

SUPREME COURT OF NOVA SCOTIA

Citation: *Martin Marietta Materials Canada Ltd. v. Beaver Marine Ltd.*,
2016 NSSC 226

Date: 20160921

Docket: Hfx No. 358414

Registry: Halifax

Between:

Martin Marietta Materials Canada Limited, a body corporate, and Factory Mutual
Insurance Company, a body corporate

Plaintiffs

v.

Beaver Marine Limited, a body corporate, and Hatch Ltd., a body corporate,
formerly known as SGE Acres Limited, and DYWIDAG Systems International,
Canada Ltd., a body corporate

Defendants

v.

Birmingham Construction Limited, and Atlantic Sub-Sea Construction and
Consulting Incorporated

Third Parties

Decision: Summary Judgment Motion

Judge: The Honourable Justice Denise M. Boudreau

Heard: July 8, 2016, in Halifax, Nova Scotia

Counsel: Murray Ritch, QC, for the Applicant Atlantic Sub-Sea
Construction and Consulting Incorporated
Gordon Proudfoot, QC, for the Respondent Hatch Ltd.

By the Court:

Introduction

[1] This is a summary judgment motion (on evidence) made by third-party Atlantic Sub-Sea Construction and Consulting Incorporated (“Atlantic”) in the context of a case-managed, multi-party litigation.

[2] Proceedings were originally commenced by way of Notice of Action, filed by the plaintiffs Martin Marietta Materials Canada Limited (“Martin Marietta”) and Factory Mutual Insurance Company (“Factory Mutual”) against the defendants Beaver Marine Limited (“Beaver”), SGE Acres Limited (“SGE”), and DYWIDAG Systems International, Canada Ltd. (“Dywidag”) in October 2011. The claim relates to a steel sheet pile wharf constructed for Martin Marietta (and insured by Factory Mutual) at its quarry located in Auld’s Cove, Nova Scotia, in 2005/2006. The wharf was built by Beaver (general contractor) and designed by SGE (now Hatch Ltd.), using components manufactured by Dywidag.

[3] In November 2008, part of the wharf collapsed into the ocean, leading to the present litigation.

[4] The originating action has been amended twice by the plaintiffs: once in December 2011 (to amend the name of the second defendant from SGE Acres Limited to Hatch Ltd. (“Hatch”), and a second time in July 2015, to remove certain claims in relation to defendants Hatch and Beaver.

[5] Defendants Hatch and Beaver both brought third-party claims against two other companies, both sub-contractors who worked on the project: Bermingham Construction Limited (“Bermingham”), and the applicant, Atlantic.

[6] Beaver later withdrew its third-party claim against Bermingham. The third-party claim by Hatch against Bermingham was the subject of a separate summary judgment motion brought by Bermingham (see *Martin Marietta Materials Canada Ltd. v. Beaver Marine Ltd.*, 2016 NSSC 225).

[7] The third-party claim, by Hatch against Atlantic, is the subject of this motion. This claim, filed in July 2012, identifies the applicant Atlantic as being “in the business of providing underwater construction services”. It pleads that should the plaintiffs be successful, in whole or in part, Atlantic (and Bermingham) should indemnify Hatch “as a result of their negligent assembly, construction and installation of the steel sheet pile system which caused or contributed to the collapse of the wharf”. In their defence, Atlantic confirms being a subcontractor to

Beaver, hired to assemble and install mid-water walers, and install tie-backs on the wharf, but denies any liability for the collapse.

[8] This third-party claim was amended in April 2016, to include the following:

19. Hatch further states that Atlantic Sub-Sea failed to properly tighten the hex nuts provided by DSI on the end of the tie rods and only tightened them by hand when it was possible to tighten them by wrench but they failed to do so.

20. Further Hatch says that Atlantic Sub-Sea was negligent in not taking other steps to secure the hex nuts at the end of the tie rods at the waler end of the assembly by using such methods as tack welding. Hatch also says that Atlantic Sub-Sea did not reference the original Issued for Construction Plans of Hatch nor did it consult the Dywidag Shop Drawings to install double beveled washers as opposed to one beveled washer.

21. Further Hatch says that Atlantic Sub-Sea were negligent in that they failed to install washers for all bolts, tie rods, and nuts on the work that they were performing when they knew or ought to have known they were required to do so in accordance with the plans.

22. Hatch claims against Atlantic Sub-Sea for any and all claims against Acres/Hatch and passes them along by claiming contribution and indemnity against them pursuant to Common Law and the *Tortfeasors Act*, R.S.N.S. 1989, c. 471, as amended.

[9] The applicant Atlantic brings the present summary judgment motion in relation to the claims against it. Hatch actively opposes that motion, and submits that their claim against the applicant should proceed to trial. Beaver has chosen to take no position in relation to the motion relating to it; Beaver advises that they will abide by this court's decision as to the present motion.

Summary Judgment

[10] The Civil Procedure Rule relating to summary judgment on evidence is found at 13.04:

Summary judgment on evidence in an action

13.04 (1) A judge who is satisfied on both of the following must grant summary judgment on a claim or a defence in an action:

- (a) there is no genuine issue of material fact, whether on its own or mixed with a question of law, for trial of the claim or defence;
- (b) the claim or defence does not require determination of a question of law, whether on its own or mixed with a question of fact, or the claim or defence requires determination only of a question of law and the judge exercises the discretion provided in this Rule 13.04 to determine the question.

(2) When the absence of a genuine issue of material fact for trial and the absence of a question of law requiring determination are established, summary judgment must be granted without distinction between a claim and a defence and without further inquiry into chances of success.

(3) The judge may grant judgment, dismiss the proceeding, allow a claim, dismiss a claim, or dismiss a defence.

(4) On a motion for summary judgment on evidence, the pleadings serve only to indicate the issues, and the subjects of a genuine issue of material fact and a question of law depend on the evidence presented.

(5) A party who wishes to contest the motion must provide evidence in favour of the party's claim or defence by affidavit filed by the contesting party, affidavit filed by another party, cross-examination, or other means permitted by a judge.

