



“NOT MY FAULT”

**CURRENT ISSUES UNDER THE DESIGN AND
WORKMANSHIP EXCLUSION**

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SEPTEMBER 2014

I. Introduction

The faulty design and workmanship exclusion was last dealt with by CLEBC at the 2009 Insurance Law and Construction Conferences.¹ There has been some significant case law in connection with the exclusion since that time. This paper will address the scope of the exclusion generally, and will focus on some specific issues that have arisen as a result of recent case law, including *Ledcor Construction Limited v. Northbridge Indemnity Insurance Company et al*, 2013 ABQB 585, [2013] I.L.R. 1-5495² and the very recent decision in *Acciona Infrastructure Canada Inc. v. Allianz Global Risks US Insurance Company*, 2014 BCSC 1568.

II. Wordings

There are several variations on the wording of the exclusion, some common and others less so. By far the most common wording in use in Canada refers to “cost of making good”, “faulty design or workmanship”, followed by a “resulting damage” exception. A fairly standard wording provides:

PERILS EXCLUDED:

- (c) cost of making good faulty or defective workmanship, material, construction or design, but this exclusion shall not apply to damage resulting from such faulty or defective workmanship, material, construction or design;³

¹ In 2009 the exclusion was considered in two papers. The exclusion was considered in broad overview as part of a paper considering builders’ risk policies generally, Boswall *Builders Risk Insurance*, Construction Law Update – 2009. One aspect of the exclusion, the then new “state of the art” standard created by the Supreme Court of Canada in *Canadian National Railway Co. v. Royal and SunAlliance Insurance Co. of Canada*, 2008 SCC 66, [2008] 3 S.C.R. 453 was considered in detail in a separate paper; Miller, “*Canadian National Railway v Royal and SunAlliance*, New Certainty for Faulty Design”, Insurance Law Conference - 2009.

² The author is counsel for appellant insurers on the *Ledcor* matter. The appeal will be heard in October 2014. Comments in this paper on the *Ledcor* decision should be considered with that in mind.

³ This specific wording is taken from *Foundation Co. of Canada Limited v. American Home Assurance Company* (1995), 25 O.R. (3d) 36, (Gen. Div.).

A somewhat more detailed version of this wording is as follows:

This policy does not insure:

- (a) The cost of making good:
 - (i) faulty or improper material;
 - (ii) faulty or improper workmanship;
 - (iii) faulty or improper design

provided, however, to the extent otherwise insured and not otherwise excluded under this Policy resultant damage to the property shall be insured.⁴

The “cost of making good” wording has been considered many times by Canadian courts.⁵

Some wordings, instead of “cost of making good”, refer to damage “caused by” or “attributable to” faulty design or workmanship. For example, the following wording was considered in *Algonquin Power (Long Sault) Partnership v. Chubb Insurance Co. of Canada* (2003), 50 C.C.L.I. (3d) 107 (Ont. S.C.J.):

We will not pay for loss ... caused by or resulting from any of the following. But if loss or damage by a Covered Cause of Loss results, we will pay for that resulting loss or damage.

Similarly, in *BC Rail Ltd. v. American Home Assurance Co.* (1991), 49 C.C.L.I. 189 (B.C.C.A.), the Court considered an exclusion for “loss or damage caused by ... faulty workmanship, error in design ...”.

⁴ This specific wording was considered in *Greene v. Canadian General Insurance Co.* (1991), 5 C.C.L.I. (2d) 193 (Nfld. S.C.), upheld on appeal [1995] N.J. No. 251 (C.A.), 23 C.L.R. (2d) 203.

⁵ Among the cases that have considered “cost of making good” wording are *Bird Construction Co. Ltd. v. United States Fire Insurance Co.* (1985), 18 C.C.L.I. 92 (Sask. C.A.); *Foundation Co. of Canada Limited v. American Home Assurance Company* (1995), 25 O.R. (3d) 36, (Gen. Div.); *Poole Construction Ltd. v. Guardian Assurance Co.*, [1977] A.J. No. 784, [1977] I.L.R. 1-879 (S.C.); *Sayers & Associates Ltd. v. Insurance Corp. of Ireland Ltd.* (1981), 126 D.L.R. (3d) 681 (Ont. C.A.); *Simcoe & Erie General Insurance Company v. Willowbrook Homes (1964) Ltd.*, [1980] I.L.R. 876; *Simcoe & Erie General Insurance Company v. Royal Insurance Company of Canada*, [1982] 3 W.W.R. 628 (Alt. Q.B.); *Algonquin Power (Long Sault) Partnership v. Chubb Insurance Co. of Canada* (2003), 50 C.C.L.I. (3d) 107 (Ont. S.C.J.); *Inland Concrete Ltd. v. Commonwealth Insurance Co.*, 2011 ABQB 378, 2 C.L.R. (4th) 55; *Canadian National Railway Co. v. Royal and SunAlliance Insurance Co. of Canada* (2004), 15 C.C.L.I. (4th) 1 (Ont. S.C.J.), overturned on appeal, 2007 ONCA 209, 48 C.C.L.I. (4th) 161; overturned on appeal and trial judgment restored, 2008 SCC 66, [2008] 3 S.C.R. 453; *Ploutos Enterprises Ltd. v. Stuart Olson Constructors Inc.*, 2008 BCSC 271, 60 C.C.L.I. (4th) 59; and *Ledcor, supra*.

In some cases the exclusion refers to neither “cost of making good” nor damage “caused by” faulty design or workmanship and refers only to the excluded perils themselves. For example, in *British Columbia v. Royal Insurance Co. of Canada* (1991), 4 C.C.L.I. (2d) 206 (B.C.C.A.) the wording provided:

This policy does not insure:

- (a) (i) faulty or improper material;
- (ii) faulty or improper workmanship;
- (iii) faulty or improper design;

provided, however, to the extent otherwise insured and not otherwise excluded under this policy, resultant damage to the property shall be insured.

There are also variations on the language used to describe the scope of “resultant damage”, within the exception to the exclusion. One such variation was considered by the BC Supreme Court in *Supreme Steel Ltd. v. Aon Reed Stenhouse Inc.*, June 13, 2008, BCSC Vancouver Action S023382, in which the exception provided:

It is specifically understood and agreed that all loss or damage arising as a consequence of faulty workmanship, faulty materials or negligent design is insured, except that the original cost of the component(s) that is/are actually proven to be either faulty and/or of negligent design shall be excluded. [emphasis added]

In some cases courts have found other exclusions to have the same effect as an exclusion for faulty design. In *Triple Five Corp. v. Simcoe & Erie Group* (1994), 29 C.C.L.I. (2d) 219 (Alta. Q.B.) upheld on appeal (1997), 42 C.C.L.I. (2d) 132, the Court considered an exclusion which provided:

10. Perils Excluded

This policy does not insure against:

...

- (j) mechanical breakdown or derangement, latent defect, faulty material, faulty workmanship, inherent vice, gradual deterioration or wear and tear, but this exclusion shall not apply to damage resulting therefrom;

The exclusion did not mention design. The issue in *Triple Five* was design of the West Edmonton Mall rollercoaster. The Court found that the mechanical breakdown, latent defect and inherent vice wording operated to exclude the cost of making good the faulty design.

