

IN THE SUPREME COURT OF BRITISH COLUMBIA

Citation: ***Ploutos Enterprises Ltd. v. Stuart Olson
Constructors Inc.,***
2008 BCSC 271

Date: 20080303
Docket: S060352
Registry: Vancouver

Between:

Ploutos Enterprises Ltd.

Plaintiff

And

Stuart Olson Constructors Inc.

Defendant

And

Commonwealth Insurance Company

Third Party

Before: The Honourable Madam Justice Martinson

Reasons for Judgment

Counsel for Plaintiff

N. Kambas

Counsel for Defendant

D. A. Thompson

Counsel for Third Party
Date and Place of Trial:

D. B. Kirkham, Q.C.
October 29, 30, 31, 2007 and
November 1, 2, 5, 6, 7, 2007
Vancouver, B.C.

INTRODUCTION

[1] Solid hardwood flooring installed in a four-storey 35 suites condominium, built in 2005, failed and had to be completely removed and replaced using a different installation method. The plaintiff, Ploutos Enterprises Ltd. ("Ploutos") was the flooring subcontractor hired by Stuart Olson Constructors Inc. ("Stuart Olson"), the general contractor, to do all the flooring. PCI was the developer. Ploutos hired Kingston

Flooring to do the actual installation. Ploutos has sued Stuart Olson for the cost of the remedial work it did. Stuart Olson says that the failure was caused by Ploutos.

[2] The third party, Commonwealth Insurance Company (“Commonwealth”), issued a builders risk policy for the project, with PCI, Stuart Olson and Stuart Olson’s subcontractors as named insureds. The policy covers failures of this sort generally, but has an exclusion clause for “the cost of making good faulty workmanship, construction materials or design unless physical damage not otherwise excluded by this Policy results, in which event this Policy shall insure such resulting damage.” Commonwealth says the exclusion clause operates in this case because of faulty workmanship, faulty design and faulty construction materials. While it supports Stuart Olson’s position with respect to fault, it says that it does not matter which party was at fault for insurance purposes.

[3] At the time, it was not clear who was responsible for the failure of the hardwood. Stuart Olson and Ploutos agreed that Ploutos would do the remedial work with some assistance from Stuart Olson and that they would sort out the question of fault later. They agreed at trial that Ploutos would not be paid if it was at fault and vice versa.

[4] I have concluded that Ploutos was at fault, both with respect to the moisture testing and the moisture barrier. With respect to the insurance issue, I have concluded that the exclusion clause applies.

BACKGROUND FACTS

[5] The main contract between Stuart Olson and the developers, PCI, called for the installation of cork underlay, which is an acoustic barrier but not a moisture barrier. It did not mention a moisture barrier. Stuart Olson and Ploutos entered into a subcontract. It is common ground that the subcontract provided that Ploutos was to “furnish all...testing...required to diligently and fully perform and diligently complete...the work...” The scope of work, in general, was to supply and install all carpet, wood and ceramic tile finishes. The subcontract also provided that Ploutos was to inspect all substrates to be covered prior to the commencement of its work and that “start of work denotes acceptance of all substrates.”

[6] The building had suspended concrete slabs, as opposed to at grade or below grade slabs. The slabs were poured between approximately September 9, 2004 and November 10, 2004, starting from the bottom of the building and ending on the fourth floor. Two concrete mixes were used. Roof waterproofing was complete in January 2005. Weather tight enclosure of the building started on the fourth floor, occurring there in January 2005 and proceeding successively to lower floors, with completion by the end of February 2005. Windows were installed from the top floor down, beginning in early January, and finishing by approximately February 23, 2005. A completion certificate for the windows was issued on March 30, 2005.

[7] Dry heat was installed and turned on following installation of the windows. Dry heat was activated on the fourth floor on January 17, 2005 and installed on successively lower floors as the floors were made weather tight.

[8] The temperature was maintained at 72 degrees Fahrenheit before installation. Drywall sanding was in progress on the ground floor by the end of March 2005, and at the time the hardwood floors were installed the drywall had received one coat of paint.

[9] The installation of the hardwood started in early March 2005, beginning on the top floor and progressing to successively lower floors, with completion in mid-May 2005. The floors, as installed, consisted of the following, in order: concrete slab; Taylor #900 Workhorse flooring adhesive; Dinoflex Acoustic Rubber Underlayment for noise reduction; SikaBond T-54 adhesive; and one of two types of approximately 3/8 inch thick solid hardwood, Evergreen Solid Options, imported and distributed by Trademark International Marketing Inc. (“Trademark”), and Out of Africa Village Collection, manufactured by Columbia Flooring and distributed by Buckwold Western Ltd.