(6) A judge who hears a motion for summary judgment on evidence has discretion to do either of the following:

- (a) determine a question of law, if there is no genuine issue of material fact for trial;
- (b) adjourn the hearing of the motion for any just purpose including to permit necessary disclosure, production, discovery, presentation of expert evidence, or collection of other evidence.

[11] This new Rule does away with the two-part test that had existed previously (*Quadrangle Holdings v. Coady Estate* 2016 NSSC 106; *Drysdale v. Bev & Lynn Trucking* 2016 NSSC 109). The burden remains on the applicant: if that party can satisfy the court that there is no genuine issue of material fact for trial, and no question of law requiring determination, the court must grant summary judgment. In response, the opposing party is expected to put their “best foot forward” in showing what that material fact could be, or what that question of law could be.

[12] The following comments from *Coady v. Burton* 2013 NSCA 95 provide assistance as to the “material fact for trial”:

[87] ...

2. The first stage is only concerned with the facts. The judge decides whether the moving party has satisfied its evidentiary burden of proving that there are no material facts in dispute. If there are, the moving party fails, and the motion for summary judgment is dismissed.

...

4. The judge’s assessment is based on all of the evidence whatever the source. There is no proprietary interest or ownership in “evidence”.

...

6. Proof at either stage one or stage two of the inquiry requires evidence. The parties cannot rely on mere allegations or the pleadings. Each side must ‘put its best foot forward’ by offering evidence with respect to the existence or non-existence of material facts in dispute...

7. If the responding party reasonably requires disclosure, production or discovery, or the opportunity to present expert or other evidence in order to “put his best foot forward”, then the motions Judge should adjourn the motion for summary judgment, either without day, or to a fixed day, or with conditions or a schedule of events to be completed, as the judge considers appropriate, to achieve that end.

8. In the context of motions for summary judgment the words “genuine”, “material”, and “real chance of success” take on their plain, ordinary meanings. A “material” fact is a fact that is essential to the claim or defence. A “genuine issue” is an issue that arises from or is relevant to the allegations associated with the cause of action, or the defences pleaded....

...

10. Summary judgment applications are not the appropriate forum to resolve disputed questions of fact, or mixed law and fact, or the appropriate inferences to be drawn from disputed facts.

11. Neither is a summary judgment application the appropriate forum to weigh the evidence or evaluate credibility.

12. Where, however, there are no material facts in dispute, and the only question to be decided is a matter of law, then neither complexity, novelty, nor disagreement surrounding the interpretation and application of the law will exclude a case from summary judgment.

[13] At a summary judgment motion, each party is expected to put their “best foot forward” in making their submission that the matter should/should not proceed to trial:

... In the Court of Appeal and here, the case for the plaintiffs was put forward, not only on the basis of evidence actually adduced on the summary judgment motion, but on suggestions of evidence that might be adduced, or amendments that might be made, if the matter were to go to trial. A summary judgment motion cannot be defeated by vague references to what may be adduced in the future, if the matter is allowed to proceed. To accept that proposition would be to undermine the rationale of the rule. A motion for summary judgment must be judged on the basis of the pleadings and materials actually before the judge, not on suppositions about what might be pleaded or proved in the future... (*Canada (Attorney General) v. Lameman* 2008 SCC 14)

Evidence

[14] The applicant's position is that, as a subcontractor, it was hired only in the capacity of skilled labour. It was asked to provide basic cutting and welding, and to assist with installation and assembly of the basic underwater components of the wharf. While there was no formal contract in place, the applicant was provided with a three-page "bid package" by Beaver, which provided a sketch of the project, and pointed out those parts of the project that would involve the applicant.

[15] The applicant submits that its work was done properly, and that there is no evidence that it did not do so. The applicant notes that in the course of its work, it provided no independent design or construction expertise, nor was it expected to. The applicant did not review or comment on drawings or procedures from a structural or construction perspective, nor did it expect to, nor was it expected to. The applicant further notes that during construction, no criticism of their work was ever related to them, by either defendant.

[16] Furthermore, and perhaps more fundamentally, the applicant submits that there is no evidence of causation as against it, i.e., there is no evidence that any work they did caused or contributed to the wharf failure.

[17] The evidence shows that the applicant's first job was to assist with the assembly of the "walers" on land. I refer to the discovery evidence of Lennan Hart of Atlantic, on January 25, 2016 (pp. 132–133):

Q. Now did Atlantic Sub-Sea do any assembly for the walers?

A. We did.

Q. Okay. What did.... What did you do?

A. Early on, and I'm not sure of the date exactly, Dennis called and said, We're... there's nothing going on over here yet, why don't you come over? We have a boom truck and a couple of guys, will assemble all the walers.

Q. Uh-huh.

A. And that's what we did in April and May of that year before... Before much construction it started...

Q. Yeah.

A. ... It was just in their laydown area.

Q. Uh-huh.

A. Myself, a helper of mine and Dennis and a Kevin, assembled all the walers for the underwater components.

Q. Of the lower waler.

A. The lower waler, yeah.

[18] As later described by Mr. Hart, this assembly was not a complicated process (pp. 243-244):

Q. Okay. And with there had been periods of time where the assembled walers, both upper and lower, would have been sitting on the wharf for a considerable period of time before actually installing them?

A. No. There was no wharf.

Q. No, I know. I'm sorry I'm ---

A. It was -- it would be on a piece of land over to the -- off to the side there, right.

Q. Yes. I'm -- thank you for --

A. And that was another reason why a lot of them weren't -- they weren't all put together before and -- because there was just no room to put them all together there, right.

Q. Yes. But they would sit there until it was time for them to be actually installed on the project?

A. Right.

Q. And that could be for a number of weeks?

A. Possibly.

Q. Sure. And they would be available to be seen by anybody?

A. Yes.

Q. Including Mr. McCharles if he was walking around?

A. Correct. See, all these pieces of the waler system are generally all labelled, right? Because your splices have to go in a certain spot. Because your top splice and your bottom splice can't line up. So that means A1 is on the bottom and A2 or whatever -- however the shop drawing guys label them. So each piece has its -- is labelled so it has its place to go. Just so that the splices are staggered and everything fits.