Courts have occasionally considered wordings which provide cover for some aspect of faulty design or workmanship. For example in *CIC Mining Corp. v. Saskatchewan Government Insurance*, (1994) 24 C.C.L.I. (2d) 229 (Sask. C.A.) the policy said this:

THIS POLICY DOES NOT INSURE:

- (a) Cost of making good faulty workmanship or materials but this exclusion shall not apply to physical loss or damage resulting from such faulty workmanship or materials, except as provided in the faulty or defective workmanship clause.
- (b) Cost of making good error in design of process, equipment or machinery, but this exclusion shall not apply to physical loss or damage resulting from such error in design.

...

FAULTY OR DEFECTIVE WORKMANSHIP CLAUSE

It is understood and agreed that this Policy is extended to insure the cost of making good faulty workmanship which renders any portion of the project unfit for its intended purpose.

Faulty or Defective Workmanship rendering any portion of insured property unfit for the purposes for which it was intended is considered to have caused physical loss or damage but this extension will not extend to cover any Business Interruption or consequential loss. [emphasis added]

There are also two entirely separate set of graduated wordings, the “DE” and “LEG” wordings, prepared by two groups of London underwriters. The full text of the wordings is set out below (Section VII). Those wordings have been in use for many years in Canada, to some degree, and are becoming increasingly common. Until very recently none of those wordings had been given any judicial consideration in Canada. Now, one of those wordings, the LEG 2, has been considered in *Acciona, supra*.

In summary, while there are many potential variations on the wording of the exclusion, all have some features in common:

1. a description of the matters to which the exclusion applies (design, workmanship, materials, plans, specifications, etc.);

2. reference to scope the scope of the exclusion (“cost of making good”, “loss or damage caused by”);
3. a description of the standard which applies (“faulty”, “faulty or defective”, or “error in”); and
4. some form of “resulting damage” exception.

Each of these issues will be considered in turn.

III. What is “Design” or “Workmanship”?

This is probably the most straightforward aspect of the exclusion. Courts generally have not had much difficulty determining whether the case involves design, workmanship, or one of the other conditions referred to on some versions of the wording (such as construction, material, plans or specifications).

“Design” has been held include such matters as:

1. consideration of stability of underlying soils (*BC Rail v. American Home, supra* and *Algonquin Power, supra*);
2. consideration of loads potentially to be imposed on parts of the structure by other parts of the structure or related structures (*Poole Construction Ltd. v. Guardian Assurance Co.*, [1977] A.J. No. 784, [1977] I.L.R. 1-879 (S.C.) and *Simcoe & Erie General Insurance Company v. Royal Insurance Company of Canada*, [1982] 3 W.W.R. 628 (Alta. Q.B.));
3. consideration of loads potentially to be imposed by external forces, such as wind and ice loads (*Simcoe & Erie General Insurance Company v. Willowbrook Homes (1964) Ltd.*, [1980] I.L.R. 876; *Collavino Inc. v. Employers’ Mutual Liability Insurance Co of Wisconsin* (1984), 5 C.C.L.I. 94 (Ont. H.C.J.);

“Workmanship” has been held to include such matters as:

1. procedures used in erection of trusses as part of construction of a building (*Bird Construction Co. Ltd. v. United States Fire Insurance Co.* (1985), 18 C.C.L.I. 92 (Sask. C.A.);
2. temporary and permanent bracing in connection with construction of a house (*Greene v. Canadian General Insurance Co.* (1991), 5 C.C.L.I. (2d) 193 (Nfld. S.C.), upheld on appeal [1995] N.J. No. 251 (C.A.), 23 C.L.R. (2d) 203);

3. steps taken (or not taken) to protect equipment during construction (*Sayers & Associates Ltd. v. Insurance Corp. of Ireland Ltd.* (1981), 126 D.L.R. (3d) 681 (Ont. C.A.));
4. procedures used in testing portions of a building or other structure for purposes of contract acceptance (*Pentagon Construction (1969) Co. Ltd. v. United States Fidelity and Guaranty Company*, [1977] 4 W.W.R. 351 (B.C.C.A.); *Ploutos Enterprises Ltd. v. Stuart Olson Constructors Inc.*, 2008 BCSC 271, 60 C.C.L.I. (4th) 59);
5. procedures used in cleaning portions of a building or other structure for purposes of contract acceptance (*Ontario Hydro v. Royal Insurance*, [1981] O.J. No. 215 (H.C.J.) and *Ledcor*, *supra*).

These are illustrative examples only and are obviously not exhaustive as to the matters that would constitute design or workmanship for purposes of the exclusion.

One case considering the definitions of both “design” and “workmanship” and the border between the two is *Pentagon*, *supra*. In *Pentagon* a tank failed during testing, required in connection with its commissioning and acceptance. Neither the drawings nor the contract documents mandated a specific test procedure. The drawings should have stated that certain welding had to be complete before testing was carried out. The testing was carried out without the welding having been done, and the tank collapsed. The insured claimed the cost of rebuilding the tank. Insurers denied, asserting that the failure to complete the welding prior to testing was faulty design, faulty workmanship, or both. The insured argued that, because the test procedure was not specified in the contract documents or drawings, the test procedure was not a matter of design, and that because there was no specific act of negligence on the part of a particular employee that could be pointed to as having caused the collapse, there was no faulty workmanship.

Robertson J.A. said the following in connection with “design”:

My view is that the word “design” as it is used in the policy expresses a concept of the finished product of the work to be done by Pentagon [the insured] under the contract and that that concept finds its expression in the plans and specifications; those plans and specifications themselves are not, however, the design. It follows that detailed instructions of how the work of construction is to be carried out are not part of the design of the tank. Consequently, the lack of instructions as to the order in which the welding and the testing were to be done cannot constitute faulty or improper design.

With respect to “workmanship”, Robertson J.A. said the following:

There was argument directed in essence to establishing whether or not there was on the part of an employee of Pentagon negligence that caused

the failure of the tank. This appeared to be predicated by Pentagon on the idea that “loss or damage caused by faulty or improper workmanship” had in mind only specific acts that could be characterized as faulty workmanship or improper workmanship, such as manual operations of an artisan. (A dictionary definition relied on by Pentagon was taken from Funk & Wagnall, New Standard Dictionary (1943): “2. The work or result produced by a worker; as all these are his workmanship.”) In my view, this was not all that was intended to be comprehended by the words. The workmanship referred to comprehended as well the combination, or conglomeration, of all the skills that were directed to the building of the tank.

Accordingly, it was not necessary that there be some act that could be characterized as “manual operations of an artisan” to constitute faulty workmanship. All of the acts involving application of some degree of skill and required in connection with construction of the tank constituted workmanship. As those matters included carrying out of the final testing, there was faulty workmanship.

Bull J.A. agreed with Robertson J.A. regarding the existence of faulty workmanship, but also found that there was faulty design. Bull J.A., referring to *Hudson’s Building and Engineering Contracts, 10th edition, 1970* said:

... “design” is referred to as being a wide term which includes not only structural calculations, shape and location of materials, but their choice, as well as the choice of particular work processes, and concludes with the following words:

“In other words, in sophisticated contracts the design includes the specifications as well as the drawings.”

In my opinion, the construction contract here qualifies as such a “sophisticated contract” and with respect to it “design” would include the drawings and specifications for the project or “Works” thereunder.

Bull J.A. found that there was a deficiency in the plans and specifications, in they failed to specify that final testing not be carried out until after the welds in question were in place. Accordingly, there was faulty design in addition to faulty workmanship.

The third member of the Court, MacLean J.A., adopted the reasons of Robertson J.A., but did not find it necessary to consider whether there was faulty design in addition to faulty workmanship. In other words, MacLean J.A. adopted that portion of the reasons of Robertson J.A. finding that there was faulty design, but not that portion of the reasons finding that there was no faulty workmanship.

