Dias v Petropulos and another
[2018] 4 All SA 153 (WCC)

Division:	WESTERN CAPE DIVISION, CAPE TOWN
Date:	30 July 2018
Case No:	22639/2009
Before:	LJ BOZALEK J
Sourced by:	C Webster SC and G Kay
Summarised by:	DPC Harris

. Editor's Summary . Cases Referred to . Judgment .

Personal Injury/Delict - Damage to immovable property - Claim for damages - Excavation of property causing damage to neighbouring property - Duty of lateral support - Whether the right to lateral support is owed only to land in its natural state - Court finding that the duty of lateral support in relation to contiguous pieces of land is owed to buildings as well - save where such land has been unreasonably loaded so as to place a disproportionate or unreasonable burden on the neighbouring land.

Civil Procedure - Evidence - Expert or opinion evidence - Expert evidence is admissible when it can appreciably assist the court, and the opinions of expert witnesses are admissible only where, by reason of their special knowledge and skill they are better qualified to draw inferences than the judicial officer.

Editor's Summary

In an action for payment of damages, the plaintiff alleged that the excavation of the first and second defendants' properties resulted to damage to his own property. The plaintiff's case was that the damage to his property was caused by the mobilisation in June 2008 of the scree mountain slope on which it was located. That slope mobilisation, the plaintiff's case proceeded, was caused through breaches by the defendants of the duty of lateral support they owed to his property.

The first defendant disputed that she owed the plaintiff a duty of lateral support for a number of reasons, including that plaintiff's property had previously been excavated and was no longer in its natural state and that the plaintiff had consented to the first defendant's excavation and thereby waived any right of lateral support it might otherwise have had.

Held - The issues for determination were whether a common law duty to provide lateral support to the plaintiff's property was owed by the first and second defendant's properties; whether the excavations carried out on each of the defendant's property breached that duty of lateral support; and whether the slope mobilisation relied on by the plaintiff had occurred or not.

In considering the law regarding the duty of lateral support, the Court identified the differences between the parties as concerning the question of whether the right to lateral support is owed only to land in its natural state and, secondly, if that was the case, what is meant by "natural state". Examining the two leading cases on the subject, the Court held that the principle of lateral support is a rule of neighbour law, introduced because it was regarded as just and equitable, and that it is not simply a carbon copy of the English law of lateral support. The cases referred to did not shed any light on one of the central issues in the present matter which was whether the duty of lateral support between contiguous pieces of land extends to buildings on that land or only the land in

its natural state and, if the latter, the scope of any exceptions to that rule. The Court found no authoritative or binding decision in our law that limits a land owner's right of lateral support to the land in its natural state only, as is the case in English law. There are, furthermore, cases where it was held that the right extended to support to buildings on the land. Furthermore, our law in regard to the right of lateral support is squarely located within the law of neighbours in which one of the guiding principles is that of reasonableness. The Court decided that the duty of lateral support in relation to contiguous pieces of land is owed to buildings as well - save where such land has been unreasonably loaded so as to place a disproportionate or unreasonable burden on the neighbouring land. In the circumstances of the present case, the first and second defendants were the owners of land contiguous to the plaintiff's property. In the light of the Court's finding that a duty of support was owed in those circumstance both to land and buildings, both defendants were under a common law duty to provide lateral support to the plaintiff's property.

The Court then turned to consider whether the plaintiff unreasonably loaded his property through the construction of a residential dwelling thereon. There being no basis on which to make such a finding, it could not be found that the plaintiff forfeited his right to lateral support from his neighbours by unreasonably loading his land.

Remaining issues for the Court's determination included whether the excavations breached the duty of lateral support and, if so, whether that lead to the slope mobilisation. The overall conclusion as to whether there was failure of lateral support was one which the Court had to determine, based on the evidence in front of it, including, to the limited extent relevant, the expert evidence. Expert evidence is admissible when it can appreciably assist the court, and the opinions of expert witnesses are admissible only where, by reason of their special knowledge and skill they are better qualified to draw inferences than the judicial officer. An expert witness should not usurp the function of the court.

The evidence established that the plaintiff's property clearly moved laterally and downwards towards the excavation on the first defendant's property. The Court adopted the view that there is no closed list of mechanisms through which a removal of lateral support will manifest *vis-à-vis* a neighbouring property. It also found that the plaintiff had established the requirement of causation.