Q. And that would be indicated or marked on the individual piece of steel from the manufacturer?

A. Yes.

Q. So it was really just a matter of --

A. Putting a puzzle together.

Q. That's right. Not a very complicated puzzle?

A. No.

[19] Next, in terms of the actual waler and tie rod installation work, which involved the applicant, it is most concisely described in the applicant's brief (p. 19; referring to the evidence of Mr. Hart):

(a) Atlantic Sub-Sea installs channel brackets (i.e. temporary waler supports), using a jig or template devised in tandem with Beaver Marine;

- (b) Atlantic Sub-Sea burns holes through the SSP (for the waler tie bolt connections), again using a template devised in tandem w/ Beaver Marine;
- (c) Beaver Marine lowers waler section on to channel brackets supports;
- (d) Atlantic Sub-Sea inserts waler tie bolts (and washers) from outside;
- (e) inside, Atlantic Sub-Sea installs tie plates on the waler tie bolts, and tightens those bolts;
- (f) Beaver Marine lowers tie rod to lower waler;
- (g) Atlantic Sub-Sea installs tie rod (threading it through the lower waler) and affixes the tie rod with hex nut, one bevelled washer and a backer plate;
- (h) Atlantic Sub-Sea attaches next waler section or sections (after Beaver Marine lowers it on to channel brackets) to existing waler with splice bolts;
- (i) repeat previous steps

[20] As noted above, it would appear that some of this process was worked out “on-site” between the applicant and the general contractor, Beaver Marine; I refer to the discovery of Mr. Hart (pp. 127-131):

Q. Well, or let me...

A. Okay.

Q. ... ask you this question first. Did you have any discussions with Beaver about the method you proposed to use to install the various components, like the Waler's, the tie rods, the splices, the tie bolts?

A. They... They would have been involved in every step. They would have been watching...

Q. Uh-huh.

A. ... and suggesting if there were improvements to be made.

Q. Okay. But this was during the course of construction?

A. Yeah.

Q. Yeah.

A. There would have been ongoing discussions to improve and...

Q. Yeah.

A. make things safer.

[21] As I have already indicated, the pleadings note the following specific areas where, in the view of the respondent, the applicant failed in its duty:

- (a) they failed to properly tighten the hex nuts on the end of the tie rods, and only tightened them by hand, when they should have used such methods as tack welding;
- (b) they failed to install double beveled washers as opposed to one beveled washer;
- (c) they failed to install washers for all bolts, tie rods, and nuts.

[22] The applicant has responded to each of those claims in the present motion before the court.

[23] Firstly, the applicant agrees that it only hand-tightened the tie rod hex nuts. It points out that this was done on the instructions of Beaver Marine, their general contractor; that there was no suggestion by anyone, either then or later, that the nuts should have been tack welded; and that in any event, since the other end of the tie rod was not yet secured, there was no need to do anything more at that point.

[24] I refer to the discovery evidence of Mr. Hart, January 25 (p. 177):

Q. Uh-huh. And you put the... What... They put the tie rod through the Waler?

A. Yes.

Q. And it's coming in on an angle I take it? And what's next?

A. Put the beveled washer on and then spin the nut on until they felt threads out the back of the nut.

Q. Uh-huh.

A. That was their instructions.

Q. Okay. Who instructed them to do that?

A. Andre.

[25] Mr. Hart testified on January 27, at page 505 and onwards:

Q. What instruction, if any, did you get from anyone about how to tighten the hex nuts on the tie rods after they had passed through the lower waler?

A. To bring them up snug against the back of the beveled washer to hold them in place? That the tightening would occur later in the near... In the shore area.

Q. Okay.

A. Tightening of the rod would occur and that that would all be pulled tight as a result of their tension.

Q. Were you instructed to tighten by hand? What was...

A. That was...

Q. ... was that someone else's decision or was that your...

A. That was... We were instructed to do that because, in fact, any other tightening would have been fruitless because the waler was at... The tie back was, at this point, still just hanging by the crane, so we could tighten it until, you know, forever, and it would just keep pulling in, until it came to the back of the steel sheet pile, so there's no... There was really no tensioning for us.

Q. Yeah.

A. We couldn't do any of the tensioning.

Q. Okay. So the other ends, that is the shore side ends of the tie rods, while your men were tightening at the walers, the shore side ends of the tie rods, they were already affixed to the deadmen.

A. Not usually.

Q. Or were they?

A. No. They weren't.

Q. None were?

A. They were hanging from the crane.

Q. Okay. So the shoreward end of the tie rods were just hanging loose?

A. They were dangling... They were supported by the cranes.

Q. Alright. And so you understood then that when your men had finished their work at the lower Waler, the Beaver man would tighten them and affix them to the deadmen.

A. Pass them through the deadmen and attach them, yes.

Q. And tighten them up.

A. At that point, yeah.

[26] The applicant also notes the discovery evidence of Doug Ratcliffe (a representative of Bermingham), taken April 14, 2006 (pp. 204-206):

Q. ... And on the other end -- you say that that's how you pull the tie rods tight. On the other end, back to the hand tightening issue that we have in this case, you say that the hand tightening - do you put a wrench on that and --

A. There is no reason to.

Q. A spanner?

A. The only reason you would put something on it, if the nut was jamming a little bit and you couldn't put it on by hand.

Q. Oh, yeah, for sure.

A. But there's no reason.

Q. Okay. But if you --

A. And there's no pressure on the other end.

Q. No pressure on the other end?

A. No.

Q. So, that's the waler end?

A. The waler end. Where the waler end is there's no pressure there until after you push your block -- your tie rod through the block and make all your connections. That's when the pressure comes on the waler.