[10] There were discussions among Stuart Olson, PCI and Ploutos about using Prolayment underlayment instead of cork underlayment. Prolayment is both an acoustic barrier and a moisture barrier. In the end, Ploutos did not use Prolayment or cork. Rather, it used a Dinoflex underlayment, which is an acoustic barrier but not a moisture barrier. The double glue-down installation method was used.

[11] Kingston Flooring tested the slabs before the initial installation by using an electronic moisture meter known as a Tramex meter. The test results were negative. Trademark did six tests. Three tests involved plastic sheets sealed down over a small area of concrete. Three more tests involved pieces of wood taped over the concrete. Three of the six tests could not be read. The other three showed no moisture. No calcium chloride tests were conducted.

[12] The problems did not emerge immediately, but rather in degrees and over time. Initially the problem was “hollow” sounding flooring, which was followed by “cupping” of boards and “peaking” (lifting) of the flooring. Testing done after the damage occurred, using calcium chloride tests, revealed significant and unacceptable moisture in the concrete slabs.

MOISTURE TESTING

a. Ploutos' Position

(1) *Responsibility for Testing*

[13] Ploutos says that it followed industry standards and directives in existence in 2005. The industry standard in British Columbia was that it was the responsibility of the general contractor to do the necessary testing or to hire a third party to do so. Ploutos did moisture meter testing just for its own purposes.

[14] Ploutos submits that in the industry in British Columbia at the time, calcium chloride moisture testing was not done. It is still not done.

[15] Ploutos relies in part on a manual published in 2006 by the National Floor Covering Association of Canada (“NFCAC”). There was no such manual in existence in 2005, at the time of this project. However, Ploutos' owner, George Apostolopoulos, said that the manual sets out the practice that existed in 2005. That manual says that “it shall be the responsibility of the General Contractor or Construction Manager to provide and pay for such testing in a timely manner prior to any floor covering installation, so as not to impede the installation of floor covering materials.”

[16] It also relies upon a manual prepared by the American National Wood Flooring Association (“NWFA”). That manual, published in 1996, says that “moisture conditions are not the flooring contractor's responsibility.”

[17] It submits that it makes sense that the flooring contractor is not responsible. It is the general contractor who controls the building and is responsible for the length of time of the curing of the cement, the humidity in the building, and the temperature in the building. The general contractor has a contingency fund that can be used for the purpose of obtaining the tests.

[18] The expert reports submitted by Stuart Olson and Commonwealth say that moisture detection testing, which is quantitative and reveals the vapour emission rate, should be done. They do not, however, say who should do it.

(2) *Adequacy of the Testing*

[19] Ploutos submits that if it was required to do testing, what it did, together with what Trademark did, was acceptable at the time. When the contract refers to all testing, it must be taken to mean all testing that the industry did at that time.

[20] What the experts say about calcium chloride testing (and moisture barriers) “may make sense”. However, it was not the way the industry operated in 2005. Rarely were calcium chloride tests used (or moisture barriers). This conclusion was supported by the evidence of Calvin Boldt and Rick Carson, of Kingston Flooring.

[21] With respect to the provision in the subcontract, it says that the word “testing” is broad. It is part of the standard contract drafted by Stuart Olson and should be read in light of what the industry did at the time,

in light of the policies of the NFCA and the NWFA, and in light of Stuart Olson's instructions to it. No ambiguity is required to look outside the words of the contract. At the time, electronic moisture meter tests were used.

[22] The manufacturer's specifications for Solid Options specifically refer to a Tramex meter. The glue manufacturer, Sika Canada Inc., refers to the NWFA policy and specifically says that a Tramex meter is okay. Nowhere does it say that subcontractors are to do calcium chloride testing, including the NWFA or the NFCA. Ploutos submits that the specifications and the directives only recommend calcium chloride testing; they do not say it is required.

[23] Ploutos notes that additional tests were done by Trademark and there was no evidence of cupping of the wood or moisture accumulations.

[24] David Mollenhauer, the project general manager for Stuart Olson, told Ploutos to test the surface and they did so with a Tramex meter. Ploutos was advised "not to install any wood floors until the concrete slab surfaces and wood itself were moisture-tested and deemed dry enough."

[25] Ploutos says that the letter from Steve Pocock of Trademark advising Ploutos what testing it should do, means nothing. Ploutos was satisfied by its own testing that the concrete was able to accept the hardwood.

b. Analysis - Moisture Testing

[26] Ploutos argues that the court is not confined to the words of the contract, even in the absence of ambiguity.

