



THE SUPREME COURT OF APPEAL OF SOUTH AFRICA

Case No. 601/04
NOT REPORTABLE

In the matter between

CITY OF JOHANNESBURG

APPELLANT

and

DEBBIE INVESTMENTS CC

RESPONDENT

Coram: Howie P; Scott, Brand, Jafta JJA et Cachalia AJA

Heard: 20 February 2006

Delivered: 23 March 2006

Summary: Delictual claim for flood damage to property; expert testimony inconclusive. Court should not venture its own opinion.

Neutral citation: This case may be cited as *City of Johannesburg v Debbie Investments CC* [2006] SCA 29 (RSA)

JUDGMENT

CACHALIA AJA

[1] Debbie Investments CC is a close corporation and the respondent in this appeal. It instituted a delictual action against the City of Johannesburg (the appellant), a local authority, for flood damage that was caused to a property that it owns in Linksfield, Johannesburg. The appellant denied liability and simultaneously instituted an action in reconvention against the respondent for damage that was caused to a municipal road and wall bordering the property. The respondent too denied liability in respect of this claim.

[2] Having agreed to separate the merits of the claim from the quantum of the damages, the parties requested the Johannesburg High Court to decide the merits only. That court (Coetzee AJ) held that the appellant was liable for the damage caused to the respondent's property. At the same time it dismissed the appellant's counterclaim. The appellant was however granted leave to appeal to this court.

[3] The property that is the subject of this appeal is situated on the slopes of Linksfield Ridge in Johannesburg. The ridge slopes at a steep angle of between 30° to 34° from south to north (from top to bottom). Access to the property is obtained from a road, Linksfield Drive, situated at the north end of the property. The macadamized road was constructed by the appellant's predecessors in the 1950's and is now the responsibility of the appellant. It snakes up the ridge, taking three sharp 'hairpin' bends on its way to the top of the ridge. At the second bend, this is at the south-eastern corner of the property, the road curves sharply above the property at an angle of 180°. From here it continues in a south-westerly direction to the top of the ridge. The minute of the inspection *in loco* records that rainwater normally flows from the third incline at the top of the ridge around the inside corner of the second bend (the south side) down the road. The road therefore acts as a natural drainage course.

[4] The portion of the road above the property is constructed partly on cut and partly on fill. In some places the cut is into solid, weathered granite; in others it is into the talus which forms a layer on the weathered granite. Fill is

imported porous and pervious material, soil or rock, which was introduced during the construction of the road to fill the area between the naked slope and the surface of the road. The porous and pervious material of fill allows for the free flow of water through it. Granite on the other hand, is impermeable. Talus consists of material which has been rolled and transported by gravity down the slope of a hill or mountain. It contains rocks, boulders, gravel and other fractions of soil and is permeable.

[5] Where the respondent's property is bounded by the road above it, a retaining wall was constructed by the appellant's predecessors to hold up the fill which supports the road. It is a substantial wall, 7 metres high, made from stone and mortar. Before the incident giving rise to this action occurred, a number of vertical and horizontal cracks were apparent across the face of the wall.

[6] Between this wall and the roadway is a concrete kerb, 15 cm high, and between the kerb and the wall, a grass verge. The wall is positioned 1,5 metres away from the kerb. It rests on a talus layer and its east and west sides are founded on weathered granite. The wall is founded on talus in the centre and weathered granite on its east and west extremities. It is convenient to refer to this wall as the municipal wall.

[7] The municipal wall straddles a depression or gully in the impermeable granite that is filled with talus which is permeable, thus allowing the infiltration of water through it. The talus would form a natural drainage ditch in the gully. The talus layer is between 1,5 to 2 metres thick. The evidence did not establish the depth of the gully, how far up and under the municipal wall it extended and, if it did, whether it extended under the road above the property and proceeded further up the ridge. An important issue in this appeal is whether a causal link exists between the flow of water down the gully and the damage to the respondent's property.

