

2000 MBQB 58
Manitoba Court of Queen's Bench

H & H Concrete & Drain Inc. v. Flin Flon (City)

2000 CarswellMan 257, 2000 MBQB 58, [2000] M.J. No. 244, 97 A.C.W.S. (3d) 155

H & H Concrete & Drain Inc., Plaintiff and The City of Flin Flon, Defendant

Beard J.

Judgment: May 5, 2000

Docket: Winnipeg Centre CI 96-01-99309

Counsel: *Donald A. Flatt*, for Plaintiff.

Michael G. Finlayson, for Defendant.

Subject: Public; Civil Practice and Procedure; Municipal

Related Abridgment Classifications

Municipal law

[XII Municipal liability](#)

[XII.1 Negligence](#)

[XII.1.e Flooding from sewage system](#)

Headnote

Municipal law --- Municipal liability — Negligence — Flooding from sewage system

Plaintiff subcontractor under contract between contractor and defendant city to build new sewage lift station — Plaintiff responsible for site excavation, concrete work and backfilling — Plaintiff brought action against defendant for compensation for expenses incurred when sewer main broke and flooded construction excavation — Action dismissed — Plaintiff failed to prove on balance of probabilities that failure of sewer main caused by negligence of defendant's employees — Failure of sewer main more likely caused by failure of bank of excavation due to slope of bank being cut too steep and not being adequately supported.

ACTION for damages for negligence.

Beard J.:

I. The Issues

1 The plaintiff, H & H Concrete & Drain Inc. ("H & H"), has sued the defendant, the City of Flin Flon ("the City"), for compensation for expenses that it incurred when a sewer main broke and flooded a construction excavation. The main issue in this case is that of causation - has H & H satisfied me on a balance of probabilities that the City's employees caused the failure of the sewer main?

2 There was considerable evidence regarding shoring along the east bank of the excavation that was constructed by H & H. While H & H may not have constructed the shoring to engineering specifications, due in part to unexpected ground conditions, I find that the shoring itself had nothing to do with the sewer line failure. Therefore, I will say nothing more about the engineering plans for, the construction of, or the irregularities in, that shoring.

II. The Facts

3 H & H was a sub-contractor under a contract between O. G. McEwen Electrical Contractor Ltd. and the City to build a new sewage lift station for the City. Under the sub-contract, H & H was responsible for, among other things, the site excavation, the concrete work and the backfilling. This included responsibility for maintaining and protecting existing buried utilities, such as water and sewer lines and for constructing any shoring, bracing or underpinning required to protect the service lines from damage as a result of the excavation.

4 Vince Tavares ("Tavares") was in charge of the project for H & H. He and two helpers arrived at the job site on Sunday, July 9, 1995. On inspecting the site, Tavares determined that a culvert drained surface water to a point near the construction site and could result in the excavation being flooded with runoff water in the event of heavy rain. To prevent this problem, the culvert would have to be extended further to the west, past the construction site.

5 On the morning of Monday, July 10, 1995, Tavares met with the City's engineer and they agreed that the City would provide the culvert pipe and install a catch basin, while H & H would install the pipe, including digging and filling the trench. It is agreed that H & H did the installation work on Monday, July 10, 1995.

6 The excavation and shoring were completed and H & H poured a skin coat of concrete in the bottom of the excavation by the late afternoon of Thursday, July 13, 1995. Tavares said that he returned at about 8:00 p.m. to check the skin coat and found a thin layer of water on top. He had a worker take a photo of the excavation, called the City, and then he and his men immediately began digging in the northeast corner of the excavation, which seemed to be the area from which the water was coming, to find the source of the leak. They uncovered a connection between two sections of the sewer main pipe running along the east side of the excavation that had pulled apart and from which sewage water was flowing.

7 By this time, two City employees had arrived. Collectively, they decided to try to do a temporary repair, which required some materials and a backhoe to lift the pipe. The City employees left to get the materials and backhoe, while Tavares and his helper stayed behind to ready the site for the repair.

8 Throughout this time, the water was flowing out of the sewer pipe and was washing the bank away, exposing more and more of the pipe. As more of the pipe was exposed to the north of the separated connection, the erosion uncovered a large patch affixed to the west side of the sewer pipe. It was agreed that this patch had probably been attached when the sewer was originally being installed and that neither party was aware of it until this event. While the men were attempting to effect the repairs at the separation, a large piece of the bank fell down on the sewer pipe and broke a large hole in the pipe about five feet to the north of the separation. Water began flowing through the hole, and it was then apparent that the men could not finish the repairs without first shutting off the flow through the pipe. The result was that the excavation filled with sewer water up to the level of the broken pipe.