It was concluded that the defendants owed the plaintiff a duty to provide lateral support to the plaintiff's property, and that such duty had been breached as a result of the excavations on the defendants' properties.

Notes

For Civil Procedure: Superior Courts see:

. *LAWSA* Replacement Volume 2017 (Vol 4, paras 1-945)

. Harms, DR (SC) *Civil Procedure in the Superior Courts* Durban LexisNexis, Service Issue 61 (February 2018)

For Delict see:

. *LAWSA* Third Edition (Vol 15, paras 1-223)

. *Law of Delict* by J Neethling and JM Potgieter (7ed) Durban LexisNexis 2015

Cases referred to in judgment

Regal Superslate (Pty) Ltd [1963] 1 All SA 203 (1963 (1) SA 102) (A) - **Referred to** 200

Rex v Vilbro and another [1957] 3 All SA 200 (1957 (3) SA 223) (A) - **Referred to** 205

Road Accident Fund v Mothupi [2000] 3 All SA 181 (2000 (4) SA 38) (SCA) - **Referred to** 224

Judgment

BOZALEK J:

[1] Commencing in October 2009, the plaintiff, in his capacity as the owner of a residential dwelling situated at [...] T.A. Camps Bay, instituted a damages action against his neighbours, the first and second defendants, for damage caused to his property. I shall also refer to the plaintiff's property

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as (the "Dias property"). The plaintiff's case was that the damage to his property was caused by the mobilisation in June 2008 of the scree mountain slope on which it was located. That slope mobilisation, the plaintiff's case proceeded, was caused through breaches by the defendants of the duty of lateral support they owed to the Dias property. The first defendant, Mrs Marina Petropulos, is the owner of one of the neighbouring properties, namely, [...] BR, Camps Bay. I shall also refer to that property, which prior to 2008 was an unimproved erf, as the "Naumann property") which is the surname of her husband. Mr Naumann is a builder and was responsible for all excavation work and building on the Naumann property which played a critical role in this matter. I shall also refer to the property which was at all material times owned by the second defendant, Mr Dawid Venter, as (the "Venter property").

[2] Thereafter at the instance of either the first or second defendant or at the instance of a third party, six third parties were joined. The first of them, Nik Moroff and Associates CC ("Moroff"), is a professional structural engineering practice which was joined in the action by the first defendant. She alleged that Moroff (or its predecessor) was appointed as the project engineer for the works on the Naumann property and that it was negligent in carrying out its mandate. Moroff pleaded to the plaintiff's particulars of claim and first defendant's third party notice and participated fully in the trial, disputing the merits of the plaintiff's claim.

[3] The plaintiff's claim was also opposed by the first and second defendants. At an early stage in the trial, however, the second defendant withdrew therefrom after having apparently reached a settlement agreement with the plaintiff. I shall return to this issue later.

The cases made by the respective parties

[4] The mobilisation of the slope, which is at the heart of this matter and which occurred around July 2008, affected five neighbouring erven on the steeply sloping mountainside of Camps Bay. These properties formed a parcel of land bound between Theresa Avenue, on the upper part of the mountainside and Barbara Road on the lower mountain side. Apart from the Dias, Naumann and Venter properties, other affected properties were the Babrow property and the Stylemark property. The Babrow property is also located on Theresa Avenue on the upper part of the mountainside. The Stylemark property borders on the Venter property on the Sea Point side which in turn borders on the Naumann property. All of these last three properties abut onto Barbara Avenue. Only the Babrow, Naumann and the Venter properties border on the Dias property. The Naumann property lies directly below the Dias property as does, but to a lesser extent, the Venter property.

[5] In the months preceding June 2008, excavations took place on both the Venter and Naumann properties. In the case of the Naumann property, these were preparatory to the building of a residential dwelling on what had previously been an undeveloped erf. In the case of the Venter property, the excavation preceded the building of a new garage.

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[6] The core of the plaintiff's case was pleaded in paragraphs 6-8 of its particulars of claim as follows:

"6. In carrying out the aforementioned excavation of the first defendant's property, the first defendant deprived the plaintiff's property of the lateral support to which the plaintiff is entitled.

7. In carrying out the aforementioned excavation on the second defendant's property, the second defendant deprived the plaintiff's property of the lateral support to which the plaintiff is entitled.