[27] The court must look at not only the words used in the contract, but also the factual matrix – the background of relevant facts that the parties must clearly be taken to have known and to have had in mind when they composed the written text of the agreement. This contextual analysis has two aspects: the context of the document itself and the surrounding circumstances giving rise to the contract. However, the primary focus is on the text and the contextual facts are background; the words of the contract must not be overwhelmed by a contextual analysis. See: **Jacobsen v. Bergman**, 2002 BCCA 102, 163 B.C.A.C. 266; **Glaswegian Enterprises Inc. v. B.C. Tel Mobility** (1997), 49 B.C.L.R. (3d) 317, 101 B.C.A.C. 62 (C.A.); **Black Swan Gold Mines Ltd. v. Goldbelt Resources Ltd.** (1996), 25 B.C.L.R. (3d) 285, 78 B.C.A.C. 193 (C.A.); and Geoff R. Hall, *Canadian Contractual Interpretation Law*, 1st ed. (Markham, Ont.: LexisNexis, 2007) at 9-10.

(1) Responsibility for Testing

[28] The subcontract between Stuart Olson and Ploutos states that "the Contractor, Ploutos Enterprises Ltd. (PEL), agrees to furnish all...testing...required to diligently and fully perform and diligently complete those portions of the work as described..." Walter Bisschop testified that making sure there is no moisture in the concrete is something that Ploutos takes responsibility for whenever it undertakes a contract such as this one. He agreed that Stuart Olson did not say it had done any concrete moisture tests or obtained independent moisture tests. While he qualified his evidence by saying that Ploutos did not have to do testing, he did not point to any other project where it did not take responsibility for testing.

[29] The subcontract also provides that Ploutos is to inspect all substrates prior to work and that the start of work denotes acceptance of all substrates. Once Ploutos began installation, it accepted the substrate. Mr. Bisschop testified that it was his understanding that under the subcontract if Ploutos proceeds with the work this constitutes acceptance of the concrete substrate. This, the evidence showed, is consistent with the accepted practice in the construction industry.

[30] The subcontract therefore specifically provides that Ploutos is responsible for testing and making sure that the substrate was ready for installation. Its obligation was to decide what testing was necessary and to do the necessary testing; that was the intention of the parties based on the wording of the contract.

[31] Ploutos is not assisted in this respect by a consideration of the factual matrix. There is no evidence

that the parties discussed Stuart Olson's responsibility for testing. Rather, the evidence is that Mr. Mollenhauer, the project general manager for Stuart Olson, specifically told Mr. Bisschop that Ploutos must test the concrete to ensure that it was ready to receive the hardwood. While Mr. Mollenhauer was defensive in some aspects of his evidence, I accept that he did in fact say this to Mr. Bisschop. He had good reason to do so as he had previous experience with a hardwood floor failure in Calgary. Mr. Bisschop did not suggest otherwise.

[32] As noted above, Ploutos relies on industry standards that, it says, were that it was up to the general contractor to either do the testing or hire a third party to do the testing. It also argues that it makes sense that the general contractor, rather than the flooring contractor, should be responsible for testing because of the general contractor's responsibilities at the job site.

[33] The 2006 NFCA manual requires that a qualified third party inspection agency be used to test all substrate surfaces for moisture and alkalinity levels. It says that the general contractor or construction manager is responsible for providing and paying for such testing. It also provides that it is the responsibility of the flooring contractor to verify that moisture and alkalinity tests have been conducted and if necessary, verify such results with its own moisture indicator testing.

[34] Section 2 of part A11 of the manual says, in part:

.01 Because there is precedence [sic], and in fact, a broad acceptance in the construction industry for independent testing, the NFCA requires that a qualified third party inspection agency be used to test all substrate surfaces for moisture (specifically for vapour emission) and alkalinity levels.

.02 It shall be the responsibility of the General Contractor or Construction Manager to provide and pay for such testing in a timely manner prior to any floor covering installation, so as not to impede the installation of floor covering materials.

. . .

.07 It is the responsibility of the flooring contractor to verify that moisture and alkalinity tests have been conducted for all areas to receive flooring before installing any flooring materials, and if necessary verify such results with their own moisture indicator testing.

[35] The manual published by the NWFA says that flooring contractors are not responsible for moisture conditions. It also says that flooring contractors should take the initiative to determine potential problems and advise the customer of available remedies before the start of installation.

[36] These publications do not assist Ploutos in view of the terms of the subcontract making it responsible for testing. Stuart Olson had the right to require Ploutos to do the testing; Ploutos did not have to sign the contract if it did not want to do so.