9 H & H looked after the repairs so that the lift station project could be finished. This entailed renting a large-capacity pump in Winnipeg and pumping out the excavation, cleaning out the earth that had fallen in, obtaining two sections of the sewer pipe which were brought in from Edmonton, repairing and filling in around the pipe and rebuilding the catch basin. There was also a cost resulting from the delay in the rest of the project as this work was undertaken. It is, generally, these costs for which H & H is now seeking general and special damages.

10 H & H and the City had different explanations for the cause of leaking water. H & H, through its expert, took the position that the City was responsible for the patch becoming dislodged when its employees installed the catch basin in the extended culvert, which was close to the area of the patch on the sewer pipe. Its expert was of the opinion that, when the patch became dislodged, water began leaking from the sewer line behind the patch which undermined the bank and caused the flooding.

11 The City, through its expert, took the position that any actions by employees of the City could not have dislodged the patch. Its expert was of the opinion that, when H & H dug the excavation, it made the side slopes too steep, leaving the banks unstable. As a result of the instability, the bank shifted in the area of the connection of two sections of the

sewer pipe, causing the pipe to separate and sewer water to begin running out, which undermined the bank and caused the flooding.

III. Decision

i. factual disputes

12 There were several facts that were at issue, being the following:

- there was disagreement as to whether the City's employees completed the installation of the catch basin and the subsequent tamping to lower the height on the same day or on different days;
- there was disagreement as to the exact location of the catch basin on the culvert in relation to the sewer pipe; and
- there was disagreement as to the distance that separated the culvert from the sewer pipe prior to the flood.

13 On the first factual dispute, I find that the installation of the catch basin, including the tamping with the backhoe, was likely all completed on Tuesday, July 11, 1995, rather than the tamping being done one or two days later. The evidence of the City's employee was that the installation was completed on Tuesday. The only evidence that this was not the case was that of Tavares, and his evidence in this regard was inconsistent. On his discovery, he stated that all of the work was completed on the Tuesday the 11th. He changed his testimony at trial and first stated that he thought that the tamping was done the next day, that is, on the Wednesday, but later he said that it could have been done later on the same day as the installation. His only certain recollection at trial was that the employees returned to do the tamping, while acknowledging that it could have been later the same day.

14 In saying this, I am not being critical of Tavares. I found him to be a truthful witness, and I am satisfied that he was testifying as to his best recollection of the events. Unfortunately, the events in question occurred almost five years prior to the trial and he was testifying from memory, having made no notes at the time. It would be extremely difficult for anyone to remember details of one job among many after such a long time. I do not in any way fault him for this inconsistency in his testimony.

15 For the tamping to have been done the following day would have defeated the purpose, which was to lower the top height of the structure. The catch basin was composed of a top iron ring which held an iron catch basin cover, then a pre-cast ring of cement which sat on top of the culvert and two rows of crescent-shaped cement blocks on each side of the culvert to stabilize the cement ring. Concrete was used to adhere the blocks, the ring and the culvert and to give the structure the required height up to ground level.

16 When the structure was complete, the City's employees evidently found it to be too high, because the bucket of a backhoe was used to hit or tamp down on the cast iron ring to lower the structure to the required height. Lowering the height was accomplished by forcing some of the concrete out from between the cement ring and the top of the culvert. If this tamping was not done until the next day, the concrete would be hard and would break rather than being squeezed out. Instead of lowering the height of the catch basin, it would be broken. Thus, logically, it is more likely that the tamping was done on the same day as the catch basin was constructed and not the next day.

17 The condition of the concrete between the parts of the catch basin is relevant to the question of how much force from the tamping was transmitted down to the sewer pipe underneath the catch basin. If the tamping was done when the concrete was still wet, the force would squeeze the concrete out and, in so doing, absorb the force, leaving little force to be transmitted down. If the concrete had already dried, the catch basin and culvert would, according to H & H's expert, act like one solid piece and transmit more force downward rather than absorbing it.

18 While there was much evidence and argument on this point, the City's expert testified that, even if the tamping was done when the concrete was dry and not able to absorb the force of the tamping, it would not have changed his opinion of the cause of the damage to the sewer pipe.