8. In consequence thereof and in or about June 2008, the scree slope on which the plaintiff's property and residence is situated and constructed, mobilised and subsided through the mechanism of -

8.1. a shallow slip circle with uplift at the toe, resulting in vertical upward bulging of the ground surface between Barbara Road and the structures facing onto it; and

8.2. lateral movement towards Barbara Road".

[7] Paragraph 9 read as follows:

"The aforesaid mobilisation of the slope and subsidence caused extensive damage to the residence and other improvements on the plaintiff's property, more particularly in that -

9.1. It resulted in the block retaining wall along the boundary of the property being undermined and caused it to

collapse;

9.2. It caused lateral movement and subsidence of the garden area up to the Western façade of the main house;

9.3. It caused the swimming pool to settle and translate laterally and to become detached from the main house, with the result that the swimming pool is unusable and requires demolition and rebuilding;

9.4. It caused damage to the main house in the form of cracking and movement of walls and tiles, cracking of floor slabs, movement of door and window openings and cracking of driveway and boundary retaining wall on Theresa Avenue;

9.5. It caused the entire ground area of plaintiff's property to subside, which subsidence is continuing with continuing structural damages aforesaid."

[8] In paragraph 10, the plaintiff avers that the mobilisation of the slope and the subsidence and the damage to his property were caused:

"10.1 jointly by the excavation on the first and second defendants' property;

10.2 alternatively, partially by the excavation on the first defendant's property and partially by the excavation on the second defendant's property".

In the further alternative it was averred that these consequences were caused by the excavation on the first defendant's property or the second defendant's property alone.

[9] The first defendant pleaded that it owed the plaintiff no duty of lateral support for one or more of the following reasons: firstly, the plaintiff's property was previously excavated, developed and built up and was no longer in its natural state; secondly, the stability of the plaintiff's property and the land on which it was situated was compromised by its development or that of neighbouring properties. In the alternative, the first defendant pleaded that in the excavation or the development of its property it did not deprive the plaintiff's property of any lateral support to which it was entitled. In the further alternative, ie in the event of it being found

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that its excavation deprived the plaintiff's property of lateral support to which it was entitled, the defendant denied that it incurred any liability by the virtue of the plaintiff's following conduct:

1. the plaintiff consented to the first defendant's excavation and thereby waived any right of lateral support it might otherwise have had;

2. the plaintiff thereby consented to the risk of harm resulting from the first defendant's excavation;

3. any damage sustained was:

3.1 not caused by the result of any breach of legal duty or wrongful conduct on the part of the first defendant;

3.2 was not foreseeable or was too remote to attract liability;

3.3 was caused due to the failure on the part of the plaintiff to properly or duly mitigate his damages.

[10] The second defendant similarly denied liability for any damages suffered by the plaintiff and pleaded that the slope mobilisation was caused exclusively by the excavation effected by the first defendant on her property.

The separation of issues

[11] The first defendant brought an application in terms of rule 33(4) for certain issues to be separated out and heard first. The terms of the separation were contested by the plaintiff. On 13 May 2016, Saldanha J made an order in the following terms:

"1. There shall be a separation of issues in terms of rule 33(4) in terms of which the following issues, namely, those arising from paragraphs [1]-[8] of the plaintiff's particulars of claim be determined *in initio*:

(a) Whether a common law duty to provide lateral support to plaintiff's property was owed by each of the first and second defendants properties;

(b) Whether excavations carried out on each of the defendant's properties in or about May or June 2008 breached this duty of lateral support;

(c) If so, whether as a result of the plaintiff's property being so deprived of such lateral support by the excavations on one or both of the defendant's properties, the scree slope on which plaintiff's property and residence were situated and constructed mobilised and subsided in or about June 2008.

The further proceedings in relation to all the remaining issues in the principal action, the first defendant's counterclaim and all the third parties proceedings are stayed and shall stand over for later determination.

2. Notwithstanding that the issues arising inter alia from paragraphs 9 of the plaintiff's particulars of claim have been ordered to stand over for later determination and shall not be determined at the initial hearing, this shall not preclude the leading of evidence at the initial hearing regarding the features of damage to plaintiff's and any other properties which is relevant to the determination of any issues in (a), (b) or (c).