Q. I gotcha there, okay.

A. So, there's no reason to put a wrench on that nut at the end.

Q. Okay. And that's how you guys always do it at Bermingham?

A. Yes.

Q. And as far as the - when you put the nut on there, you that's what you do, you hand tighten them?

A. Yes. Not hand tighten them, you just screw them on, you just turn the nut on.

Q. No, I hear you. With a hand?

A. Yes.

Q. By hand, right?

A. Yes. And there's a set amount that the Dywidag is supposed to come out past the nut.

Q. Right. So that's all pre-set before you start stressing it at the other end?

A. Yes.

[27] The second issue raised by the respondent relates to the issue of bevelled washers. The applicant agrees that it installed, in the case of each waler, a single bevelled washer. The applicant notes, again, that it was acting on instructions from the general contractor, Beaver Marine. No concerns were noted with respect to that aspect of the installation. I refer to the evidence of Mr. Hart of January 25 (p. 181):

Q. Now did any of your divers ever suggest that one bevelled washer wasn't enough. The one... The plate and nut weren't aligned properly?

A. They seem to... No, they never mentioned that at all, no. That the alignment was good.

Q. Yeah, and when you came back later and did some of the demolition work was that... Did you observe that the alignment was good?

A. At that point there was a lot of other deformities going on...

Q. Uh-huh.

A. ... And... But for the most part there were... There were still tight and snug up against... In the section that we demolished...

Q. Yeah.

A. ... The wharf was still viable we thought.

Q. Yeah.

A. So, no, they were... They were in position and...

Q. Okay.

A. We had suggested even offhand that may be that part of the structure should be rehabilitated.

[28] Mr. Hart's discovery evidence, on January 26 (p. 278):

Q. ... Would the diver know how to configure the bevelled washer by feel?

A. Sure, yeah. Being the summer, the water had warmed up and this pool we were working in, they could use cotton or light gloves. They didn't have to wear heavy neoprene divers' gloves, so they could feel everything.

Q. So they could feel which end of the bevelled washer was the narrow end or which was the wide end.

A. They certainly could, yeah.

Q. And did you discuss with them how the bevel was supposed to be...

A. Yeah.

Q. ... Placed?

A. ... Did. We were instructed by Beaver's crew. Andre and Dennis said this is how this has to go on, the bevel down, the narrow part down.

[29] Following completion of the assembly of the underwater components, an inspection of the underwater work done by Atlantic was done by an independent diving company, Causeway Diver Supply. The inspection (and report) was completed July 22, 2005. It is unclear from the evidence whether this inspection was requested by Martin Marietta, or designer Grant McCharles. In any event, the report notes:

A visual inspection was conducted July 22, 2005 09:00 – 10:00 by two divers using scuba and underwater lighting. Upper and lower whalers and tiebacks were inspected and found to be secure with the following exceptions:

- 1) on the east/west wall four loose bolts were found at the connecting overlap on the lower section of the upper waler at the middle of the wall.
- 2) at the south end of the seawall (north/south), at the middle of the South dolphin, four loose bolts were found at the connecting overlap on the lower section of the upper whaler.
- 3) one loose bolt was found near the second dolphin (to the north) on the lower whaler. This was pointed out to Atlantic Sub-Sea's diver and the bolt has been tightened.
- 4) at the midway point between the two dolphins on the lower whaler there is a gap spanning approx. six feet of pile where, at the widest point, the whaler is 5 inches from the piling.

[30] This document is copied to designer Grant McCharles of SGE Acres (now respondent Hatch), and Donnie Fraser of Martin Marietta.

[31] Only items 3) and 4) of the document relate to the lower waler. Item 3) is dealt with in the report. In respect of item 4), Mr. Hart testified January 25 (pp. 202-204):

Q. Okay. And item 4, there's a reference to a midway point between two dolphins on the lower waler. There was a gap spanning approximately six feet of pile where the widest point of the waler is five inches from the piling.

A. Uh-huh.

Q. Were you aware of that?

A. Yes. And so were... so were the Beaver managers.

Q. Yeah. And was anything done to...

A. We had tightened the bolts to... to maximum and we had followed procedure going from east to west...

Q. Yeah.

A. And there was just no way that we could pull the piles out.

Q. Okay.

A. Or the waler in.

Q. Okay.

A. It was felt that any more stress on the bolts was unnecessary.

Q. Okay.

A. That's just a deflection in the steel sheet pile structure.

Q. And is not regarded... Did you regard that as just a normal incident of construction?

A. It's... Yeah it was too. I mean we had no influence over it. What happens to the pile when it leaves the surface, when it strikes down there, they have some influence on...

Q. Uh-huh.

A. ... but they can't control...

Q. Yeah.

A. ... everything.

Q. And was... Do you know the fact the gap was 5 inches, did not cause anyone any concern?

A. They were aware of it and they knew we had tightened the bolts.

Q. Uh-huh.

A. To their maximum. To their...

Q. Okay.

A. ... for their... you know, required limits, no, they (weren't?) concerned.

[32] The applicant submits that this motion is about causation. It submits that summary judgment should be granted because there is no evidence that any act or omission by Atlantic caused or contributed to the collapse.

[33] In response to this motion, the respondent has provided two expert reports, one from engineer David Lewis and one from engineer Frank Villano, both dated May 26, 2016. Neither expert was cross-examined.

[34] Mr. Lewis, in his report, notes that he was:

... engaged to review current discovery evidence and to provide expert opinion on several issues pertaining to the underwater installation of a lower waler on a steel sheet pile (SSP) bulkhead wharf at the Martin Marietta Materials Canada Limited, wharf facility in Aulds Cove, NS. (p. 5)

[35] Mr. Lewis first addresses the technical specifications in the contract between Martin Marietta and Beaver. He notes the record drawing instruction details, noting that upper and lower waler tie back systems were specified on the north face only (which is the face that failed). He addresses how those tie rod systems and walers are meant to work, by design.