19 The second factual dispute relates to the position of the catch basin in relation to the sewer pipe. This point is relevant because the relative location of the two would affect the amount of force directed from the catch basin and culvert to the sewer pipe when the catch basin was hit with the backhoe. The culvert and the sewer pipe ran in almost opposite directions, with the sewer pipe running in a north-south direction and the culvert running approximately northwest to southeast. The culvert was installed closer to the surface, while the sewer pipe was installed at a deeper level and ran underneath the culvert. The two intersected just to the north of the northeast corner of the excavation. The catch basin that the City installed in the culvert was almost over the intersection. While it was agreed that the catch basin was a little to the east of the intersection and not directly over the sewer pipe, the City argued that the west side of the catch basin was less than one foot over the east side of the sewer pipe (that is, that they overlapped less than one foot), while H & H argued that the overlap was approximately one foot.

20 It is not necessary for me to make a determination of the exact overlap because the City's expert testified that, even accepting H & H's contention that there was a one-foot overlap, this would not change his opinion as to the cause of the damage to the sewer pipe.

21 Finally, there was a disagreement as to the distance between the top of the sewer pipe and the bottom of the culvert (that is, the distance of the separation between the two pipes) at the point of intersection. H & H's expert assumed that there was a separation of 12 to 18 inches, which was Tavares' recollection of the actual separation of the two pipes as he saw them while working on the failure.

22 The City's expert assumed a separation of approximately three feet. In estimating the separation, he included a measurement taken after the flood, which H & H argued was unreliable because the separation had been increased as a result of the flood and the repositioning of the pipes during construction. The City's expert argued that, while his calculation could be out by as much as six inches, it could not be more than that due to the manner in which the whole sewage system is constructed. He testified that, being a gravity flow system, any significant change in elevation in a relatively small part (here, only two sections or a total of 16 feet of the sewer pipe were replaced) of the whole system would have affected the functioning of the system. His opinion was that, logically, these two sections running under the culvert could not be more than six inches lower than the elevation of the sewer pipe prior to the flood without affecting the operation of the whole system.

23 While I am inclined to accept the explanation and calculations of the City's expert regarding the separation, I do not have to make this determination because he testified that, even accepting H & H's estimate of the separation, his opinion regarding the effect of the tamping on the sewer pipe would not change.

ii. damage arising from tamping on the catch basin

24 H & H's expert theorized that the City's employees caused the failure of the sewer pipe when they tamped down on the catch basin with the backhoe. He accepted that the tamping was done the next day, after the concrete had hardened, so that the catch basin and culvert were one solid piece. He was of the opinion that, when the backhoe hit the top of the catch basin, force was transmitted downward to the sewer pipe, causing it to flex. This flexing caused the patch to separate from the sewer pipe and sewage began to leak out. The sewage ran through the ground towards the excavation, weakening the bank around the sewer line. As the bank weakened, the patch moved further from the pipe and, as the bank washed away, the connection in the sewer pipe separated and the ensuing damage occurred.

25 The City's expert testified at some length about the effect of force applied to the top of pipes such as those used for the culvert and the sewer main in question, including the way that the force would be dispersed or would radiate through

the pipe and into the surrounding ground, the amount of force that would actually move downward from the upper pipe to the lower one and how a plastic pipe like the sewer pipe would react to or be deflected by that force.

26 After calculating the deflection based on the conditions that he believed existed, he then calculated the deflection of the sewer pipe based on conditions most favourable to H & H, being that:

- the amount of force being applied to the culvert was 16,000 lbs.;
- the force was applied directly to the top of the culvert (that is, that there was nothing between the force and the culvert such as wet concrete to absorb any of the force);
- the catch basin overlapped the sewer pipe by one foot; and
- the amount of separation between the sewer pipe and the culvert was 18 inches.

27 Even accepting these conditions, which he strenuously did not, he calculated that the maximum amount that the sewer pipe would deflect or deform from a circle to an oval shape would be $1/2$ mm. He testified that this very minimal amount of deflection would not be sufficient to dislodge or move the patch to cause the sewer pipe to start to leak at that location.