[8] The talus layer within the property runs from the foot of the municipal wall, down the slope, in a northerly direction at the same angle as the slope of

the ridge, ie, 30° to 34°. Eighteen metres from the foot of the wall down the slope is terrace wall and a further 2 metres below that, a garden wall. The garden wall is a few metres from the dwelling and was constructed approximately 3 metres high and 15 metres in length. It had weep holes to allow the egress of water. The dwelling on the property was cut into the mountain slope by between 4 to 6 metres, the cut being retained or protected by the terrace wall. The terrace and garden walls were built by the original owners of the dwelling, years after construction of the road and municipal wall.

[9] In the early hours of the morning on 10 February 2000, after unusually heavy and incessant rain for several days over the Linksfield area, John Halfon who resides in the dwelling on the property was awakened by a thud. It was raining and dark. A portion of the terrace wall appeared to have collapsed. Approximately half an hour later Halfon heard a further thud and discovered that his lounge, breakfast room and kitchen scullery were covered in rocks, grass and boulders. The garden wall had also now collapsed. This caused flooding of the entire house with stones, mud and debris from the slope below the municipal wall.

[10] The flooding resulted in damage to all the rooms in the house. Curtains at the front of the house had to be replaced, so too carpets, cabinets and furniture. There was also structural damage as evidenced by the exterior cracks to the house. However, this damage appeared to have been caused by the subsidence on the northern side of the house which was unrelated to the damage behind it.

[11] The pre-existing cracks across the face of the municipal wall had widened but the stability of the wall was not compromised. There had also been pre-existing cracks along the road on Linksfield Drive. As a result of the occurrence however major damage to a portion of Linksfield Drive, above the municipal wall was caused by the subsidence of an area of approximately 30 metres in length and a width of 3 metres. The damage to the municipal wall and road are the subject of the counterclaim.

[12] The parties relied on expert testimony to explain the cause of the subsidence of the municipal road, the collapse of the terrace and garden walls and the concomitant surge of rock, mud and debris into the house. The experts however presented two irreconcilable theories. I will refer to these as the 'Top-down' and 'Bottom-up' theories.

The 'Top-down theory'

[13] The theory advanced by the respondent was presented by two engineers, Dr Ofer and Professor Stephenson. It was their view that the heavy rainfall would not have saturated the talus slope below the municipal wall so as to have precipitated the event. This view was supported by the evidence of Alan Robinson, a geotechnical engineer, who conducted soil tests at the site after the event to determine what impact the rainfall had had on the soil in the talus layer within the property. On the basis of these tests he concluded that the rainfall had penetrated the top layer of the soil only. This was because the steep gradient and the relatively low permeability of the talus soil matrix caused most of the water to run rapidly off the slope.

[14] Having excluded the saturation of the talus as the cause of the failure of the slope from their theory, they reasoned that the water would have come from another source. That source, they opined, was the road above the property. They asserted that the road above the property concentrated the water which was run off from properties situated above the road, higher up the slope.

[15] The flow of rainwater down the road was likely from time to time to have flowed down the steep road above the south-eastern corner of the property in large volumes and high velocity. The absence of an adequate storm water drainage system on Linksfield Drive, according to Stephenson, made the road and the kerb in particular unable to withstand such volumes of water. As a result during the heavy rainfalls at the time of the incident much of the water flowing down the road would have overtopped the kerb, flowed on to the grass verge between the road and the municipal wall and infiltrated down

the pervious fill material behind the wall. Some of the water would also have penetrated through the cracks in the road above the property and seeped through the fill underneath the road.

[16] The water infiltrating through the fill caused sub-surface erosion in the fill and this erosion, in turn, allowed the free ingress of water to the area below the wall causing saturation of the talus under the wall. The water then exerted hydro-static pressure causing its movement within the talus layer below the wall (ie to the north of the wall). It would then have emerged a few metres below the wall, almost like a spring, in quantities sufficient to commence a mud slide down the slope.

[17] The terrace wall was first toppled by the mud slide and subsequently the weight of mud and debris caused the collapse of the garden wall. This collapse of the garden wall caused a further rush of mud, debris and boulders through the back of the house.

[18] The erosion of the material behind and under the wall damaged the municipal wall over the years. This accounted for cracks in the wall that had been visible before the incident. During the event, the erosion caused further damage to the wall, by washing out fine material from the fill. This led to a collapse of the structure of the fill and a settling of the material above. The settlement created new and wider cracks in the wall and also a subsidence in the road above the property.