The question of what constitutes faulty design and workmanship was also considered in some detail in *Foundation Co. of Canada Limited v. American Home Assurance Company* (1995), 25 O.R. (3d) 36 (Ont. Gen. Div.), albeit in *obiter*, as the exclusion was found not to apply on the grounds that the cause of the failure was not “foreseeable”. In that case Wilson J. considered the wording in some detail. The Court said the following in connection with design (at p. 42-43):

“Design” is defined in the *Dictionary of Canadian Law* (Toronto: Carswell, 1991) as:

1. A plan, sketch, drawing, graphic representation or specification intended to govern the construction, enlargement or alteration of a building or part of a building and related site development.
2. With reference to a boiler, pressure vessel or plant or an elevating device, means its plan or pattern, and includes drawings, specifications, and where required, the calculations and a model. ... (from H.G. Fox, *The Canadian Law of Copyright and Industrial Designs*, 2nd ed. (Toronto: Carswell, 1967) at 652.

Black's Law Dictionary, 6th ed., defines “design” as:

... the plan or scheme conceived in mind and intended for subsequent execution; preliminary conception of idea to be carried into effect by action; contrivance in accordance with preconceived plan. A project, an idea.

Taken together, the definitions of “design” include the conceptual aspects, contrasted with the actual carrying out of a course of action. Design includes all but the physical work of implementation.

With respect to workmanship, Wilson J., after considering various cases, said this:

From a review of the case law it appears that workmanship and construction go hand in hand. Construction involves the physical implementation of a design. Workmanship involves the qualities of skill and knowledge and performance of the construction. The two terms are often used interchangeably in the case law, as they are to a degree, inextricably intertwined.

One of the few cases to give a narrow interpretation to the words “design” and “workmanship” is *Todd's Men and Boys' Wear v Diamond Masonry (Calgary) Ltd.* [1985] A.J. No. 743. In that case the exclusion referred to design and workmanship, but not “construction”. There was a failure to properly erect temporary bracing, resulting in collapse of a wall under construction. The Court held that this involved neither “design” nor “workmanship”. The fault was one of “construction”, and as the exclusion did not refer to construction, it did not apply. In *Foundation, supra*, the Court held (p. 51) that *Todd* was incorrectly decided. In addition, the

decision is incompatible with *Greene, supra*, and likely incompatible with *Bird Construction, supra*. *Todd* cannot be considered good law.

In most cases, it will not matter whether the act in question is characterized as one of design or workmanship, as both are generally within the exclusion. Broadly considered, any act carried out on the site in connection with the project, involving some degree of care and skill, will constitute design or workmanship for purposes of the exclusion.

IV. “Cost of Making Good”

Canadian Courts have, on many occasions, considered what constitutes “cost of making good” faulty design or workmanship. “Cost of making good” the faulty design or workmanship has, prior to the recent *Ledcor* decision, universally been treated as the repair costs necessary as a result of the faulty design or workmanship. Put another way, it is the cost of repair of that part of the insured property which was the subject of the faulty design or workmanship and which suffered damage as a direct result of the faulty design or workmanship. In *Ledcor*, the Court held that the cost of making good faulty workmanship is restricted to the cost of properly carrying out the work in question and does not include cost of repair of the property damaged by the faulty workmanship.

This section of the paper considers the pre-*Ledcor* cases; discusses the *Ledcor* decision; and then looks at the interpretation given to some alternate wordings, which do not refer expressly to “cost of making good”.

A. Case Law Considering “Cost of Making Good”

***Poole Construction Ltd. v. Guardian Assurance Co.*, [1977] I.L.R. 1-879 (Alta. S.C.)**

The insured was constructing a bridge. One of the cofferdams failed, and flooded, due to faulty design. The design error was only in the cofferdams, not the piles, piers or any other components of the bridge. The piles and piers were damaged as a result of flooding of the cofferdam and had to be removed and rebuilt. The insured argued that application of the exclusion should be restricted to the direct cost of the cofferdam, and should not apply to the costs of rebuilding the piers, piles, etc.

The Court rejected that argument, saying this (p. 635):

I take the view that the clear intent of the [exclusion] is to make it clear that the insurer will not indemnify the insured for costs caused by the insured’s own use of faulty workmanship, materials or design. To do otherwise would give the insured *carte blanche* to use faulty materials, workmanship or design. . . The original exception talks of the “cost of making good faulty design”. The cost of making good covers the entire structure in this case. To make good the faulty design the plaintiffs had to

remove the structure and fill the excavation. Those are the costs for which they ask to be indemnified and they come precisely within the exception.

Greene v. Canadian General Insurance Co. (1991), 5 C.C.L.I (2d) 193, upheld [1995] N.J. No. 251, 23 C.L.R. (2d) 203

The insured was building a house. The contractor installed some temporary bracing, which proved inadequate. As a result the house collapsed. The faulty bracing was found to constitute faulty workmanship. The insured argued that the “cost of making good” should be restricted to the cost of erecting proper bracing, and that the costs of rebuilding the house should be treated as resultant damage. The Court of Appeal, after referring to various cases, said this: (para 60)

All of these cases are concerned with how one draws the line between cost of making good faulty or improper material, workmanship or design and resultant damage to the property. The distinction is not, as the appellants argue, to be made on the basis of the smallest component part affected by the improper workmanship. Rather, the courts have used a common sense approach to decide what it was that was being worked upon. Here the defective or inadequate bracing was to stabilize the house during construction and the resulting accident caused the destruction of that house. I see no error in the decision of the trial judge that the loss suffered by the appellants was the cost of making good faulty or improper workmanship, not “resultant damage”, nor in his analysis of the applicable case law.

Thus, the entire cost of repair of the house under construction was the cost of making good the faulty workmanship.

Bird Construction Co. Ltd. v. United States Fire Insurance Co. (1985), 18 C.C.L.I. 192 (Sask. C.A.)

The insured was erecting trusses during construction of a building. The erection procedure was faulty and the truss being erected collapsed and was damaged. The truss itself was not faulty; the deficiency was only in the erection procedure. The insured argued that the cost of making good the faulty workmanship should be restricted to the cost of properly erecting the truss, and that the cost of repair should be treated as resultant damage. The Court rejected that argument. The Court held that the reason for the exclusion was to make it clear that the insurer would not indemnify the insured for “loss or costs incurred by the insured’s faulty workmanship”. The exclusion applied to cost incurred to repair the truss damaged due to the faulty workmanship.

Simcoe & Erie General Insurance Company v. Royal Insurance Company of Canada, [1982] 3 W.W.R. 628 (Alt. Q.B.)

A good description of this case is taken from the subsequent decision in *BC v. Royal, supra*, at para. 12, where the Court said:

A bridge was being built. As it reached completion, rails for another bridge were stored on top of it. Because of a design error in the substructure of the bridge, the bridge collapsed. The superstructure had no design error but of course it also collapsed. The stored rails were destroyed. It was decided that the design error was a design error affecting the whole work, namely the bridge; that the bridge was an integral whole; and that it would be improper to separate the bridge into separate items of property, namely, substructure and superstructure, and so regard one of the parts (the substructure) as excluded from coverage through being damaged by faulty design, and the other part (the superstructure) as being excepted from the exclusion as being resultant damage. On the other hand, it was decided that the damage to the stored rails was resultant damage.

Thus, cost of replacing the entire collapsed superstructure of the bridge, which had no design error and collapsed simply as a result of an error in design in the substructure, was “cost of making good” the faulty design of the substructure.