28 The City's expert also noted that there was more ground cover and therefore more pressure against the sewer pipe in this case than the ground cover used in the tests performed to calculate the deflection of the pipes on which he based his calculations. This increased ground pressure against the sewer pipe would decrease the likelihood of the deflection of the pipe as compared to the test pipes. As well as reducing the deflection in the pipe, the ground pressure would act to hold the patch in place against the sewer pipe and decrease the likelihood that it would become dislodged.

29 After considering the evidence and the opinions of the two experts, I accept the opinion of the City's expert that the actions of the City's employees while tamping down the catch basin could not have dislodged the patch and caused the sewer water to leak from the sewer pipe and undermine the bank. More specifically, I accept his opinion that the force exerted in tamping on the catch basin to lower it would essentially have dissipated before it reached the sewer pipe and, therefore, could not have caused the sewer pipe to deflect or deform sufficiently to cause the patch to become dislodged.

iii. damage arising from slope failure

30 The City's expert has offered an alternative explanation for the damage to the sewer pipe, being that the slopes of the banks of the excavation were too steep, resulting in the banks being unstable. His opinion was that this instability caused the bank around the area of the connection between two sections of pipe to move out horizontally, causing the sewer pipe to separate at the connection and the water to begin flowing out. He testified that the fact that there was a prior excavation at this location for the original installation of the sewer pipe and that slag, a cohesionless material, was used as fill for that prior installation, would have left this bank less stable than would otherwise be expected and, therefore, more prone to failure.

31 While there were no conclusive photos of the slopes of the banks before the flood, the City's expert pointed to evidence that he said indicated that the slope in this area exceeded 1:1, being the maximum unsupported slope permitted pursuant to provincial safety regulations. That evidence included the following:

- the testimony by the City engineer, Munson, that he saw a surface crack in the area of the failed bank just prior to the failure;
- the City's expert's explanation of the slope in the area in question as it appears in the photos taken after the flood, which he said was still greater than permitted or than was safe and which, he said, must have been decreased as earth in the area was washed into the excavation during the flooding; and

- photos after the flood that showed that the bank on the west side of the excavation, which had not been affected by the flood, was also steeper than safety regulations allowed.

32 It should be noted that Tavares denied that the slopes were too steep, and H & H's expert did not agree with the interpretation of the photographs by the City's expert. After considering all of the testimony, I find that it is more likely that the east-west banks were steeper than permitted by provincial regulations.

33 When questioned about the bank failure, H & H's expert provided some general opinions and then stated that he was not a geotechnical expert and that one would have to be a geotechnical expert to provide opinions on the signs of an impending bank failure.

34 The City's expert testified he had done a great deal of work in the area of slope and bank failures, having seen and investigated hundreds and also having done considerable work regarding structures that needed protection where slopes needed to be stabilized. Thus, he has had considerable experience in the areas of slopes and bank failures and was able to provide an expert opinion on the stability of the banks of this excavation and the likelihood that the cause of the failure was a bank failure.

35 After considering all of the evidence and the opinions of the two experts, I find that it is more likely that the failure of the sewer pipe was caused by the failure of the bank and that this was due to the slope of the bank around the area of the excavation in the sewer line being cut too steep and not being adequately supported.

IV. Conclusion

36 I therefore find that H & H has not proven on a balance of probabilities that failure of the sewer main was caused by the negligence of the City's employees. Thus, I am dismissing H & H's claim.

V. Damages

37 Even though I have found that the City is not liable, I must deal with the question of damages. The parties had agreed to all of the damages except for two items, being a claim for vehicle expenses and general damages.

38 The claim for vehicle expenses of \$420.00 relates to the use of Tavares' truck during the clean-up of the excavation and the repair of the sewer pipe and the catch basin. I would allow this claim.

39 H & H also advanced a claim for general damages. When questioned, H & H's principal, Wayne Handford, indicated that H & H was looking for compensation for income lost from other work because the time to complete this project was extended by the time that it took to complete the clean-up and repairs. Lost income is an item that is usually quantified and claimed as special damages, which gives the opposing party an opportunity to review income documents and to conduct discoveries on the amount claimed. Counsel for H & H did not provide me with any case law to support this amount being included in general damages and, without that, I am not allowing this part of the claim.

VI. Costs

40 Counsel did not address the question of costs. Ordinarily, costs would follow the cause which, in this case, would result in the City having its costs on a party and party basis under the tariff. If counsel wish to argue that there should be some other order, they can make arrangements to argue the question of costs before me. If that happens, I would request that the City file a bill of costs prior to the hearing.

Action dismissed.