on estimates of work that were provided by a contractor, Excel. The Tribunal does not accept Mr. Bowser's solution of replacement of the system at a cost of \$90,000 as a necessary and inevitable outcome, but there will certainly be significant costs in remedying the defects in the HVAC system.

Homeowner #3, whose repairs were provided under extraordinary conditions, acknowledged paying \$15,900 towards the cost of the material and components and work done in her home though she indicated she was told that the total cost in fact was around \$120,000. No evidence was called to rebut Mr. Bowser's figures if a total replacement of the system is called for. Mr. Kokko estimated the cost of repairs that he outlined in his report at \$8,000, but in 2006 dollars and without an estimate from a contractor. Mr. Genge's estimates in his report totaled less than \$10,000 and did not include additional costs for investigation outside the furnace room or any repairs to duct work, even such as he identified, and he did not foreclose other repairs in his iterative process. Given the deficiencies in Mr. Genge's expertise in this field, the Tribunal finds that his estimates must be regarded as a minimum amount.

The evidence provided on the cost of repairs to rectify the deficiency is not "perfect", especially as there is no agreement that if any one step or a specific series of steps is taken, the heating system will be OBC compliant and operating properly. This case has been outstanding for a very long time and the disclosure of the Applicants' estimates was made in enough time that Tarion and the Added Party could have brought forward

contrary evidence if they had been so minded. It is well established that in assessing damages, an adjudicator must draw on the evidence before her in arriving at the estimated cost of future work and do the best she can, given the limitations.

Based on all the evidence, the Tribunal finds that an award of \$36,000 is an appropriate amount to permit the necessary investigation, design, demolition, repair, and installation for a properly functioning OBC compliant system built in accordance with the warranties under the Act and for any necessary fees and permits for that work. Homeowner #1 testified that this amount represents a reasonable estimate of the cost of repair and/or replacement of the components of the system and repair of damage to walls necessary to repair errors in installation of duct work and return air. This amount is also sufficient to provide for the following:

- The work identified by Mr. Kokko to address the air handler and increase in the duct work which he estimated would cost \$8,000 or Mr. Genge's estimate for work he described of \$8,000 in Exhibit 28.
- The investigative work such as the snake with a camera through the duct work or thermographic testing and interpretation to isolate installation problems in the duct work, which was estimated at various figures but totaling less than \$5,000.
- The cost of fees for the design and applications for permits for any remedial work (estimated \$5,000 allowance based on Excel's estimate of \$6,000 for a total replacement system).
- The cost of commissioning and balancing the repaired system \$7,500 based on the Excel estimate.
- An allowance for removal and demolition of some portion of the system, \$5,000 (included in the estimates of Excel in the amount of \$20,000 as a total cost for total removal).
- \$5,000 for painting and redecorating where required; and,
- an allowance for contingencies because of the limited information and lack of consensus on the totality of the work to be done.

The Tribunal finds that it has sufficient evidence to support a reasonable estimate of the cost of remedying the defects in the HVAC system and to leave it to the homeowner to rectify the damages through their own consultants, to their own satisfaction and in their own time. They are free to repair the high velocity combo system, to seek other advice and canvas other solutions if they wish, or to use the funds from the warranty to contribute to the cost of a total replacement.

The Tribunal answers the three issues stated earlier in this decision as follows:

Issue 1: Is the Applicants' claim for warranty denied in the Decision Letter of March 28, 2006 warranted?

Answer: The Claim is warranted.

Issue 2: If the claim is warranted, should the Applicants be awarded compensation on the basis of a breach of warranty and proven damages or should Tarion be

ordered to undertake further investigation and perform any work necessary to provide an HVAC system that fulfills the requirements of all the warranties under the Act?

Answer: The Applicants should be awarded compensation.

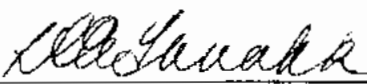
Issue 3: If compensation should be awarded as requested by the Applicants, how much should the compensation be?

Answer: The compensation should be \$36,000.

ORDER

By virtue of the power of the Tribunal under Section 16 of the Ontario New Home Warranty Plan Act, the appeal is allowed. The Tribunal substitutes its opinion for that of Tarion and directs that the Applicants' claim is warranted and that Tarion pay to the Applicants the sum of \$36,000.

LICENCE APPEAL TRIBUNAL


Lynda Tanaka, Chair

RELEASED: May 9, 2008

File Name: 3512 onhwp claim.doc

The hearing was recorded. Transcripts can be made available at your expense. The period to appeal a decision to the Superior Court of Justice or Divisional Court is 30 calendar days from the date of release of the decision. Please arrange to pick up your Exhibits within 30 days after that period has passed. The Tribunal requires seven days notice prior to releasing Exhibits.

This decision, which is being released to the parties in this proceeding, will also be posted on the Licence Appeal Tribunal's website www.lat.gov.on.ca in approximately three weeks time. The decision will also be available on Quicklaw at a later date.