[37] In any event, the NFCA manual was not published until well after this project was completed. Mr. Apostolopoulos said that the contents, in this respect, represent industry standards at the time, based on his experience in the industry. However, he did not provide evidence of any situation where a general contractor or construction manager took responsibility. I agree with Stuart Olson that the wording of subsection .01 of the NFCA manual, set out above, suggests that the policy making the general contractor or construction manager responsible is new, rather than a reflection of an existing standard.

[38] Both publications are prepared by and for the flooring industry. The evidence does not support the conclusion that the contents were generally accepted in the construction industry.

[39] Even if the NFCA manual did represent industry standard at the time, the evidence is that Ploutos did not verify that independent testing had been done, as the manual requires.

(2) *Adequacy of the Testing*

[40] Ploutos did no testing itself. It hired Kingston Flooring to do the hardwood installation. Kingston Flooring used the electronic moisture meter qualitative testing method. Trademark did some testing of its

own.

[41] I must consider both the type of testing used and the manner in which the testing was carried out.

A. Type of Testing

[42] Ploutos argues that the court can and should look outside the words of the contract to determine what is meant by the word “testing”. A consideration of the factual matrix, however, does not assist Ploutos with respect to the question of what kind of testing was required by the subcontract. The parties did not discuss what kind of testing would be done. Their common intention was that Ploutos would do the necessary testing. They formed no common intention that the testing would take a particular form.

[43] The real question is whether Ploutos did the necessary testing.

[44] The industry standard at the time is a consideration. However, the evidence of the industry standard does not support the conclusion that the type of testing used by Ploutos to test this type of installation - a suspended slab with a double glue-down system - was appropriate.

[45] The manuals to which I was referred and the expert evidence, all called by Stuart Olson and Commonwealth, show that there is a difference between qualitative testing, which is what Kingston Flooring did and continues to do, using a Tramex moisture meter, and quantitative testing. The former looks for moisture at the surface of the concrete slab. The latter measures the vapour emission rate and is required to determine whether there is moisture throughout the slab. A calcium chloride test does such a quantitative analysis.

[46] The preponderance of the evidence is that the qualitative testing was both inadequate and not in fact industry standard at the time of this project.

[47] The NFCA manual says that all substrate surfaces must be tested for moisture, specifically for vapour emission. The standard required by the manual is the testing methods and devices recommended by the particular floor covering manufacturer, except that such measures are to be no less than those required by the NFCA. The manual says that the NFCA requires tests that indicate the quantity of moisture passing through a concrete slab. It does not accept tests that simply indicate the presence of moisture and does not recommend electronic moisture meters. The calcium chloride test is highly recommended.

[48] The NWFA commissioned a paper by an expert, Howard Kanare, of CTL Group, called “Concrete Slabs and Moisture Issues”. That paper makes it clear that qualitative moisture tests are not sufficient. Plastic sheet tests are qualitative. Calcium chloride tests are the most common quantitative moisture testing. Ploutos received a copy of that paper before the installation from Trademark. It was also available on the NWFA website at the time.

[49] Also relevant is the American Society for Testing and Materials Standard Test Method relating to calcium chloride tests. It states that calcium chloride is the industry standard and a practical, well-established and accepted test of dynamic moisture.

[50] The installation instructions for the Out of Africa Village Collection hardwood, supplied by Columbia Flooring, specifically require a calcium chloride test:

SubFloor Moisture Check: ... above grade applications are susceptible to moisture, and should be tested for moisture prior to installation at several locations, within the installation area. Acceptable conditions for above and on grade applications are:

- Less than 3 lbs. / 1000 sq. ft. / 24 hours in a calcium chloride test.
-

[51] I agree with Commonwealth that this is not stated as an alternative, as suggested by Mr. Boldt, a Kingston Flooring representative, but as a requirement. Ploutos did not determine the vapour emission rate before installing the hardwood and therefore failed to comply with the Columbia Flooring installation instructions, thereby voiding the warranty.

[52] The only expert evidence was that presented by Stuart Olson and Commonwealth. All three experts are well qualified and their opinions are entitled to significant weight. Neither Mr. Kanare nor George Donnelly was cross-examined.

[53] Mr. Kanare gave evidence by way of an expert report. He says that electronic moisture meter tests should not be relied upon as acceptance criteria for the concrete being ready for flooring. He indicates that they are generally acknowledged to be useful as “survey” instruments in that they can provide relative comparisons of wetter and drier areas across a floor. They are tuned in manufacturing so that they only respond to moisture in the upper roughly one inch of the concrete, and therefore they cannot assess the important moisture conditions deeper in the slab.