3. The cost of the application stand over for determination by the trial court".

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The course of the litigation

[12] Over a period of some six and a half years the parties exchanged pleadings, including a claim in reconvention by the first defendant, brought joinder applications as well as other interlocutory applications, and sought and furnished extensive trial particulars. In the result, the pleadings alone ran to 586 pages. Further delays in the pre-trial procedure meant that the trial on the separated issues only commenced in November 2016. It, too, was plagued by delays and a postponement but ultimately ran for a total of 27 days excluding argument.

Background

[13] As mentioned, prior to 2008 four of the five affected properties had been developed by excavation and the erection of residential dwellings, the exception being the Naumann property which was in its natural state. The Dias property was purchased as a vacant erf by the plaintiff in July 1991. The Dias' appointed architects, engineers and a building contractor and their residence was built in 1993. It is a sizeable dwelling although certainly not out of keeping with neighbouring dwellings. A swimming pool is attached to the house on the seaside.

[14] A certain amount of fill from the plaintiff's excavation was used to level out the garden facing the sea, ie above the Naumann property. Following complaints from Mr Naumann in 1993 that the material from their property was falling onto his property (ie the first defendant's), the Dias' commissioned their engineer to design a retaining wall to solve this problem. A so-called Loffelstein wall was built on the boundary between the two properties and no further complaints were forthcoming from Mr Naumann.

[15] The Venter and Stylemark properties were already built prior to the Dias property being constructed. The Venter property was apparently constructed during the 1980's.

[16] In 2007/2008, Mrs Petropolus and Mr Naumann commenced with plans to build a residential dwelling on the Naumann property. Various agreements were signed with their neighbours who were apprised of the nature and scope of the intended construction. The plan involved excavating the property to produce three tiers each to be retained by a retaining wall. There would be a bottom/ground level, a middle level and a top level standing just below the Dias' Loffelstein wall. The plans for the Naumann property also involved an excavation for a lift shaft. Excavations on the Naumann property commenced in March 2008 and were completed within a month or so. Thereafter construction of the concrete retaining walls was commenced and eventually completed some months later. The building contractor was Mr Naumann, himself a master builder, using where necessary contractors. During the course of the construction of the top retaining wall the Dias' Loffelstein retaining wall largely collapsed.

[17] At around the same time as Mr Naumann was effecting his excavation and the commencement of his building operations, the second defendant ("Mr Venter") proceeded with an excavation on his property preparatory to the erection of a new garage. His excavation and newly constructed

garage were completed but during June/July 2008 subsidence and cracking problems began to present themselves on his property. By 23 July 2008, these had reached such proportions that the second defendant had to evacuate his property, never to return. In the meantime similar problems had begun to manifest on the Dias property. Furrows appeared in the garden between the Dias dwelling and the Naumann property and a pool rail pulled away from the house structure. Alarmed, Mrs Dias contacted Mr Naumann who visited the Dias property for an inspection in late July. A geo-technical engineer, Mr Van Wieringen ("Van Wieringen") was contacted and in due course was jointly appointed by Mr Naumann, the Dias' and Mr Venter. A joint meeting of all the concerned parties was held in the Dias home on 1 August 2008. Immediately thereafter Mr Naumann began to implement measures recommended by Van Wieringen to stabilise the slope of the mountainside comprising, at the least, the Dias, Naumann and Venter properties. By this stage it had become apparent that the slope was mobilising. To this end Mr Naumann had plastic sheeting placed over the garden of the Dias property to prevent the ingress of the rain water. He also had a contractor load a considerable amount of fill back onto the Naumann and Venter properties. In the ensuing weeks, a specialist contractor, Fairbrother, grouted many of the cracks which had appeared in the Dias garden and pool using a concrete mix. A specialist surveyor, Ms Valentia Papanicolaou, was appointed to monitor ground movements on the respective properties. She set up targets and commenced measurements on 2 August 2008. The slope continued to mobilise, however, but this was slowed and then largely arrested in due course by a mix of preventative and remedial measures taken by Mr Naumann. These included the installation of piles driven deep into the ground below his property and the installation of ground anchors which were driven from his property into and under the Dias property and secured to the middle retaining wall on the Naumann property. After the construction of the three retaining walls Mr Naumann ceased his building operations and in due course this litigation commenced. The Naumann property today remains essentially in the same condition as after the cessation of the building works and the completion of the measures to stabilise the properties/the slope in 2008/2009. As the months and years passed however more and more cracks and structural damage appeared in the Dias dwelling. Venter's dwelling was eventually demolished and a new dwelling built thereon at the instance of another owner. The same fate befell the Stylemark property. The Dias' continued to inhabit their property.