[36] Mr. Lewis then addresses the following concerns, from the evidence he saw, noting that they are all contrary to the specifications in the above-noted contract:

a) cutting holes using oxy-arc underwater cutting equipment, rather than drilling:

8..1.1 On January 25, 2016, Lennan Hart of Atlantic Sub-Sea Construction described a template for **burning the holes for the tie bolts for the lower waler** (page 88. Line 15 – 22) and then later stated that he would **burn the holes** and then test them with a short bolt he had in his pocket (page 120/121, line 25 – 2). He went on to describe his tender bid calculations for the number of cutting rods, oxygen, and time required to **cut 400 holes in the SSP** for the lower waler tie bolts (page 124/125, line 12 – 21). Later he states that the

holes were typically cut from the outside as there was typically better visibility out there (page 229/230, line 24 – 5).

[37] In Mr. Lewis’ conclusion section, in relation to this concern, states:

9..1.1 CSA-S16-14 “Design of Steel Structures”, Clause 28.4.3. (Page 154) specifies that manually cut fastener holes may only be permitted with the approval of the designer. Several concerns are raised by manually cut holes, namely excessive hole size, stress concentrations due to notches, and thermal altering of the base material properties. For these reasons, Standards and designers want to avoid those detrimental effects, even though field drilling, particularly underwater, is slower and more expensive. In this case, the designer specifically required that any required holes in the SSP be drilled, however it is clear, by Atlantic Sub-Sea’s own admission, that they were not. No evidence of permission by the Engineer to do otherwise was found.

[38] Mr. Lewis then moves on to:

b) installation of bolts in lower walers:

8..2.1 On January 25, 2016, Lennan Hart of Atlantic subsea construction stated that they tightened the tie bolts (ATSM A 307) up, alternating back and forth **until the hydraulic impact was maxed out** (page 160, line 15 – 16). Later he stated that the torque of the hydraulic impact wrench was set by Beaver, but that he was not sure of the torque now, he may have known at the time (page 160, line 20 – 24). Earlier on the stated that the divers used two wrenches to tighten the lower waler splice bolts because the hydraulic impact wrench didn’t work so good straight down, it really worked the best on the horizontal (page 122/123, line 20-4). Then towards the end of his testimony on that day, he talked about trying to close a 5” gap between the lower Waler and the SSP, that Tom Jewers of Causeway Diver Supply had located during a July 22, 2005 inspection, the gap apparently the result of SSP misalignment. The Atlantic Sub-Sea crew tried to close the gap by tightening the bolts to the maximum, however no details were offered on how that maximum was determined, just that any more stress on the bolts was unnecessary (page 203, line 1-17).

[39] Mr. Lewis’ conclusion:

9..2.1 CSA-S16-14 “Design of Steel Structures” Clause 23.6.b (Page 117) specifies that ASTM A307 bolts shall only be snug-tightened. The standard defines snug-tightness as

“the tightness that is attained with a few impacts of an impact wrench or the full effort of an iron worker using an ordinary spud wrench to bring the connected piles into firm contact.” (Page 26). Testimony from Atlantic Sub-Sea Construction confirmed that the ASTM A307 bolts connecting the horizontal lower waler to the SSP were tightened to the maximum torque setting of the hydraulic impact wrench supplied to them by Beaver Marine. In contrast, the vertical ASTM A307 splice bolts were tightened by divers using two wrenches because the hydraulic impact wrench did not work well when oriented straight down. Based on the testimony of the Atlantic Sub-Sea representative, the lower waler to SSP connection tie bolts may have been over tightened during installation, however without knowing the torque setting on the hydraulic impact wrench, this cannot be concluded definitively. (emphasis is mine)

[40] Mr. Lewis next discusses:

c) bevelled washers on lower tie rod:

8..3.5 On October 21, 2005, Grant McCharles, P. Eng., of Hatch Ltd. (formerly SGE Acres) confirmed that **two bevelled washers were required by DSI** at each end of the lower waler (actually lower tie rod) to make the adjustment for the angle that the tie rod was at (page 189, line 16 – 25). He went on to state that even though only one bevel washer was called for, **two bevel washers would be DSI’s interpretation of how to adjust the angle so you get a direct bearing**, so there is no gap between the nut and the washer, and full contact between the nut and washer (page 190, line 15 – 23).

8..3.6 On December 10- 11, 2015, Victor Kumala of DSI stated that they usually use **a pair of bevelled washers to equalize the angle** and that in this case with an angle 11°- 12°, they can handle up to 18° with two bevelled washers (Ex. 00132/00133 line 24 – 4). He also confirmed that if two of DSI’s bevelled washers were good for 18°, one bevelled washer would provide 9°, and that he had determined the angle in this case from the tender drawing (Ex. 00134 line 6 – 15).

8..3.7 On October 7th, 2004, Arrow Construction Products faxed two shop drawings numbered J011848-1 and -2, matching the numbers of the two DSI shop drawings included in Ex. 184, to Beaver Marine (MN002094/1). On November 8th, 2004, Beaver Marine sent Arrow Construction Products a fax approving the two shop drawings **that clearly identified the requirement for two bevelled washers at each end of the lower tie rod** (MN001231/1).

...

8..3.9 On March 10, 2015, Andre LaPierre of Beaver Marine confirmed that on the bottom waler there would have been a bevelled washer, a flat washer and a nut, and that it would have been the same at the anchor block end (Ex. 00042 line 18 – 25).

8..3.10 On January 25, 2016, Lennan Hart of Atlantic subsea construction confirmed that he had never seen the Dywidag shop drawings at any point during the time he was working on the wharf in 2005 (page 500, line 6 – 10). Further on, when asked if anyone from Beaver Marine, Andre or Dennis or anybody else, had told him or his crew, that two bevelled washers were to be used for the lower tie rods after they passed through the waler, he responded that they never received those instructions (page 501, line 13 – 17). However, during previous testimony, Lennan Hart stated that other drawings **were available on the Spartan** (*Beaver Marine's on-site spud barge*) and that he looked at them from time to time, early on when they were developing a work plan (page 492, line 21 – 25).