Canadian National Railway Co. v. Royal and SunAlliance Insurance Co. of Canada, 2008 SCC 66, [2008] 2 S.C.R. 453

The facts are set out below (Section V.B) and involved an allegation of faulty design in connection with a tunnel boring machine. The insured argued that, if the faulty design exclusion applied, it was restricted to costs of modifying the machine. At trial, Ground J. (para. 81) rejected that argument. Ground J. held that the exclusion for “cost of making good” faulty design “must be intended to apply to all loss or damage caused by faulty or improper design”, not restricted to cost of rectifying the design. This was *obiter* given Ground J.’s conclusion on application of the foreseeability test (discussed below). The reasoning on this point was upheld by the Court of Appeal (paras. 138 and 140), which held that the exclusion applied. The issue was not addressed by the Supreme Court of Canada. This was not necessary in light of the Court’s decision on the “state of the art” standard applicable to the exclusion (para. 67).

Sayers & Associates Ltd. v. Insurance Corp. of Ireland (1981), 126 D.L.R. (3d) 681

The insured was an electrical contractor installing equipment in a building under construction. The insured did not adequately cover the equipment to protect it from the elements. There was water damage to the equipment. The insured’s failure to properly protect the equipment was faulty workmanship. The insured argued that the “cost of making good” that faulty workmanship exclusion did not include cost of replacement of the damaged equipment. The Court rejected that argument. The Court found that the insured’s work was to install the electrical equipment “and to keep it dry and clean until the contract was completed”. Damage to the equipment, arising from the insured’s faulty workmanship, was cost of making good that faulty workmanship, and was not resultant damage.

Plutos Enterprises Ltd. v Stuart Olson Constructors Inc., 2008 BCSC 271

This case involved failure of hardwood flooring installed in a high rise. The flooring failed as a result of excessive moisture. A moisture barrier should have been, but was not, installed.

Moisture testing was carried out improperly. As a result, there was faulty design, faulty workmanship, and possibly faulty materials (para. 96). The insured argued that the cost of making good the defects in design and workmanship should not include cost of repair of the flooring. The Court rejected that argument. The “cost of making good” the flooring included the cost of repair of the flooring.

B. Cost of “having someone else do it right”; the *Ledcor* Decision

A different result was reached in *Ledcor Construction Limited v. Northbridge Indemnity Insurance Company et al*, 2013 ABQB 585, [2013] I.L.R. 1-5495. *Ledcor* concerned a builders’ risk policy issued to owners in connection with construction of an office tower in Edmonton. Subcontractors, in carrying out a final construction cleaning of project exterior glass, did not use proper techniques. As a result, some of the exterior glass was scratched. The insured made a claim under the policy for the costs potentially to be incurred in remedying the exterior glass. Insurers denied cover on the basis of the faulty workmanship exclusion.

The matter was heard by Clackson J., on the basis of an agreed statement of facts. Clackson J. held that the poor cleaning constituted faulty workmanship, and went on to consider whether the “cost of making good” that faulty workmanship included cost of repair or remediation of the windows (the insurers’ argument) or was restricted to cost of carrying out the cleaning properly (as argued by the insured). Clackson J. said this:

14 It is plausible that excluding the cost of “making good” faulty cleaning simply excludes the cost of having someone else do it right. That is the plaintiffs’ position. It is also plausible that “making good” faulty cleaning extends to the damage done by the faulty cleaning. That is the defendants’ position.

Clackson J. then referred to *Ontario Hydro and Combustion Engineering – Superheater Ltd. v. Royal Insurance*, [1981] O.J. No. 215. In that case a contractor conducted an acid wash of boiler tubes during commissioning of the boiler. As a result the tubes were damaged. The insured argued that the exclusion was restricted to cost of properly carrying out the acid wash. The insurer argued that the exclusion applied to the cost of repair of the damaged tubes. The Court accepted the insurer’s argument, holding that “the cost of making good the improper workmanship is the cost of replacing the tubing which was the object of this procedure.”⁶

After referring to *Ontario Hydro*, Clackson, J. continued:

15 However, while the result in *Ontario Hydro* is defensible, the reasoning that led to the conclusion reached is not provided. In the end,

⁶ The exclusion in *Ontario Hydro* was on “caused by” wording, rather than “cost of making good” wording. This should, as explained elsewhere (see Section IV.C) make no difference. The Court in *Ontario Hydro* was right to equate “caused by” with “cost of making good”.

the result reached was simply one of two plausible alternatives, and why one was chosen over the other is not readily apparent.

16 In my view, either of the proffered interpretations presented by the parties in this case appears on its face to be reasonable. The policy does not clearly suggest one alternative in preference to the other. Returning to the Supreme Court of Canada's guidance in *Progressive Homes*, it appears, therefore, that the language of the exclusion is ambiguous. In the context of what is an all risk or builders policy stipulating coverage for virtually any event which might occur by way of negligence, third party action or act of God, one could conclude that an exclusion as suggested by the defendants is inconsistent. Additionally, Bristol, as a sub-contractor is an additional insured under the policy. Subrogation by the insurers against Bristol can be waived at the option of the plaintiffs. Again, all of that suggests broad coverage inconsistent with what the defendants say is the effect of the exclusion.

On that basis the Court held that the "cost of making good" the faulty workmanship was restricted to the cost of properly carrying out the construction clean of the exterior glass, and did not apply to cost to repair the scratching. None of the decisions referred to above are cited in the decision, apart from *Ontario Hydro*. The reference to *Progressive Homes* is to the general principles of interpretation, as reiterated by the Supreme Court of Canada in *Progressive Homes v. Lombard Gen. Ins. Co.*, 2010, S.C.C. 33 [2010] 2 S.C.R. 245. The reasoning in *Ledcor*, in the author's view, cannot be reconciled with the prior decisions on the faulty workmanship exclusion referred to above. If the "cost of making good" faulty design or workmanship is restricted to the cost of carrying out the design or workmanship in question properly, as opposed to cost of repair of physical damage to the property which is subject to faulty design or workmanship, the result in all of the cases referred to above would be different.

C. Alternate Wordings

Courts have held that the exclusion has the same scope where the wording refers to damage "caused by" faulty design or workmanship, as opposed to "cost of making good", or where neither "damage caused by", nor "cost of making good" are expressly referred to, and where the wording simply excludes "faulty design or workmanship". Some of the wordings that have been considered are set out above (Section I). As was noted in *Sterling Crane v Penner Bros Utilities Ltd.* (1985), 12 C.C.L.I. 97 (B.C.S.C.), the effect of an exclusion for a specific peril has to be to exclude loss or damage caused by that peril (para. 8 – 9). *Sterling Crane* was cited for this point, in connection with faulty design in *Triple Five, supra*, (para. 242)⁷, and in *CN v. Royal, supra*, (Ont. S.C.) (para. 91). Courts considering "caused by" wording (as in *Algonquin* and *BC Rail*) have relied on "cost of making good" cases, and *vice versa*, with the terms being treated interchangeably. As is clear from the decisions cited above, including *Poole*, "cost of making

⁷ Keeping in mind the fact that, as noted above (Section I), the policy in *Triple Five* did not contain an express design exclusion, and that the decision was based on application of the latent defect, mechanical breakdown and inherent vice exclusions.

good” faulty design or workmanship is the cost of repair of the damage caused by the insured’s use of faulty design or workmanship. Accordingly, Courts are right to treat the two phrases as having the same meaning.