[54] Russ Riffell is with Levelton, a British Columbia firm. He prepared a report and testified. He says that calcium chloride tests should have been performed to quantify moisture emission from the concrete slabs before the installation. The polyethylene sheet tests can give a false negative.

[55] Mr. Donnelly provided evidence in a report. He discusses the Tramex electronic moisture meter readings. He states that the Tramex moisture meter test, when used on concrete as thick as it was at this project, “does not deliver reliable information.” He does say that the Tramex meter is a tool and the data obtained from it may be used subjectively.

[56] Both Mr. Kanare and Mr. Riffell say that if properly conducted quantitative moisture tests had been performed, they would have indicated excessively high moisture conditions in the concrete floor slab. The fact that appropriate testing done at the time of the failure revealed the excessively high moisture supports their views.

[57] All the witnesses accepted that hardwood can resist moisture only up to a vapour emission rate of either 3 lbs or 4.5 lbs./1,000 square feet/24 hours. I agree with Commonwealth’s argument that the vapour emission rate needs to be determined, as a matter of common sense, before the hardwood is installed. Only the calcium chloride test will determine it.

[58] Ploutos has, from the outset, argued that what the experts say makes sense, but the suggested practice was not the industry standard at the time of this project. However, Ploutos received the Kanare paper before this installation. That paper, written for the NWFA, makes it very clear that qualitative testing is not adequate. Ploutos asks the court to rely on the 2006 NFCA manual with respect to the responsibility for testing, saying it reflects industry standards at the time of this project. Yet it asks the court to ignore the fact that the manual recommends calcium chloride testing.

[59] Ploutos relies upon the fact that Kingston Flooring did not do calcium chloride testing and says others did not. The fact that calcium chloride tests were not used at the time by Kingston Flooring, or even by others, does not mean that what was done complied with industry standards. Ploutos had not been faced with a situation before in which it was dealing with solid hardwood installed on a suspended slab using a double glue-down system. Previous experience on different systems is of little assistance.

[60] Kingston Flooring was a member of the American NWFA. It, however, was not aware of the recommendations found in the Kanare paper. As noted above, the paper was specifically prepared for the NWFA and was available on its website. Kingston Flooring was unaware of the recommendations notwithstanding the fact that it was a member of the NWFA and produced, a few days before the trial started, an excerpt from a NWFA publication in support of the view that testing was Stuart Olson’s responsibility.

[61] No satisfactory explanation has been provided as to why quantitative testing was not done. Mr. Pocock said that these tests are not done because the developers do not want to pay the \$1,000 cost. I agree with Commonwealth’s submission that Ploutos did not offer this developer that option, or even advise that a vapour emission rate test ought to be done.

[62] Ploutos simply did not turn its mind to the kind of testing that would be required for a suspended slab double glue-down system, in spite of the fact that it did not have experience with this type of installation. It chose to let Kingston Flooring make decisions for it. It is telling that Mr. Bisschop was unaware, at his examination for discovery, of what testing had in fact been done.

[63] Ploutos also submits that much of the information about testing is from the United States, not

Canada. I agree with Stuart Olson that this is an integrated industry, with essentially the same standards. Kingston Flooring belonged to the American association. Ploutos itself did business in both Canada and the United States.

[64] The evidence of what the SikaBond adhesive manufacturer says has very limited value in determining what is appropriate with respect to the installation of solid hardwood.

[65] Ploutos says that the Solid Options specifications refer to a Tramex meter. While that is true, the preponderance of the evidence is that such qualitative testing is not sufficient. The NFCA manual, which recommends calcium chloride testing, says that while specifications are important, they should not be followed if they do not meet its standards.

[66] Mr. Mollenhauer's directions to Ploutos cannot be taken to be restricted to surface testing. All tests take surface measurements, although not all are just testing for moisture at the surface.

B. The Manner of Testing

[67] The testing performed by Kingston Flooring was inadequate.

[68] Ploutos cannot rely on the testing performed by Trademark. They were done for Trademark's own purposes and were not intended to be comprehensive moisture tests to determine whether the concrete was ready to accept the hardwood. Only three tests were analyzed, which is just a fraction of the number required. The 2002 NWFA installation guideline, which was in effect in 2005, speaks about the number of tests required. There should have been at least one per 200 square feet. There were 35 suites on four floors, with 20,000 square feet of hardwood. The slabs were poured at different times and from different mixes. Mr. Donnelly concludes, based on his expertise, that there was insufficient data and that the tests that were performed were at best subjective, not quantified and not sufficient in number.