[41] Mr. Lewis' conclusion:

9..3.1 In structural joint design and assembly, particularly in the case of bolts highly loaded and tension due to preload or live load, it is important not to introduce additional forces, such as spending movements, due to a lack of parallelism between the nut and bolted part. For example, CSA S-16-14 "Design of Steel Structures", Clause 23.4.4, (Page 116) specifies a requirement for bevelled washers for ASTM A325 bolts to compensate for any lack of parallelism where an outer face of bolted parts has more than a 5% slope with respect to a plane normal to the bolt axis. For ASTM A490 bolts, the requirement for bevelled washers is even more stringent, as they must be used to compensate for any lack of parallelism due to the slope of the outer faces.

9..3.2 The original design by Grant McCharles, P. Eng. specified a bevelled washer, although the dimensions were not given, on both ends of the inclined Dywidag tie rod for the lower waler.

9..3.3... Shop drawings prepared by DSI, clearly showing and stating the requirement for two bevelled washers, were approved by both SGE Acres and Beaver Marine, and as such, it would be expected that these approved shop drawings would have been provided to or made available on-site to guide field personnel with the installation.

9..3.4 Sufficient (220) bevelled washers to install two on each end of the inclined lower tie rods were supplied to the site, yet no one became concerned about the amount of bevelled washers left over and what that might mean.

...

9.3.6 ... it can be concluded that the lower waler and tie rod connections proceeded in such a manner that the professional engineer's design detail and a manufacturer's installation requirement, in the form of two bevelled washers under the hex nut at each

end to ensure uniform nut contact for these structurally critically important, inclined Dywidag tie rods, were not honoured.

9.3.7 ... it appears that supervisory personnel for both the contractor, Beaver Marine, and their subcontractor, Atlantic Sub-Sea, failed to ensure that they were working to the most up-to-date version of the contract plans, specifications, and manufacturer's shop drawings, even though it was acknowledged by Atlantic Sub-Sea that they were available on site aboard Beaver Marine's spud barge, the Spartan. As such, they failed to follow the assembly requirements of the designer and the manufacturer of the key structural component.

[42] Mr. Lewis next addresses:

d) Hand tightening of lower tie rod hex nuts:

8..4.1 On January 26, 2016, Lennan Hart of Atlantic Sub-Sea construction confirmed that the hex nuts on the lower tie rods were spun on and **only hand tightened because the SSP outpan was too narrow** to get any type of gear in there to get any kind of turn on it, and that they were told to at least get threads out the back of the nut (page 378, line 14 – 21). The following day he stated that the hex nut was tightened by hand to hold the washer, the bevelled washer, and the plate in place, and he confirmed that hand tightened meant literally **using your hands with no tool** (page 504, line 5 – 14). On January 25, 2016, he also stated that the tie rods were in an inpan and that it was pretty tight, you might have got an eighth of a turn each time (page 178, line 4 – 6).

...

8..4.3 On March 10, 2015, Andre LaPierre of Beaver Marine confirmed that the **divers didn't have wrenches and they didn't need wrenches to put the nuts on** the ends of the tie rods, and that there were no lock washers on the nuts underwater at the lower waler (page 208, line 5 – 14).

...

8..4.5 On October 21, 2015, Grant McCharles, P.Eng., of Hatch Ltd. (formerly SGE Acres) confirmed that the hex nuts on the tie rods needed to be more than hand tightened, they needed to be **tightened with a big wrench** (page 199, line 20 – 1), however he was not aware of any specific force or torque, just that they needed to be **hard tightened** (page 200, line 3 – 8).

8..4.6 on December 10, 2015, Joseph Li, P. Eng. of DSI stated that he assumed that someone would **go back to the hand tightened nut with a torque wrench and to inspect** to make sure that the projection of the nut was flush or if it was 20 mm or if it

was tight. They would inspect it or tighten it, if required. **DSI would not just leave it as hand tight** and pull the other end (page 452, line 20 – 25). He also felt that this would be the **common sense thing to do** (page 453, line 3).

[43] Mr. Lewis' conclusion:

9.4.9 ... At these lower waler connections, orientation of both the two beveled washers and the bearing plate was critical for minimizing stresses in the tie rod, by maintaining uniform contact between the nut and the beveled washers, and between the beveled washers and the bearing plate. Due to the offset hole in the 12" x 12" x 3/4" bearing plate, its orientation against the double channel waler was also critical. It appears that no positive measures were taken to secure these components in their correct orientation. Since both the bevel washers and the bearing plate needed to be oriented such that they were top-heavy, any reduction in clamping force by the tie rod and nut could allow gravity to rotate these components out of position. In addition to the potential for increased tie rod stress to the beveled washer misalignment, if the bearing plate rotated 180° it would no longer be long enough to bear against the top leg of the waler's upper channel, thus compromising the waler connection.

9.4.10 Testimony from Beaver Marine and Atlantic Sub-Sea construction confirmed that the tie rods were taken at the concrete anchor block end through the use of a specially made jig connected to the tie rod and then attached to an excavator. The excavator pulled on the tie rod to remove slack and then the hex nut was tightened against the concrete anchor block. DSI personnel confirmed that this method was uncommon and could potentially be very unsteady, compared to the steady pull of a hydraulic jack, the more common method to tension tie rods. It is my opinion that the potential exists for fluctuating tension levels in the tie rods during pulling with an excavator, that could have reduced the hand tightened clamping force at the lower waler, potentially allowing rotation of the beveled washer and bearing plate.

9.4.11 ... It is reasonable to assume that the lower waler components would also be subject to considerable vibration due to adjacent construction activities such as pile driving and toe pin drilling, as well as the usual and highly variable wave forces due to weather and from propeller wash. (emphasis is mine)

[44] Lastly, Mr. Lewis addresses corrosion protection:

8.5.3 During testimony on January 25, 2016, Lennan Hart of Atlantic subsea construction stated he **didn't know what Denso Tape was** and that they **did not install any Denso**

Tape, thus confirming that the specified corrosion protection for the tie rod ends, hex nuts, and bevel washers at the lower waler, was not installed (page 177, line 15 – 20).