Chronology of events

[18] What follows is a more detailed chronology of events. It is drawn largely from Mr Naumann's account of his excavation and building operations followed by the remedial measures which he took. In many instances the accuracy of the account is disputed by the plaintiff. For the purposes of this judgment, however, and subject to the aforesaid qualification, the timeline will suffice to give a general indication of the chronology of the main events:

1.	1980's	Venter property excavated and developed.

2.	October 93 to May 94	Dias property is excavated and developed: fill/rocks placed on boundary with Naumann property.

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3.	05/07/94	Dias' Loffelstein retaining wall erected.
4.	05/05/05	Moroff and Kuhne ("M and K") appointed as the structural engineers and responsible person for the proposed works and excavations on the Naumann property.
5.	05/03/2008	Monterama commences excavations on Naumann property for the three retaining walls - this involved the removal of 3932.5m³ of earth and 58 blasting shots by Shotmaster.
6.	25/03/08	Monterama commences Venter excavations next to his garage which involved the removal of 574m³ of earth and 22 blasting shots.
7.	26/03/08	Completion of excavation by Monterama on the Naumann property save for the later excavation for the lift shaft.
8.	After 26/03/08	Naumann commences trimming excavation for top retaining wall by hand.
9.	02/04/08	Completion of Venter excavations and completion of shot blasting on Naumann property and near back boundary.
10.	08/04/08	Monterama completed removal from Naumann property of most excavated material. Rest (mainly large pile of broken rocks), moved to bottom level, removed end July after lift shaft excavation.
11.	08/05/08	Naumann digging a trench for the shear key for the top retaining wall just below the boundary with the Dias' property.
12.	22/05/08	M and K express concern about safety issues relating to the Dias' Loffelstein wall and propose shoring it up or cutting the slope.
13.	27/05/08	Naumann casts foundation for the top retaining wall, the lower retaining wall and for a brick wall on the Venter boundary.
14.	Just before 07/06/08	Mrs Dias sees "furrows in my front lawn which I thought were moles."
15.	09/06/08	The Loffelstein wall on the Dias property largely collapses against shuttering erected for the casting of the top retaining wall on the Naumann property.
16.		Naumann casts foundation for his middle retaining wall, the concrete wall on Venter boundary, and casts the first lift of the bottom retaining wall.
17.	26/06/08	Naumann casts: . 2nd lift of top of retaining wall . 1st lift of middle retaining wall.
18.	14/07/2008	M and K appointed by Venter to inspect and report on various cracks that had appeared in his property and inspects the Venter property with him.

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19.		Monterama commences the lift excavation on Naumann property which involves the removal of a further 1396.5m³ of material over the next few days.
20.	15/07/2008	Partial collapse of side of lift excavation on Naumann property followed by an exchange of emails between M and K and Naumann regarding this.
21.	17/07/08	Monterama completes lift excavation on Naumann property involving a further 1480m³ of bulk material being removed off site.
22.	22/07/08	Naumann casts second lift of bottom retaining wall which is completed.
23.	23/07/08	Mrs Dias is told by her mother that the pool rail has detached from the house and a hairline crack appears in the pool.
24.		Cape Geomatics (Ms Papanicolaou), commences a survey on the Venter property and at the request of Mr Van Wieringen monitors Naumann's retaining walls.

25.	25/07/08	Naumann casts second lift on middle retaining wall, completing it and casts first lift on concrete wall on Venter property.
26.	26/08/08	Cape Geomatics commences monitoring of Venter and Naumann properties.
27.	26/08/08	The Dias pool breaks away from the house.
28.	27 - 28/07/08	Heavy rainfall falls over Camps Bay.
29.	28/07/08	A period of major movement in the underlying ground commences and lasts up 1 August 2008.
30.	30/07/08	Naumann casts and backfills with concrete behind middle retaining wall.
31.	31/07/08	Major movement in the underlying ground takes place and City officials conduct onsite inspection and issue notice of a dangerous excavation.
32.	01/08/08	End of major movement period (from 23 July 2008). A meeting of all parties is held at the Dias house, including Mr Van Wieringen.
33.		Naumann appoints Van Wieringen for geo-technical design of any ground anchors that may be required and instructs a contractor in this regard, Fairbrother.
34.		Naumann's workmen lay plastic on Dias front lawn and boundary slope.
35.		Naumann meets Van Wieringen who suggests he may have to backfill site.
36.	03/08/08	Mr Dias falls at the side of the lift shaft excavation on the Naumann property.
37.		Van Wieringen leaves a message for Naumann to commence backfilling the toe of the slip circle on the Venter and Naumann properties.