[19] Briefly put, the water emanating from above the property (the top) penetrated the verge and the cracks in the road thereby washing out fine material from underneath the road and the wall. The water that escaped under the wall as a result of this caused the material on the slope to dislocate and slide down to the bottom of the slope causing the terrace and garden walls to collapse.

The 'Bottom-up theory'

[20] The appellant, too, called three engineers who offered expert testimony on the sequence of events. They were Messrs Vanderstraeten, Roux and Wardle. They hypothesized that the cause of the failure of the respondent's garden wall was unrelated to the municipal wall and road. This was because, in their view, the angle of the slope of the road where it passes above the respondent's property is such that a significant accumulation of water along it is obviated. The water would therefore have continued down the road on its inside (south side) without overtopping the kerb (on the north side) and flowing on to the grass verge.

[21] In their view the incident was initiated by the accumulation of excessive underground water behind the terrace wall. This began with saturation of the talus layer on the slope above the dwelling. The talus slope became saturated by water from three sources: the first was rain water which fell on the slope and infiltrated through it; the second, water which flowed underneath the municipal wall and within the talus layer at the joint or connection between it and the impervious weathered granite underneath; this water had seeped naturally through the depression along the contact area between the talus and the weathered granite underneath infiltrating from the catchment area on the mountain side; the third was the seepage through the verge and cracks in the road from rainwater that fell on this area (not water from the overtopping of the kerb that flowed on to the verge as contended by the respondent's experts).

[22] The area of talus between the municipal wall and the garden and terrace walls became saturated. The water and saturated earth created pressure on the terrace wall. A combination of these pressures and the absence of any drainage provided in the terrace wall rendered it unstable causing it to collapse.

[23] With the collapse of the terrace wall, the talus layer was no longer supported. In its saturated condition the slope had lost its shear strength (its

resistance to movement) and failed. The water that had dammed up behind the terrace wall, together with the collapsed talus, was released and flowed over the garden wall and into the house. The garden wall collapsed thereafter.

[24] With the release of underground water eroding the slope even further a progressive land slip occurred going back up the slope. The onset of the slide and release of ground water would have washed fine material out from behind the municipal wall, causing progressive local subsidence of the overlying road fill and further cracking of the road surface. Surface water on the roadway would then have flowed into these cracks and immediately behind the wall into the fill, adding to the accumulating ground water and in turn the washout and subsidence process.

[25] In short the collapse of the terrace and garden walls was caused by a build-up of water and soil pressure at the bottom of the slope which was followed, after the collapse of the terrace and garden walls, by the progressive backward landslip up the slope to the top.

[26] The parties sought to hold each other liable on the basis of these theories. The respondent contended that the damage to its walls and house was caused by the failure of the appellant to construct an adequate drainage system to prevent flooding from the road above the property. The appellant in turn sought to hold the respondent liable for the damage that was caused to the road and the municipal wall on the basis that progressive backward landslip which precipitated the subsidence was, so it contended, the consequence of the failure of the respondent's defectively constructed walls.

[27] The learned judge *a quo* was unable to decide which of the theories was the preferable explanation for the incident. Despite this he upheld the respondent's claim and dismissed the appellant's counterclaim. He did so on the following basis: it was common cause that on both versions the catalyst for the catastrophe was the considerable volume of water that originated higher up the ridge, ie, south of the respondent's property, in the catchment area, and passed under the municipal wall. Whether the water passed above

the road and through the verge and the cracks in the road, or underneath the road and through the gully, where, he assumed, it would have passed through permeable fill, it was, he considered, the appellant's failure to construct the road or properly maintain it that contributed to the volume of water passing under the wall that caused the damage to the respondent's property.

[28] The experts of the parties were agreed that the water that had passed under the municipal wall would have come from two sources: the first was the natural infiltration in the gully through the talus; the second, seepage through the verge and the cracks in the road. The volume of water that passed through the gully was not investigated. There was a disagreement concerning the volume that would have seeped through verge and the cracks in the road. The respondent's experts suggested that a large volume of water coming down the road would have overtopped the kerb and penetrated the verge. The appellant's experts on the other hand denied that this would have happened because, in their view, most of the water coming around the bend above the property would have passed on the inside, ie, the south side of the kerb. This view is consistent with the observation that was made at the inspection *in loco*, alluded to earlier, that rainwater coming down the hill would flow on the inside bend of the road above the property. Not only was the evidence regarding the actual volume of the water that would have seeped through the verge and cracks in the road inconclusive, but the evidence whether a *significant* volume would have seeped through this way was likewise so.