[45] Mr. Lewis' conclusion as to this issue:

9.5.1 This structurally critical component, completely encapsulated with a bright yellow jacket corrosion protection for its entire length, except for 11" at each end, and yet the experienced diving subcontractor never questioned why uncoated steel nuts and beveled washers were being installed in saltwater without any type of corrosion protection. Although it is highly unlikely that this would have any bearing on the collapse after only three years in service, it serves as another example of the lack of understanding of the installation requirements for the tie back system by diving subcontractor Atlantic Sub-Sea. (emphasis is mine)

[46] Mr. Lewis' ultimate conclusion is found at page 28 of his report:

Conclusion: when the various factors and opinions previously discussed are taken together, it is my opinion that the manner in which the lower waler tie back system was installed by Atlantic Sub-Sea construction, contributed to or even initiated a multifactorial catastrophic collapse of the failed SSP bulkhead wharf.

[47] The respondent also tendered a report from engineer Frank Villano. Mr. Villano first indicates that he has reviewed the report of David Lewis, "and I concur in all respects to his report" (p. 4).

[48] Mr. Villano adds the following:

3. During the installation process, Atlantic Sub-Sea performed hand tightening of the securing nut for the tie rod at the lower level waler on the inboard side of the steel sheet pile wall. Hand tightening of the tie rod securing nut is a primary contributing factor in the failure of the sheet pile bulkhead wall of the wharf structure. Normal construction practice is to wrench tighten the underwater portion of the nut of the threaded rod...

4. Post tensioning of the tie back should have been performed using a calibrated hydraulic jack (ram) from the land side of the concrete tie rid (sic) anchor blocks allowing for a direct axial loading to a specified pressure to ensure the tie rods are loaded to design loading evenly thereby preventing localized over-stressing of individual tie rods and loosening of nuts along the underwater lower wall.

The only post tensioning utilized in the process was achieved using a hydraulic excavator station on shore using a fabricated bracket and straps “pulling” on the land- side end of the tie rod... Based on the writer’s interview with the technical department of DYWIDAG and upon review of the available documents from the supplier, hand tightening and uncalibrated attempts at post tensioning such as those utilized during the installation of the tie rods proper design values of the tie rod system could not be achieved using a hydraulic excavator designed for soil excavation as compared to a calibrated hydraulic ram style post tensioning system mounted on the land side of the anchor block. This improper construction tech is contributory to the localized over stressing of the tie rods in the failure zone of the wharf.

[49] Mr. Villano then repeats some of the same concerns/conclusions of Mr.

Lewis in relation to the bevelled washer issue, and the issue of cutting holes in SSP.

[50] The applicant points out that both reports, at most, speak of possible areas of concern and/or each writer’s understanding of standards and industry practice.

Furthermore, where the experts express the view that it would have been the applicant’s responsibility to review the construction drawings, and to advise the contractor and/or the design engineer of discrepancies between those drawings and the actual construction, the applicant points out that this would be inappropriate. It

notes that it is not a subcontractor's role to second-guess instructions and regular oversight by its employer, the lead contractor.

Analysis

[51] Causation is an essential element of any negligence claim:

A successful action in negligence requires that the plaintiff demonstrate (1) that the defendant owed him a duty of care; (2) that the defendant's behaviour breached the standard of care; (3) that the plaintiff sustained damages; and (4) that the damages were caused, in fact and in law, by the defendant's breach. ... (*Mustapha v. Culligan of Canada Ltd.*, [2008] S.C.J. No. 27, at para. 3)

[52] Causation is a question of fact:

8. The test for showing causation is the "but for" test. The plaintiff must show on a balance of probabilities that "but for" the defendant's negligent act, the injury would not have occurred. Inherent in the phrase "but for" is the requirement that the defendant's negligence was *necessary* to bring about the injury - in other words that the injury would not have occurred without the defendant's negligence. This is a factual inquiry. If the plaintiff does not establish this on a balance of probabilities, having regard to all the evidence, her action against the defendant fails. (*Clements v. Clements* 2012 SCC 32)

[53] Clearly, therefore, where a plaintiff claiming negligence cannot show a causal connection between a defendant's action(s) and the loss suffered, that defendant may seek summary judgment, and a court may dismiss that plaintiff's claim (*Szubielski v. Price* 2013 NSCA 151; *Chan v. White* 2014 NSSC 383). In *MacNeil v. Bethune* 2006 NSCA 21, the court stated:

28. Although he was listing relevant principles for a summary trial, not a summary judgment application, Green, J., as he then was, in *Marco Ltd. v. Newfoundland processing Limited* [1995] NJ No. 168 [TD] described the threshold common to both as:

76...9. There will be a “genuine issue for trial” if the issue in question is not spurious and the issue relates to a material fact or point of law that is necessary to be decided to resolve the ultimate controversy between the parties. Obviously, there will not be a genuine issue for trial if the responding party can put forward no evidence that could constitute either a defence or a claim in law.

In my view, in this case, after considering the evidence presented by all parties on the applications, it can be said with confidence that there was no controversy of fact or law that required resolution by a trial. If the matter were permitted to go to trial, the plaintiffs would have no chance of success because they have no evidence to support their allegations that the damages they suffered were caused by or contributed to by any act or omission of the defendants.

[54] A similar result was also reached in *Kiden Used Furniture v. Pearson* 2014

ONSC 4625, where the plaintiff claimed against the defendant following a fire:

[42] ... To succeed, the plaintiff must also show that the fire was caused by the defendant’s negligence. The plaintiff’s circumstantial evidence, even after making assumptions in the plaintiff’s favour regarding the cause identified by the defence expert, fails to prove any particular cause of the fire on a balance of probabilities, let alone that the defendant’s negligence caused the fire.

[43] Thus, even if I make certain assumptions and conclusions that are favourable to the plaintiff and to some extent not called for on the material before me, I nonetheless conclude that there is no genuine issue for trial regarding the plaintiff’s negligence claim given the absence of an expert report demonstrating the requisite causation. The plaintiff’s “cumulative circumstantial evidence” is insufficient.