38.	04/08/08	At Naumann's request Monterama commences backfilling of both Venter and Naumann's property involving the Venter garages and the Naumann lower excavation and middle platform with a total of 1057.5m³.
39.	17/08/08	Naumann appoints Fairbrother for installation for ground anchors.
40.	18/08/08	Fairbrother commences work.
41.	05/09/08	Van Wieringen recommends the grouting of cracks on their property to the Dias'.
42.	26/09/08	Naumann requests that grouting proceeds on the Dias property.
43.	End Nov 08	Fairbrother completes installation of 21 anchors and three drains on the Naumann property.
44.	22/01/09	Geomatics survey shows no further movement on Naumann property.
45.	Feb - Oct 09	Naumann engages Fairbrother to install 42 piles and further anchors on the Naumann property at substantial cost for further stability.
46.	Oct 2009	After installation of ground anchors and piles on Naumann property, movement of slope in direction of Naumann property has effectively stopped.
47.	27/10/09	Dias issues summons.

The issues

[19] The first issue, whether a common law duty to provide lateral support to the plaintiff's property was owed by the first and second defendant's properties, is largely a question of law. The second issue, whether the excavations carried out on each of the defendant's property breached this duty of lateral support, involves an evaluation of the factual evidence and the expert evidence whilst applying the law. The third issue, namely, assuming that there was a breach of the duty of lateral support by one or both of the defendants, did the scree slope, on which the plaintiff's property and residence was situated, mobilise and subside in or about June 2008, encompasses the question whether the slope mobilisation relied on by the plaintiff, namely a slip circle failure (with uplift at the toe), occurred or not but also the question of whether such slip circle failure is a manifestation of a lateral support failure. Answering this question, which has a large element of overlap with the second issue, similarly involves an evaluation of the factual and expert evidence and the application of the appropriate legal principles.

The evidence

[20] The plaintiff and his wife both testified. Also called on behalf of the plaintiff were two neighbours, Messrs

Wentzel and Babrow. The plaintiff called three expert witnesses, Ms Papanicolaou on the survey process and the results, Dr McStay a geo-technical scientist who offered his opinion on the central question of the causes and mechanism of the slope failure and an engineer, Mr Van Gyssen, who testified mainly regarding construction issues relating to the Dias property.

[21] On behalf of the first defendant Mr Naumann testified mainly regarding factual issues. A geo-technical engineer, Dr Day gave expert evidence on behalf of the first defendant regarding the mechanism and the causes of the slope failure and offered an opinion regarding the question of lateral support in relation to these matters (as did Dr McStay).

[22] The first third party, Moroff, aligned itself with the case presented by the first defendant. It called no factual witnesses and chose not to place the evidence of its expert, Dr Moffet, before the Court.

Summary of the evidence

[23] I propose firstly to summarise what I regard as the relevant evidence and, in some cases, to immediately evaluate the witnesses in question. In doing so I must emphasise that such evaluations have been made after a consideration of all the evidence heard and in the light of the arguments advanced by Counsel in relation to witness credibility.

The plaintiff's case

Mr Kenneth Wentzel

[24] Mr Wentzel, a resident of Theresa Avenue and direct neighbour to Mr Peter Babrow, testified that he had acquired his current property some ten years previously. Prior to that he had arrived in Camps Bay 23 years previously and in all this time had lived in various properties on Theresa Avenue which he would develop and on sell. Around 2002 he went onto the Dias property and spoke to the plaintiff regarding a possible purchase but the Dias' were not interested. Although Mr Wentzel carried out no real inspection of the property on that occasion he noticed no flaws in the house although the pool was somewhat green and dirty and only half filled with water. He had never experienced any structural or cracking problems with any of the properties that he purchased on Theresa Avenue. Nor had he ever received complaints from the persons who purchased such properties from him. In 2008, he had attended the general meeting at the Dias house where Mr Naumann and engineers were also present to discuss the slope failure. On that occasion he saw no damage to the Dias property although he did not specifically look for cracks. As mentioned, Mr Wentzel testified that his property was not affected as a result of the excavations on the Venter and Naumann properties. He did testify of being aware that after the excavations on the Naumann property his neighbour Babrow had "definite damage to the Llandudno side of his property." Mr Wentzel also testified that it was a very wet winter in 2008 with high ground water levels.