[69] Mr. Pocock told Ploutos, through Mr. Bisschop, not to rely on Trademark's tests, but to do its own plastic sheet testing. In a March 2, 2005 letter, Mr. Pocock said:

There is no evidence of any Slab Moisture Content Tests on the site that I could see. I visited all floors and ... I found nothing which indicated any moisture testing was underway.... I look forward to your confirmation supporting that moisture and humidity testing has indeed taken place and is ongoing.

[70] In spite of receiving this letter, Ploutos did not do anything other than the moisture meter testing. It, in fact, did not even disclose the letter until the week before the trial and with no explanation for such a late disclosure. This lack of testing led to a violation of Trademark's warranty.

[71] Even if it had done plastic sheet testing, the expert evidence, which I accept, is that they have limited value. If they do show moisture, that is helpful. However, they can yield false negative test results in that they do not indicate the moisture condition deeper in the concrete. That is why the NWFA recommends quantitative moisture emission testing using calcium chloride kits.

[72] I am satisfied that if Ploutos had conducted proper quantitative moisture testing before the installation, it would have discovered the excessively high moisture conditions in the concrete floor slab. The expert evidence, which I accept, states this.

MOISTURE BARRIERS

a. Ploutos' Position

[73] Stuart Olson and PCI are very experienced and sophisticated. PCI had an architect who was also a consultant on this project. Ploutos says that they specified cork as the underlay and should know what they are doing.

[74] The industry standard is not to specify a moisture barrier for suspended slab concrete unless a

problem is identified and the owner/developer chooses not to allow more time for the slab to dry. This conclusion is supported by the evidence of Mr. Apostolopoulos and Mr. Bisschop and by the letter Mr. Mollenhauer sent to Commonwealth in which it supported Ploutos' position that it was not at fault.

[75] There was no contractual obligation to install a moisture barrier. The specifications said cork, which is not a moisture barrier. There was no change order changing cork to Prolayment, which is a moisture barrier. The contract is clear that there must be a written change order in order to change the contract.

[76] Dinoflex, which is not a moisture barrier, was used and it is more likely than not, based on the evidence, that Andy Croft, the representative of PCI, was told and agreed. Mr. Croft did not deny being told; he just did not recall. Mr. Bisschop is certain that he did tell Mr. Croft and that Mr. Croft agreed. Mr. Bisschop and Mr. Pocock were clear that Prolayment could not be used on double glue-down installation. Mr. Bisschop would not install an underlay worth 50 cents, rather than Prolayment worth 20 cents, without consent. Also, Mr. Croft and Mr. Bisschop had a good relationship from their work on previous jobs. Although Stuart Olson argues that there should have been a change order to Dinoflex, it was not needed as there was no cost factor involved.

[77] Dinoflex has easily visible holes in it. Stuart Olson often had representatives on site and would have seen it. It knew that there was no moisture barrier being installed.

[78] In the result, Ploutos installed what the contract provides for: an acoustic barrier without a moisture barrier rating. If a barrier was required, it was up to PCI and Stuart Olson to include a provision in the contract specifying a moisture barrier.

[79] Stuart Olson and Commonwealth rely on a 1996 excerpt from the NWFA manual, which they say supports the conclusion that a moisture barrier is required. Ploutos submits that the excerpt does not say that there should be a moisture barrier when there is a suspended slab. It deals only with concrete slabs on grade.

[80] Stuart Olson and Commonwealth rely on expert evidence saying that a moisture barrier was required. Ploutos says that what the experts say may make sense. However, it was not the practice to use them at the time of this project. It rarely saw moisture barriers installed in suspended concrete slab situations.

b. Analysis - Moisture Barriers

[81] I am satisfied that Ploutos was required to install a moisture barrier. The fact that the contract said that a cork underlay was to be used is not relevant to the question of the use of a moisture barrier. It was not the responsibility of either PCI or Stuart Olson to specify a moisture barrier. It was Ploutos' responsibility under the subcontract to inspect the substrate to make sure that it was ready for installation. The substrate was not ready without a moisture barrier.

[82] Ploutos agreed that a moisture barrier was needed. This is evidenced by a letter from PCI to Stuart Olson dated January 14, 2005 saying that both the supplier and Ploutos have strongly recommended substituting the specified cork underlay with a Prolayment moisture barrier and acoustic membrane. Ploutos agrees that it intended to use Prolayment. It was only when it discovered that Prolayment would not work with a double glue-down system that it changed to Dinoflex, which is not a moisture barrier.