[55] What evidence do I have before me relating to causation? I note the discovery evidence of Grant McCharles, October 23, 2015 (p. 225):

Q. So, when the failure mechanism started you believe that one of the plates in the upper waler system at the SSP wall, the north wall, failed?

A. Yes. And that is my opinion only, I guess.

[56] Again, from Mr. McCharles' evidence (p. 244):

Q. Okay. So, just to lead into a couple of points, based on your assessment of the information, your conclusion was that the failure initiated in the top waler on the north face of the wharf, correct?

A. Based on my opinion, yes.

Q. Yeah. And as you went through, a number of times your view is that it was a failure of a plate that initiated the failure?

A. Yes.

Q. Okay. And once that plate failed that particular tie rod would no longer be bearing load, is that correct?

A. Would no longer be effective, yes.

[57] And Mr. McCharles again (pp. 46-49):

Q. But if I can just on your observation so I am sure I understand them, with your -- having made the observations you did did it seem to you -- are -- that the lower tie rod would have held that first and it would have been the upper -- sorry the lower C channel, the lower waler would have held --

A. Yes.

Q. --- and the upper one fail first?

A. Let go first and then this material behind the wall in that particular area started to rush forward.

...

Q. So based on your observations and the -- after the loss the photographs taken that are Exhibit 2, I get a sense from you that you reach that conclusion this was a top-down failure of the west end. So it started to fail at the top and it gradually failed more and so you'd have the upper waler fail followed by ultimately the --

A. The lower waler.

Q. -- lower waler giving away.

A. Could let go also.

[58] I further note the evidence of Mr. Hart, relating to physical evidence recovered post-failure, when the structure was demolished/dismantled (January 25, pp. 58-59):

Q. Now could you make any observations of the plates, the plate washers that held... that were... Let me back up a bit. Observations of the plate washers that were between the nut and the channels of the waler?

A. Yes, we would have had our hands right on them.

Q. Now or any of those deformed?

A. None of the ones that we put our hands on, they were not deformed. This was part of the structure that...

Q. Hadn't collapsed.

A. Appeared to be in good condition.

...

Q. When you looked at the nut and the bevel washer and the plate washer, did it look like they were seated properly and they were in proper alignment?

A. They did, yes. I mean, and they were oriented properly...

[59] In the context of this motion, my role is not to establish ultimate causation.

However, it is clear that there is no evidence of causation before me that implicates the applicant. There is, in my view, no evidence pointing to any failure on the part of the applicant Atlantic which led to this loss.

[60] The expert reports, as can be seen by the excerpts that I have quoted, are speculative. Both Mr. Lewis and Mr. Villano have raised concerns with the work

of Atlantic, and/or with the assembly of the lower waler connection. Those concerns may or may not be valid. In some cases, they are not founded in the evidence, but on “possibilities”. In any event, the best the experts can say is that some of these “possible” deficiencies could “possibly” have, in theory, contributed to the failure. Neither expert has done any testing, or analysis, to provide any actual confirmation that those failings, if they occurred, led to this loss. This evidence, were it tendered at trial, could not base a finding of causation.

[61] Both applicant and respondent agree that the hex nuts were hand tightened by the applicant. The evidence before me is, firstly, that this was done pursuant to instructions of the lead contractor, Beaver; secondly, that this may be an appropriate way to install these nuts. However, there is no evidence that there were any loose hex nuts at the time of the failure of the wharf. Furthermore, there is no evidence that, if there were any loose hex nuts, that they contributed or caused this failure.

[62] The experts who spoke about the “hex nuts” issue are talking about industry practice, possibly relevant to the appropriate standard of care. However, both reports are completely speculative; neither expert can say whether any nuts were, in fact, loose, or whether the “hand-tightening” caused or contributed to the loss.

[63] Both applicant and respondent agree that the bolt holes were cut, not drilled. Again, the evidence shows that was done pursuant to instructions of Beaver (starting with the bid package). Other than speculation by Mr. Lewis and Mr. Villano, there is no evidence that this “cutting” either caused or contributed to the failure.

[64] Both applicant and respondent agree that the applicant used a single bevelled washer at each waler end of the assembly. Again, the evidence shows that this was done pursuant to instructions of the lead contractor. Again, there is no evidence, other than speculation, that this single bevel caused or contributed to the failure. In fact, post-failure inspection appeared to show the hex nuts and bevelled washers still seated and aligned properly.

[65] As to reporting and inspection issues, the respondent (and his experts) have spoken at length about their understanding of industry practice. While this might be interesting reading, it is in no way helpful to the issue of causation. Poor reporting and poor inspection, even if they occurred, did not cause this wharf to collapse.

[66] In my view, without the respondent being able to show some evidence of causation as against the applicant, this matter cannot and should not proceed to

trial, since an essential element of the claim is already known to be lacking. There is no evidence of any causal link between the work of Atlantic and the loss.

[67] I conclude that there are no genuine issues of material fact requiring a trial of this claim. Based on the material before me, this claim is lacking a necessary element of a negligence claim, and would have no chance of success. I am convinced that allowing this claim to proceed to trial would not be a good use of judicial resources.

[68] This litigation has been going on for a number of years, and is quite far along. Extensive discoveries have occurred, and disclosure has been exhaustive. I am satisfied that it has reached a stage where a determination about this claim's viability can be made. Courts have recognized that where a litigation has reached a "very ripe" stage of proceeding, i.e., where discoveries are complete and the case ready for trial, it is quite appropriate for a court to determine that the evidence shows no triable issue, even in the case of a third-party claim: *Ese Sports v. Continental Insurance Company* (1995) O.J. No. 2591 (Q.L.); *Selig v. Cook's Oil Company* 2005 NSCA 36.

[69] I further find that there is no question of law involving these parties that requires determination (Rule 13.04 (1)(b)).

[70] According to Rule 13.04, where I find no such question of law or fact, I must grant summary judgment. I grant summary judgment to the applicant. The claim of the defendant Hatch against third-party Atlantic Sub-Sea is dismissed.

[71] If the parties cannot agree as to costs, I would ask them to provide me with written submissions.

Boudreau, J.