V. When is Design or Workmanship Faulty? The “State of the Art” Standard

The standard that applies in determining whether design or workmanship is “faulty” underwent a potentially significant change as a result of the decision of the Supreme Court of Canada in *CN v. Royal*, *supra*. In summary, the standard for application of the exclusion was revised from one of “all foreseeable risks” to one of “state of the art”. There was some discussion, after that decision was handed down, to the effect that the new standard might unduly complicate the process of determining when the exclusion applies.⁸ The concern was, in part, that application of the “state of the art” standard would turn many cases involving the exclusion into quasi-negligence trials (albeit one involving a “state of the art” standard rather than a reasonable care standard).

That does not appear to have occurred, based on experience with the exclusion to date. Only two decisions since *CN v. Royal*, both handed down very recently, have considered the “state of the art” standard; *Verreault Navigation Inc. v. The Continental Casualty Co.*, 2014 Q.C.C.S. 2879 (QSC) and *Acciona*, *supra*. Both reach unsurprising conclusions concerning application of the state of the art standard. It may well turn out that significance of the “state of the art” standard will be restricted to very unusual situations, involving complex engineering and design on the frontiers of existing knowledge. Before commenting on the recent cases it is worth describing both the pre-existing “all foreseeable risks” standard, and the new “state of the art” standard.

A. The Traditional Standard: “All Foreseeable Risks”

Traditionally the standard applied to determine whether design or workmanship is “faulty” is that of “all foreseeable risks”. If the risk was “foreseeable”, then design or workmanship that failed to accommodate that risk was “faulty”⁹. *Queensland Government Railways and Electrical Power Transmission Property Ltd. v. The Manufacturers Mutual Insurance Ltd.*, [1969] 1 Lloyd’s Rep.214 (Aust. H.C.) involved a bridge, designed to ensure that it would survive the highest flood ever recorded on the site at which it was built. A flood higher than that ever recorded occurred and the bridge failed. The Court found that risk of such an extreme flood was not

⁸ See, for example, Miller, *Canadian National Railway v Royal and SunAlliance*, New Certainty for Faulty Design, *supra*.

⁹ There has been *obiter* comment in some cases that, while the standard in connection with design was “foreseeability” the standard in connection with workmanship was “reasonable foreseeability” so that workmanship would only be “faulty” where there was negligence. Cases which raised this possibility, based on certain comments by one member of the Court in *Queensland*, include the decision of the BC Court of Appeal in *BC Rail*, *supra*. The notion of such a distinction has been rejected in other cases, including *Foundation*, *supra*, and in texts, including Brown and Menezes, *Insurance Law in Canada* (p. 20.34). Any debate on this point has likely been ended by the decision in *CN v. Royal*, and in *Acciona*, in which the Court that the “state of the art” standard should apply to workmanship, as well as design.

“reasonably foreseeable”, in that such a flood was very unlikely. But it was “foreseeable” in that such a flood was possible. Accordingly, on the foreseeability standard, design of the bridge was “faulty”.

Queensland was followed on this point in a number of Canadian cases involving unusual, but “foreseeable” conditions. Those conditions include very high, but foreseeable, winds (*Simcoe & Erie v. Willowbrook Homes, supra*) and very heavy, but foreseeable, spring break up of ice (*Collavino, supra*).

One of the few Canadian cases to have found that a design which failed had nonetheless taken into account all foreseeable risks was *Foundation, supra*. *Foundation* involved failure of a cofferdam during construction of a bridge. The cofferdam failed because of a rare combination of a pocket of gas and slickenslide (a fractured clay surface). The Court made it clear that the standard required a meeting of “extreme, but foreseeable, circumstances”. Extensive engineering evidence was called. The Court found that, on the basis of that evidence, the combination of factors which caused failure of the cofferdam was so unusual that it was simply not “foreseeable”. Thus, despite having failed, the design was not faulty or defective.

B. The “State of the Art” Standard: *CN v Royal*

The facts of *CN v. Royal, supra* were unusual. The project was boring of a rail tunnel. Because of the scale of the project the tunnel boring machine had to be designed basically from scratch, specifically for the project. One issue that arose during design was how to deal with the risk of bored material entering the machine’s main bearings. The unprecedented size of the machine gave rise to special problems in terms of ensuring that bored material did not enter the bearings due to differential deflection in components of the machine. The matter was addressed during the design phase of the project. Experts were retained and carried out sophisticated work to develop a system of seals in order to protect the bearings. The sealing system, which could not be fully tested, failed in operation. Bored material entered the bearings, the bearings seized, and the machine suffered damage.

The trial judge, Ground J., applying the traditional standard, found that the risk of differential deflection was not “foreseeable” and thus the design was not faulty. The difficulty with that finding, of course, was that the specific problem of differential deflection was not only foreseeable, it was foreseen during the design process. The fact that every reasonable precaution was taken to accommodate this risk was not, on the traditional standard, sufficient to avoid a finding that the design was faulty. The Court of Appeal overturned the trial decision on this basis.

The difficulty with the traditional analysis on the facts in *CN v. Royal, supra* is obvious. A design which did not deal fully accommodate all foreseeable risks would inevitably be faulty, no matter how difficult, specialized or unprecedented the issue being faced. The standard is close to perfection.

The Supreme Court of Canada, by a narrow majority, overturned the decision of the Court of Appeal on the basis that pure “foreseeability” should no longer be the standard. Instead, the standard should be “state of the art”. Those risks that would be foreseen applying a “state of the art” standard must be dealt with applying “state of the art” engineering and design principles. If those steps are taken design will not be faulty, even if it fails.

The question then becomes, exactly what does “state of the art” mean? This is discussed by Binnie J. for the majority, at para. 55:

It is quite possible to evaluate the design (as distinguished from the designer) as to whether it met the standard of an ordinary, reasonable, cautious and prudent design, having regard to what could be expected in the circumstances. However, a design that survives a negligence test is not, on that account, of a calibre sufficient to deny the insurers the benefit of the exception. The insurers are entitled to the benefit of the exemption unless the design met the very highest of standards of the day and failure occurred simply because engineering knowledge was inadequate to the task at hand.

Accordingly, the “state of the art” standard is higher than a negligence standard, but below a standard of perfection.

C. Cases Since *CN v. Royal* Considering the “State of the Art” Standard

The first case to consider the “state of the art” standard was *Verreault, supra*. In *Verreault* the policies in question were primary and excess marine construction liability policies issued in connection with a project to refurbish a ferry owned by the Government of Canada. The policies covered the contractors’ legal liability in connection with the project, but excluding liability arising from faulty design. Part of the contract involved design and installation of a new HVAC system. The HVAC system did not operate to specifications and, as a result, the Government brought a claim against the contractor¹⁰. Insurers denied on the basis of the faulty design exclusion. The insured opposed the denial on the basis that the HVAC system was designed to “state of the art”, in that it was designed to certain industry codes. The Court had no trouble rejecting that argument. The codes on which the insured relied were applicable in connection with buildings. Separate codes governed an HVAC system for use in a vessel. Accordingly, the system clearly was not designed to “state of the art”.

There was more detailed consideration of the state of the art standard in *Acciona, supra*. While the real significance of the decision is its treatment of rectification costs, discussed below, the reasoning in connection with the state of the art standard is also of interest. *Acciona* involved a project to construct a new hospital wing. Construction utilized cast-in-place reinforced concrete

¹⁰ Interestingly, the coverage provision under which the claim was made did not include any requirement that the claim be as a result of property damage. Accordingly, cover was triggered, subject to the design exclusion, as a result of the Government of Canada’s claim that the system was defective.

slabs. The concrete slabs, over time, began to exhibit excessive cracking and “over-deflection”. The slabs were intentionally designed to be high at the centre when initially constructed, and then to undergo a certain amount of deflection to become level. However, the deflection did not stop at the intended point. The deflection continued, and the slabs eventually sloped down towards the middle. This raised no structural or safety issues but, due to the cracking and over-deflection, the slabs did not meet the standards set out in the governing contracts. As a result, substantial remedial work had to be undertaken.