[25] Mr Wentzel's evidence was of a rather general nature and when pressed for detail in his evidence he became defensive. Nonetheless, I accept the general thrust of his evidence which was that as a long-time owner of various properties in Theresa Avenue he had never encountered any structural problems and that, in 2002 at least, the Dias property had, on casual observation, been in good condition.

Mr Peter Babrow

[26] Babrow testified that he resided at 30 Theresa Avenue alongside the Dias property, having bought the property in about 1998. He renovated what had been an old house but in very good condition. He had not been aware of any structural issues regarding his property which was in immaculate condition after his renovations. He and other neighbours signed an agreement with Mr Naumann relating to the latter's construction of a proposed dwelling. He did so because Mr Naumann was a master builder with a good reputation.

[27] That agreement, also signed by the Dias' and other neighbours, provided that they agreed to support Mr Naumann and the first defendant in an application lodged with relevant departments of the City of Cape Town and the Western Cape Provincial Administration for the removal of a restrictive title condition which affected the proposed construction. In paragraph 2.7 Mr Naumann and the first defendant undertook to ensure the 'security and integrity of neighbouring properties during the construction phase' in return for which the first defendant and plaintiff would build in accordance with certain annexed plans.

[28] Some weeks or months after the excavations on the Naumann property in 2008, Mr Babrow and his partner noticed that their garden had subsided. Thereafter he noticed that on the Llandudno side of his house ie alongside the Dias property his deck was cracking as were walls in various rooms on that side of the house. He contacted his insurer who sent out a team and appointed a geo-technical expert. That person together with Fairbrother, a specialist contractor, commenced extensive remedial work at his house. Prior to 2008, he had never experienced any such problems either with his garden or his house.

[29] Mr Babrow also testified about the state of the Dias property based on visits he had made there prior to 2008 and in looking after the Dias property whilst they were in Zimbabwe. He stated that the condition of their property was very similar to that of his, namely, pristine inside. He testified that he always takes note of such things when he goes into people's houses because he likes things "to be right", and in fact he would have asked the Dias' when they were going to repair something if he saw that it was not in order. He testified that

on occasion the Dias' swimming pool was dirty and needed a water top-up but that he never saw any cracks in it and would have raised it with them if he had. After the excavations and subsidence in 2008, Mrs Dias would call him over if a new problem arose. As a result he had gone into the Dias property quite regularly when a new crack or something similar had become evident. Mr Babrow testified that the walls in the Dias house and tiles had cracked, the pool had become severed from the house, the garden had dropped as well as the brick paving outside their respective garages.

[30] In cross-examination, Mr Babrow firmly rejected the suggestion that there had been cracks in the Dias' pool prior to 2008. When it was put to him that the Dias property had been in a fairly dilapidated state he stated that he could not testify about the outside, but the inside was "pristine". He clarified that on most occasions when he had seen the pool on the Dias property it had been sparkling clean but on other occasions, when

the Dias' were away, it had been green. He had never seen the pool completely empty.

[31] Babrow was a very good witness who answered questions forthrightly and without hesitation. His evidence was honest and concise and I have no hesitation in accepting it in full.