[83] I am not satisfied that Mr. Croft, on behalf of PCI, or anyone from Stuart Olson, agreed to the use of Dinoflex. One of the main reasons for the proposed change to Prolayment, which was accepted, was that it was a moisture barrier. It is highly unlikely that either Stuart Olson or PCI would have accepted a barrier that was not a moisture barrier in these circumstances. It is telling that there are no documents whatsoever indicating that there was ever a discussion about Dinoflex.

[84] All of the expert evidence says that a moisture barrier was required. Mr. Kanare relies on the NWFA installation guidelines from June 2002, which say that a moisture retarder, with permanence equivalent to 4-mil polyethylene film, is always required. The NWFA installation guidelines apply to all concrete surfaces, including suspended slabs. Kingston Flooring knew about the publication, but did not follow the standards contained therein.

[85] Mr. Riffell, the British Columbia expert, says that a moisture barrier should have been installed. His opinion is independent of the NWFA publication.

[86] Mr. Donnelly's opinion is that a moisture barrier was needed. He refers to several flooring authorities, other than the NWFA, which state that a barrier is mandatory even if testing shows the slabs are dry. He says that it is less expensive to install one than to perform the extensive testing required to negate the existence of excessive moisture.

[87] The suppliers also require a moisture barrier. Mr. Pocock, representing Solid Options, expressly advised Ploutos through Mr. Bisschop that a moisture barrier must be used when installing Solid Options. Both the installation instructions and the warranty require one. The other hardwood supplier, Columbia Flooring, says in its installation instructions that it requires a 6-mil polyethylene film over the subfloor.

[88] Even if it is correct that the Prolayment underlay could not be sufficiently bonded, there is no satisfactory explanation as to why a moisture barrier was not provided. Though Mr. Pocock said no other dual barrier was available, there is reliable evidence that many single use barriers were available.

[89] The only explanation Ploutos gives is that it was not the practice to use moisture barriers. However, the fact that the NWFA required a barrier, as did the specifications of the hardwood suppliers, indicates that Ploutos was not following industry standards in place at the time. In any event, the use of solid hardwood on a suspended slab with a double glue-down process was new. There was, therefore, no standard and Ploutos was obligated to find out what was needed. It was not enough to do what it had done in the past.

[90] The fact that there was no change order from cork to Prolayment is not relevant. Ploutos was aware of the need for a moisture barrier and chose to use Dinoflex, which is not a moisture barrier.

[91] The lack of a moisture barrier caused the loss.

[92] Ploutos relies, in part, on the fact that Stuart Olson did not blame it, and in fact advocated on behalf of Ploutos in the insurance contest. It says doing so amounts to an admission that Ploutos was not at fault.

[93] Mr. Mollenhauer did write a letter to Commonwealth that supported Ploutos. He said he consulted with others at Stuart Olson on a matter relating to the industry standard. However, I am not satisfied that the letter sent from Stuart Olson to Commonwealth should be viewed as an admission that it agreed that Ploutos was without fault. Stuart Olson was required to advance a claim in a timely fashion and it relied on what it was told by Ploutos in a matter outside its own expertise.

THE THIRD PARTY CLAIM

[94] This is an issue between Stuart Olson and Commonwealth. I have been asked to deal with this issue even though I have found that Stuart Olson was not at fault.

[95] The Builders Risk Declarations Master Policy states at clause 4(c):

This policy does not insure:

...

- (c) The cost of making good faulty workmanship, construction materials or design unless physical damage not otherwise excluded by this Policy results, in which event this Policy shall insure such resulting damage.

[96] Commonwealth says that there is coverage, but the exclusion clause applies. The moisture testing carried out amounts to faulty workmanship. The lack of a moisture barrier amounts to a faulty design. The lack of a moisture barrier is also faulty equipment.

[97] Stuart Olson says that the exception to the exclusion clause applies. It acknowledges that there is a well-known line of cases that confines similar exceptions to resultant damage. Resultant damage is damage to some part of the insured property other than the part that was designed in a faulty manner: **Foundation Co. of Canada Ltd. v. American Home Assurance Co.** (1995), 25 O.R. (3d) 36, 21 C.L.R. (2d) 205 (Ont. Ct. Gen. Div.); **Triple Five Corp. v. Simcoe & Erie Group** (1994), 159 A.R. 1, 29 C.C.L.I. (2d) 219 (Q.B.);

British Columbia v. Royal Insurance Co. of Canada (1991), 60 B.C.L.R. (2d) 109, 7 B.C.A.C. 172 (C.A.); **B.C. Rail Ltd. v. American Home Assurance Co.** (1991), 79 D.L.R. (4th) 729, 54 B.C.L.R. (2d) 228 (C.A.); **Simcoe & Erie General Insurance Co. v. Royal Insurance Co. of Canada** (1982), 36 A.R. 553, 19 Alta. L.R. (2d) 133 (Q.B.); and **Poole Construction Ltd. v. Guardian Insurance Co.**, 4 A.R. 417, [1977] A.J. No. 784 (QL) (S.C.).