The builders’ risk policy issued in connection with the project contained a design and workmanship exclusion on LEG 2 wording (set out below). Insurers denied the claim on the basis of the exclusion. Several issues were raised, including the question of whether there was any defect in design or construction of the slabs. The insured argued that there was no defective design or workmanship within the meaning of the exclusion, as the slabs had been constructed to the “state of the art”. Both the insured and insurers called expert evidence concerning the specific cause of the cracking and over-deflection. The evidence accepted by Skolrood J. was to the effect that the construction involved slabs that were thinner than would generally be the case. That would be acceptable, so long as certain specific procedures were followed in connection with formwork and reshoring of the concrete during construction. Those procedures were not followed. The Court accepted expert evidence that the analysis undertaken in connection with the formwork/reshoring procedures was “inadequate”. In those circumstances Skolrood J. had little difficulty in concluding that the contractor’s work did not meet the “state of the art” standard. Accordingly, there were defects in workmanship within the meaning of the exclusion.

It appears that, at least to this point, the change in standard does not appear to have given rise to real difficulty. That may well continue to be the case. *CN v. Royal, supra* may turn out to be the rare case, based on its unusual facts, in which there is a difference between a design or workmanship which accommodates all “foreseeable” risks, and a design or workmanship which is “state of the art”.

VI. The Resulting Damage Exception

The final question that must be answered in connection with the application and scope of the exclusion is whether any part of the claim qualifies as “resulting damage”. Canadian Courts have given extensive consideration to the resultant damage issue. There is obvious interplay between the “cost of making good” and “resulting damage”. Any costs that are included in the “cost of making good” by definition cannot qualify as “resulting damage”. For that reason, several of the cases considered above under the heading “Cost of Making Good” also consider the resulting damage exception.

It is first worth noting that “resultant” damage within the meaning of the exclusion must be physical damage. Economic or financial loss does not constitute resultant damage within the meaning of the exclusion. Such loss may, of course, potentially be covered under the policy following covered physical damage, but such cover must be found in the business interruption, extra expense, delayed opening or soft cost provisions, not in the resultant damage exception. This issue has been considered in *BC Rail, supra*, and in *CN v. Royal, supra*.

To qualify as “resulting” damage, the damage must be to property separate from that which is subject to the faulty design or workmanship. As with the “cost of making good” it is worth considering some examples. The following cases have all expressly considered the resultant damage exception and the costs that are potentially within the exception.

British Columbia v. Royal Insurance (1991), 4 C.C.L.I. (2d) 206 (B.C.C.A.)

BC v. Royal involved a creek channelization project. The project involved channelization works within the creek, and also separate diversion works, for the purposes of diverting the creek flow during the project. The diversion works failed during a heavy rain. As a result there was damage to both the diversion works and the main creek channelization works. The insured did not make a claim for damage to the diversion works, but claimed that the damage to the main creek channelization works was resultant damage and that damage to the main channel was thus within the exception. This was due principally to the fact that the diversion system would have no continuing function in the completed creek channelization project, and the fact that the construction documents treated the diversion system as a construction device separate from, and not a part of the designed project. As a result, the cost of repair of the damage to the main creek channelization was covered as resultant damage.

Triple Five Corp. v. Simcoe & Erie Group (1994), 29 C.C.L.I. (2d) 219 (Alta. Q.B.)

The rollercoaster, as a result of the accident which gave rise to the claim, was destroyed. Other property was also damaged. The failure was due to one defective component of the rollercoaster. The insured argued that all costs of repair, including cost of replacement of the destroyed rollercoaster should be treated as resulting damage. The Court said this at para. 253:

The case law on the subject is to the effect that the “resulting damage” exception to the exclusion clause is not to be construed in a way that requires that the policy will cover the cost of repairing the property which was itself defective or improperly made, that is, the rollercoaster itself. In making this analysis, I do not think it right that I should consider the rollercoaster in its component parts. It is the rollercoaster which has failed, and no part of the rollercoaster should be included under the resulting damage exception. Only the property that is damaged by the violence of the ensuing accident, or surrounding property of the insured which was damaged by flying parts is covered here. This, in my opinion, would include only direct collision damage to the tracks, columns, superstructure and the surrounding demising walls, roof and staircase, and handrail that were damaged by the falling material from the wheel assembly.

The Court of Appeal, in upholding this decision, noted, the trial judge, after making the correct finding concerning the scope of the resultant damage exception, had awarded the insured the cost of repair of the resultant damage “and possibly a little bit more” (para. 51). That was likely a reference to the fact that the award included cost of repair of the track, which was a component of the roller coaster, and thus not resultant damage.

Algonquin Power (Long Sault) Partnership v. Chubb Insurance Co. of Canada (2003), 50 C.C.L.I. (3d) 107 (Ont. S.C.J.)

A hydroelectric dam under construction failed. The cause of the failure was the dam's inability to deal with hydraulic piping in the soil and bedrock beneath the dam. The Court found that no part of the cost of repair of the dam could be covered as resultant damage, notwithstanding the fact that only certain components of the dam were faulty. The Court said this: (para. 202)

Where the loss was caused by faulty design, the insured (sic insurer) will not pay for loss resulting to the whole of the design including its various subcomponents. To hold otherwise would place on the insurer a virtual warranty for the items designed. The insured could then take risks on the design of a particular component of the item with assurance that it would at least be compensated for the damage that that component, if it turned out to be faulty, visited on the other components of the item.

The only portion of the claim which was covered as resulting damage was damage to a transformer station, a turbine, fences and a retaining wall. Like the stored rails in *Simcoe & Erie v. Royal, supra*, or the separate set of concrete channels in *BC v. Royal, supra*, the fencing etc. was entirely separate property from the dam and, thus, within the exception.

Supreme Steel Ltd. v. Aon Reed Stenhouse Inc., June 13, 2008, BCSC Vancouver Action S023382

In *Supreme Steel* the insured constructed a temporary shoring tower for use in connection with erection of sections of the elevated sections of the Skytrain line. During the course of using the tower to jack a section of the line into place the tower buckled. The original tower was constructed of prefabricated sections and had not been tested for loads that would be applied during the jacking procedure. A new tower had to be built to replace the original tower and, to meet the design loads that would be imposed, had to be built at about ten times the cost of the original tower.

The policy was on standard design exclusion wording, but with this addition to the exception:

... except that the original cost of the components that is/are proven to be either faulty and/or negligent in design shall be excluded.

The insured argued that the effect of this addition to the wording was to bring into cover cost of the replacement tower, minus the cost of the original tower. The Court rejected that argument. The Court accepted insurers' argument that the exception could not have been intended to permit the insured to recover the cost of constructing a properly designed tower. The Court held that the closing words of the exception could mean only that, where there was resultant damage to other property as a result of the collapse of the tower, that resultant damage would be covered, less the original cost of the collapsed tower. The effect of the closing words of the exception was to clarify that no part of the cost of the collapsed tower *would ever* be covered.

BC Rail v American Home Assurance Co. (1991) 54 B.C.L.R (2d) 228 (C.A.)