[29] In this court the appellant did not seek to impugn the court *a quo*'s dismissal of the counterclaim. Its submission is that if the water that caused the damage came down the gully and so under the wall the appellant should not have succeeded in its claim. This is, so it is contended, because the construction of the road was not shown to have had any bearing on the flow of this water. There was consequently no factual link between the appellant's conduct in constructing the road, and the detrimental consequences suffered by the respondent.¹

¹ See *International Shipping Co (Pty) Ltd v Bentley* 1990 (1) SA 680 (A) at 700.

[30] The respondent did not seek to demonstrate that the construction of the road in any way interfered with the natural infiltration of water through the gully. The thrust of its argument was that the evidence had demonstrated that the most likely source of the water which passed underneath the wall was through the cracks in the road and the verge. This being so, it was contended that the appellant's failure to repair the cracks in the road and the verge was the cause of the consequential damages that it suffered.

[31] The court *a quo* was correct in its view that there was no evidential basis to make any finding on the volumes of the water that would have passed either through the cracks in the road and the verge or down the gully. The experts had pointedly differed on this issue. There was no basis to prefer either of the opinions. If anything, as I have said (see para 28), the minutes of the inspection *in loco* support the appellant's view that most of the water coming down the road would have passed on the inside bend of the road rather than overtopping the kerb on its opposite side. The respondent's submission in this regard is therefore not sustainable.

[32] But the court *a quo* was not able to accept the appellant's submission that if the water had passed under the road that it was not liable for the damage that was caused to the respondent's property. This was because, in its view, the construction of the road would have changed the natural drainage and flow of water on to the respondent's property, allowing the water to 'have passed through the fill in the gully'. This, reasoned the court, rendered the appellant liable for the damage. I am, with respect, unable to agree with this finding.

[33] I made reference earlier to the fact that the municipal wall straddles a depression or gully which is filled with talus that forms a natural drainage course. The wall is founded on talus at its centre, not fill, as the court *a quo* erroneously assumed. Fill is the material which was introduced into the area between the talus slope and the road.

[34] The evidence did not establish either the depth of the gully or how high

up the ridge it extends. If it did extend up the ridge above the road as contended by the appellant's experts, water would have collected naturally in it from the catchment area above the respondent's property and infiltrated through the talus under the municipal wall. There is no evidence to suggest that the construction of the road in any way modified the natural drainage and flow of water on to the respondent's property. The finding by the court *a quo* to this effect is speculative, and is based on the erroneous assumption referred to above. Neither the appellant's, nor the respondent's experts' testimony had any bearing on this question.

[35] The court *a quo* correctly accepted that the water coming under the wall must have originated in the main from higher up the slope, ie, above the respondent's property in the catchment area. But it could not, in the absence of evidence of the volume of this water that would have flowed down the gully naturally and through the talus layer, find that the appellant bore any responsibility for the damage. This was because there was no factual basis for it to infer that the construction of the road had any bearing on the volume of the natural infiltration of the water through the gully or through the verge and the cracks in the road.

[36] Once the learned judge had found, with respect correctly, that he was unable to accept either of the theories advanced by the experts on behalf of the parties, he ought, without more, to have absolved both from liability. By venturing into territory that neither of the parties' experts had, he in effect impermissibly advanced his own theory.

[37] In the result the appeal is upheld with costs. The order of the court *a quo* is amended to read as follows:

- (a) 'In respect of the plaintiff's claim the defendant is absolved from the instance. The plaintiff is to pay the costs of the action.'
- (b) 'In respect of the defendant's counterclaim the plaintiff is absolved from the instance. The defendant is to pay the costs of the counterclaim.'

A CACHALIA
ACTING JUDGE OF APPEAL

CONCUR:

HOWIE P
SCOTT JA
BRAND JA
JAFTA JA