[98] Commonwealth argues that applying the principles in those cases to the facts of this case, Stuart Olson could not claim for damages to the very thing that was designed in a faulty manner or improperly – the actual hardwood floors. However, Stuart Olson argues that this exception to the exclusion clause is fundamentally different from the analogous clauses in previous cases and suggests that cases interpreting those clauses are of little or no relevance. It relies on the word “unless” in support of its position that the policy provides coverage for the cost of making good physical damage, even if the cost of making good such physical damage also constitutes the cost of making good faulty workmanship, construction materials or design. It argues that cases interpreting analogous exclusions depend on the words “but” or “provided, however”, instead of “unless”.

[99] A number of interpretation guidelines apply to insurance contracts. Geoff R. Hall, *Canadian Contractual Interpretation Law*, 1st ed. (Markham, Ont.: LexisNexis, 2007) at 173-174, suggests eight special principles:

1. The court should look at the words of the contract to determine if there is ambiguity.
2. The court should ascertain the intention of the parties concerning specific provisions by reference to the language of the entire contract.
3. The court should construe ambiguities found in the insurance contract in favour of the insured (the *contra proferentem* rule).
4. The court should limit the construction in favour of the insured by reasonableness.
5. Coverage provisions should be construed broadly and exclusion clauses should be construed narrowly.
6. It is desirable, at least where a policy is ambiguous, to give effect to the reasonable expectations of the parties.
7. Policies of insurance should be interpreted in a manner consistent with the general economic purpose of insurance.
8. There is an increased willingness to rely on precedent, including in some cases American authorities, for insurance contracts than there is for other types of contracts.

[100] While Commonwealth has the onus of showing that the exclusion clause applies, Stuart Olson has the onus of proving that the exception to the exclusion clause applies. Keeping the principles of contractual interpretation in insurance cases in mind, I am not, for several reasons, satisfied that the exception to the exclusion applies.

[101] Contrary to Stuart Olson’s argument, “but” and “unless” are both defined as meaning “except” in the Shorter English Oxford Dictionary.

[102] Exclusion clauses containing the word “unless” have arisen in Canadian case law. While none of these cases have specifically considered whether “unless” changes the meaning of the exclusion, the outcomes illustrate that the effect of the clause remains the same: **ABB Inc. v. Domtar Inc.**, 2007 SCC 50, [2007] S.C.J. No. 50 (QL); **Dawson Creek (City) v. Zurich Insurance Co.**, 2000 BCCA 158, 75 B.C.L.R. (3d) 131; **Tembec Inc. v. American Home Assurance Co.**, [2000] J.Q. No. 2845, 99 A.C.W.S. (3d) 846 (Qc. C.A.), leave to appeal to S.C.C. refused, [2000] S.C.C.A. No. 550 (QL); and **Barnet Properties Ltd. v. Commonwealth Insurance Co.** (1996), 32 B.C.L.R. (3d) 39, 41 C.C.L.I. (2d) 165 (S.C.).

[103] Even accepting that the word “unless” gives the clause some different meaning, the phrasing “shall insure such resulting damage” must be taken to mean that what is insured is resulting physical damage and only resulting physical damage.

[104] Policy reasons suggest that Stuart Olson should not be able to recover. It would be an inappropriate spreading of the risk if an insured were able to recover such loss. The contractor or designer would theoretically be able to charge a full price for the work, save money by being careless, and then rely on the insurer to pay for the cost of correcting the mistakes. Stuart Olson submits that such insurance should be available and that is what it purchased. This goes against the principle suggested above, that policies of insurance should be interpreted in a manner consistent with the general economic purpose of insurance.

[105] Clause 4(c) should be interpreted in accordance with the well-established line of cases dealing with exclusion clauses. Stuart Olson can recover only for that which falls within the exception to the exclusion, that being resulting physical damage. Therefore, if there is faulty workmanship, construction materials or design in relation to the flooring, then the defendant cannot recover the cost of making good the flooring system.

[106] There was both faulty workmanship and faulty design. The exclusion applies and the exception to the exclusion does not apply.

Madam Justice Donna J. Martinson