In *BC Rail* a section of the insured's rail line collapsed, together with the rail bed and the fill beneath the rail bed. The design of the fill was faulty. The insured argued that, as the error was restricted to the fill, the cost of replacing the rail line, with a temporary and then permanent bridge, was covered as resultant damage. The Court rejected that argument. The Court relied on *Poole* and certain other decisions referred to above. The fill could not be separated from the rail and other components. All were within the exclusion.

In the course of its decision the Court referred to *Landru v Inter City Contractors Ltd.*(1987) 24 C.L.R. 95 and *Foundation Co. Of Canada v Aetna Cas. Co. of Canada* [1976] I.L.R. 1-757. Both involved similar facts. In *Landru* the error was in failing to properly install a weeping tile system below a slab and in watering backfill after the slab was poured. As a result the floor heaved and had to be replaced. In *Foundation v Aetna* there was faulty compaction of material below a slab, resulting in damage to the slab. In both cases, the Courts held that the cost of repair of the slab was resultant damage. In *Poole, supra* the decision in *Aetna* was expressly rejected, and the case was found to have been incorrectly decided. In *BC Rail*, the Court of Appeal noted the negative treatment of those cases, for example in *Poole*. The decision in *BC Rail* concerning the scope of the exception is incompatible with the broad scope given to the exception in *Landru* and *Foundation v Aetna*.

VII. The “DE” and “LEG” Wordings

The “DE” and “LEG” wordings have been in use for many years in the United Kingdom. Both the DE and LEG wordings involve a graduated series of exclusions of decreasing breadth. Thus, the wording can be tailored, depending on the scope of the exclusion desired (and the premium the insured wishes to pay).

The genesis of the DE clauses is explained in the Chartered Insurance Institute, *Construction Insurance*, 1999, Cromwell Press Limited (p. 159):

In view of the number of different wordings prevalent, it was considered by leading building and civil engineering insurers in the London market to be desirable to establish standard versions of the wording of the exclusion to cater for the different levels of cover provided. A committee was formed of leading insurers; five alternative wordings were drafted, which were thought to define adequately the five different levels of cover which insurers were prepared to offer.

A. The “DE” Wordings

The “DE” wordings were originally drafted in 1985, and were redrafted in 1995. The full text of the 1995 clauses is as follows:

- **DE1 (1995): Outright defect exclusion**

This policy excludes loss of or damage to the Property insured due to defective design plan specification materials or workmanship.

- **DE2 (1995): Extended defective condition exclusion**

This policy excludes loss of or damage to and the cost necessary to replace repair or rectify:

- (i) Property insured which is in a defective condition due to a defect in design, plan, specification, materials or workmanship of such Property insured or any part thereof;
- (ii) Property insured which relies for its support or stability on (i) above;
- (iii) Property insured lost or damaged to enable the replacement repair or rectification of Property insured excluded by (i) and (ii) above.

Exclusions (i) and (ii) above shall not apply to other Property insured which is free of the defective condition but is damaged in consequence thereof.

For the purpose of the Policy and not merely this Exclusion the Property insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design, plan, specification, materials or workmanship in the property insured or any part thereof.

- **DE3 (1995): Limited defective condition exclusion**

This policy excludes loss of or damage to and the cost necessary to replace repair or rectify:

- (i) Property insured which is in a defective condition due to a defect in design, plan, specification, materials or workmanship of such property insured or any part thereof;
- (ii) Property insured lost or damaged to enable the replacement repair or rectification of Property insured excluded by (i) above.

Exclusion (i) above shall not apply to other Property insured which is free of the defective condition but is damaged in consequence thereof.

For the purpose of the Policy and not merely this Exclusion the Property insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design plan specification materials or workmanship in the Property insured or any part thereof.

▪ **DE4 (1995): Defective part exclusion**

This Policy excludes loss of or damage to and the cost necessary to replace, repair or rectify:

- (i) Any component part or individual item of the Property insured which is defective in design, plan, specification, materials or workmanship;
- (ii) Property insured lost or damaged to enable the replacement repair or rectification of Property insured excluded by (i) above.

Exclusion (i) above shall not apply to other parts or items of Property insured which are free from defect but are damaged in consequence thereof.

For the purpose of the Policy and not merely this Exclusion the Property insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design plan specification materials or workmanship in the Property insured or any part thereof.

▪ **DE5 (1995): Design improvement exclusion**

This policy excludes:

- (i) The cost necessary to replace repair or rectify any Property insured which is defective in design, plan, specification, materials or workmanship;
- (ii) Loss or damage to the Property insured caused to enable replacement, repair or rectification of such defective Property insured.

But should damage to the Property insured (other than damage as defined in (ii) above) result from such a defect, this Exclusion shall be limited to the costs of additional work resulting from and the additional costs of improvement to the original design plan specification materials or workmanship.

For the purpose of the Policy and not merely this Exclusion the Property insured shall not be regarded as lost or damaged solely by virtue of the existence of any defect in design plan specification materials or workmanship in the Property insured or any part thereof.

B. The “LEG” Wordings

The 1996 LEG exclusions are as follows:

- **LEG 1/96 model ‘outright’ defects exclusion**

The Insurer(s) shall not be liable for Loss or Damage due to defects of material workmanship design plan or specification.

- **LEG 2/96 model ‘consequences’ defects exclusion**

The Insurer(s) shall not be liable in respect of:

All costs rendered necessary by defects of material workmanship design plan or specification and should damage occur to any portion of the Insured Property (Contract Works) containing any of the said defects the cost of replacement or rectification which is hereby excluded is that cost which would have been incurred if replacement or rectification of the said portion of the Insured Property (Contract Works) had been put in hand immediately prior to the said damage.

For the purpose of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property (Contract Works) shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship design plan or specification.

- **LEG 3/06 model ‘improvements’ defects exclusion**

The Insurer(s) shall not be liable in respect of:

All costs rendered necessary by defects of material workmanship design plan or specification and should damage (which for the purposes of this exclusion shall include any patent detrimental change in the physical condition of the Insured Property)¹¹ occur to any portion of the Insured Property (Contract Works) containing any of the said defects the cost of replacement or rectification which is hereby excluded is that cost incurred to improve the original material workmanship design plan or specification.

For purpose of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship design plan or specification.

¹¹ The words in brackets in the second paragraph of the exclusion were added in 2006 following the decision in *Skanska Construction U.K. Limited v. Egger (Barony) Limited*, [2005] E.W.H.C. 284 (TCC). The decision gave rise to concerns that, in the absence of an amendment, physical manifestation of a defect might not be interpreted in a manner consistent with expectation of the market.

These wordings are now more commonly seen in Canada. In fact, certain forms published by the Canadian Construction Documents Committee (see Builders' Risk CCDC Endorsement, IBC 4047) provide for policy wording to be amended to incorporate the following definition of "resultant damage":

"RESULTANT DAMAGE" shall mean physical damage to the insured property other than the cost of rectifying the defect or fault that caused the physical damage. The cost of rectifying the defect or fault (the cost of making good) shall be the cost which the Insured would have incurred to do so had such defect or fault been discovered immediately before the physical damage occurred and rectified at that time.

An amendment along these lines would give the exclusion a scope similar to LEG 2. While the CCDC forms require this endorsement, in the writer's experience the requirement is often, in practice, removed from construction contracts.

The scope of cover will be very different under some of these wordings as compared to the "traditional" Canadian design/workmanship exclusion. This can be seen in connection with the DE wordings, by considering an example set out in *Construction Insurance* (1999), supra. The example given is of a steel frame building partially complete, with a dwarf brick wall forming part of the building, but not relying on any other part of the building for support. Bolts used in construction with the steel framework prove to have inadequate capacity. As a result the building collapses and in doing so damages the wall.

The result, on the various DE wordings would be as follows:

1. On DE1 the entire loss would be excluded.
2. On DE2 the entire loss would be excluded, except cost of repair of the brick wall. That is because the walls and roof rely for support on the defective components (the bolts). The wall does not.
3. On DE3 the steel framework would be excluded but the roof, cladding and brick wall would be covered. That is because the defect is in the steel framework only. The steel walls and roof were not defective but are part of the structure damaged in the collapse.
4. On DE4 only the bolts themselves would be excluded. That is because the DE4 wording is restricted to the "component part or individual item" of the property which is defective. Thus, with DE4 wording even the steel framework would likely be covered.
5. On DE5 the entire cost of repair of the building to original standard, including the cost of placing the defective bolts to the original standard would be covered. The only element that would be excluded is any increased cost of reconstruction of the building, to correct the defect in the original construction.

The significance of these wordings, in terms of the covered portion of the cost of repair of these is obvious. Take *Simcoe & Erie v. Royal, supra*. The defect in that case was in the bridge substructure only. The bulk of the repair cost was replacement of the collapsed superstructure. Had the DE2 wording applied the result would have been the same as on the Canadian wording (no cover for cost of the substructure as it was defective; no cover for the superstructure, as relied for support on the faulty substructure; coverage for the stored rails). Had the DE3, DE4 or DE5 wordings applied the result would have been quite different. There would have been cover for the cost of replacement of the superstructure. It also would have been necessary to investigate, had the DE4 wording applied, whether the “particular part or component” subject to faulty design was something smaller than the entire substructure. Of course, had the DE5 exclusion applied the entire cost of replacing the substructure, to its original condition, would also have been covered. The only cost that would be excluded are additional engineering and construction costs associated with designing and building an improved substructure, so as to correct the deficiencies in the original.

C. LEG 2 Considered; the Acciona Decision

Acciona Infrastructure Canada Inc. v. Allianz Global Risks US Insurance Company, 2014 BCSC 1568

The facts in *Acciona* are set out above (Section V.C). The policy at issue contained a design and workmanship exclusion closely based on LEG 2 (the only differences being the omission of the reference to “Contract Works” at three points in the exclusion, following the reference to “Insured Property”).

Skolrood J, in considering the scope of the exclusion, said this, at para 221:

Read in its entirety, I find that the intent of clause 5(b) is to exclude those costs rendered necessary by one of the named defects, but is limited to costs “which would have been incurred if replacement or rectification of the Insured Property had been put in hand immediately prior to the said damage.” In other words, the excluded costs are only those costs that would have remedied or rectified the defect immediately before any consequential or resulting damage occurred, but the exclusion does not extend to exclude the cost of rectifying or replacing the damaged property itself; the excluded costs crystallize immediately prior to the damage occurring and are thus limited to those costs that would have prevented the damage from happening.

After referring to a paper drawing a comparison between LEG2 and DE4, Skolrood J. went on to say this, at paras. 223 and 224:

The “damage” in issue here is the cracking and over deflection of the concrete slabs. The “defect in material workmanship” is the improper formwork and shoring/reshoring procedures adopted that resulted in the damage to the slabs. Applying clause 5(b), the excluded costs are those

that would have remedied or rectified the defect before the cracking and over deflections occurred i.e the costs of implementing proper formwork and shoring/reshoring procedures or incorporating additional camber into the formwork.

There was no evidence on which to quantify these costs except to say that they would have been minimal. [emphasis added]

With the greatest respect to the trial judge, in the author's view this conclusion is inconsistent with the wording and intent of the exclusion. The costs which are within the exclusion are the costs which would have been incurred to repair or rectify that part of the property containing the defect immediately prior to the damage occurring. To the extent that cracking and over-deflection constitute physical damage, the cost of repair or rectification must be considered as at a date after construction and just prior to that damage. This should, on the wording of the exclusion, comprise the cost of repairing/rectifying the defective slabs, so that the cracking and over-deflection would not occur. If no such repair could be undertaken, the exclusion would have to apply to the full cost of replacing the defective slabs.

What Skolrood J. held to fall within the exclusion is something quite different. Skolrood J. held that the exclusion applied only to any incremental costs that would have been incurred in carrying out the defective work correctly in the first place. In the author's view, that cannot be the correct interpretation of the exclusion. The extra cost that would have been incurred to avoid the defective condition in the first place cannot constitute the cost of rectifying the defective condition, after construction and immediately prior to commencement of damage.

In addition, the interpretation given by Skolrood J. to the LEG 2 exclusion is that which properly applies to the LEG 3 exclusion. LEG 3 excludes only "that cost incurred to improve the original material, workmanship design, plan or specification". In other words, LEG 3 is limited to the incremental cost of doing the job properly. To the extent the graduated nature of the exclusions can be considered, this is an additional reason why, from the perspective of insuring intent, the decision in *Acciona* is incorrect.

Proper application of LEG2 would not always result in exclusion of substantial repair or rectification costs. In some cases the costs excluded would be (or would be equal to) the additional costs that would have been incurred to carry out the job correctly in the first place. The result depends very much on the facts. This can be seen by considering the following scenarios:

1. Insufficient trusses. A building is constructed using 80 trusses. 100 trusses should have been used. The building collapses. It would have been possible to install the additional 20 trusses any time prior to the collapse. In those circumstances the exclusion should be restricted to the cost of installing the additional 20 trusses. Up to the moment of the collapse, the defect in the building could have been repaired by incurring those costs. Accordingly, those are the only costs that fall within the exclusion, on LEG 2 wording. Those are the same

costs (possibly subject to additional costs such as mobilization/demobilization), that would have been incurred to do the job correctly in the first place. That is not why those costs are excluded; they are excluded because they are the costs that would have been incurred, just prior to the collapse, to repair or rectify that portion of the property containing the defect.¹² But the result is essentially the same as if the exclusion applied only to the cost of doing the job correctly.

2. Improper protection. A contractor fails to properly cover equipment on which he is working. As a result, the equipment suffers rain damage. Again, to the extent LEG 2 would apply at all here, it would be restricted to the cost of properly protecting the equipment. To the extent that the equipment contains a defect in workmanship, by way of the lack of protection, the defect could have been rectified by instituting proper protection. Accordingly, those are the only costs that fall within the exclusion.¹³

Thus, we can see that, on some scenarios, LEG 2 will have a scope much narrower than the traditional Canadian wording, and that costs falling within the exclusion will approximate the cost that would have been incurred to do the job correctly. But where the only option that would have been available to repair or rectify the property, just prior to the damage, was removal and replacement, DE 2 has to apply to full cost of removal and replacement.

The decision on any appeal in *Acciona* will no doubt be awaited with interest. As the first decision on a set of exclusions that is coming into increasing use, the decision is of real significance. The effect of the trial decision is to essentially nullify LEG 2, a wording that may currently be written into many builders risk policies (per the CCDC documents referred to above). In addition, to the extent some of the same principles arise in interpretation of the DE clauses, the decision may well have an impact on the interpretation given to those clauses as well.

¹² Of course, on the 'standard', non-LEG wording quoted above (see Section I) all costs of repair of the building would be excluded. This scenario is analogous to *Greene, supra*. That would also be the result on LEG 1 or on DE 1 or DE 2.

¹³ Again, on the 'standard' wording, all costs of repair of the equipment would be outside cover. This scenario is analogous to *Sayers, supra*.