Mrs Liliana Dias

[32] Mrs Dias, 64 years of age at the time of the trial, testified that she and the plaintiff came to Cape Town in 1991 and purchased the vacant erf at [...] T. A. in order to build a home there. A nearby dwelling had just been completed and so they engaged the architect, engineer and builder who had built the dwelling which they admired. She was taken through a series of photographs showing the progression of the construction of their house. They showed *inter alia* a huge boulder being removed in preparation for building and the foundations for the back boundary wall ie that closest to Theresa Avenue, being prepared. The witness identified photographs showing the deep hole dug on the property to hold but one of the very substantial supporting pillars for the dwelling, also known as footpad pillars. Stones and earth ("fill") were put on the edge of the property towards the Llandudno side, towards the bottom to form a slight bank. No additional rocks or earth were brought onto the property. After complaints from Mr Naumann about rocks falling onto his vacant erf these were removed and her engineer, a Mr Gadomski, was commissioned to design a Loffelstein wall in front of the stone bank. Mr Gadomski produced a design and the Loffelstein retaining wall was duly built. It stood from 1993 until 2008 without any problems. The Dias' moved into the house towards the end of 1995. The dwelling comprised various rooms on the ground/basement floor, a middle floor comprising, amongst others, four bedrooms as well as a patio and swimming pool. The top level was a triple garage entering into a kitchen and scullery. The dwelling was their dream home and they built it using the best possible materials.

[33] The witness was taken through a series of photographs showing the house in its newly finished form and through the ensuing years. She testified that they experienced no problems in the house from 1994 until 2008. The only flaw she could recall was one tile on the steps to the dining room which had cracked. The house had been in extremely good condition with no mould and the garden had likewise also been in good condition.

[34] Regarding the pool, Mrs Dias testified that since she and her husband were away in Zimbabwe for several months at a time the pool would have to be regularly cleaned and refilled upon their return. In regard to the agreement which she and other neighbours concluded with Mr Naumann she testified that in giving their consent to his proposed construction plans, she had relied on the fact that he was a master builder and would know what he was doing.

[35] Much of Mrs Dias' evidence concerned her perception or experience of what took place on the Naumann property during the phases when excavation took place thereon and the three retaining walls were built. In this regard her evidence was of a general nature, superficial and often too subjective to be of any great value. She testified that she saw many trucks

removing soil and rocks, that she was aware of blasts which were quite severe and following which she felt the shock or vibrations. She also testified as to various large rocks which were removed from the Naumann property but her evidence in this regard was somewhat vague and difficult to follow.

[36] Of greater relevance was her evidence that in the first half of May 2008, her late mother had told her that there was a dip in the garden but that she had been remiss and paid no attention to this. She also testified that just before her son's wedding on 7 July 2008 she had seen furrows in her lawn which she thought were caused by moles. These matters had not caused her concern because at that time she had "no idea what her ground was showing her." She also testified about noticing a dip in her garden nearby a feature rock. However it was on or about 23 July 2008 that clear indications of trouble appeared. On her return from work her mother advised that the pool rail had popped out of the wall and their dog had disappeared. She had a quick look and saw a hairline crack on the wall between the house and the pool. When she went down to Barbara Road to search for her dog and found Mr Venter standing outside his property with furniture being loaded into a truck as he vacated his house. He was beside himself and showed her large cracks in the garage floor on his property. Mrs Dias then realised that what had been happening on her property was related to the excavations and work being conducted on the two properties below hers ie the Venter and Naumann properties, and that for two weeks no one had told her anything about it. The following morning she telephoned Mr Naumann to raise the matter and he advised that he would come up the following day with his engineer to conduct an inspection, which apparently he did do in her absence. On 25 July 2008, a day

or so later, the pool on her property actually began to break away from the house.

[37] Regarding repairs to her house Mrs Dias testified that just before her son's wedding (7 July 2008) she had asked her husband to tidy up a piece of masonry that had fallen off above a structural beam. As far as further repairs were concerned she testified that after she had appointed Mr Van Wieringen he had advised her not to undertake any repairs, to put stickers on all the cracks as they appeared and to record notes as to when they did. She had followed his advice ever since. Mrs Dias confirmed that her pool had never been repaired prior to the excavation and that thereafter the cracks in the pool were grouted by Mr Naumann's contractor, Fairbrother.

[38] Much evidence and cross-examination was heard regarding a crack in the Dias' swimming pool based on what initially was the first defendant's case viz that it had pre-dated the Naumann excavation. In his first report the first defendant's expert, Dr Day expressed the view that a grouted crack in the pool pre-dated the excavations but he later abandoned this portion of his evidence. Photographs of the pool, post excavation, and an inspection in loco revealed extensive damage to the pool in the form of cracking and severance from the house.

[39] Mrs Dias was also shown photographs showing large cracks which had formed in her garden and which were later grouted by Naumann's contractor, Fairbrother, with a mixture of cement and water. She also

testified that the ground in front of the feature rock had dropped considerably as a result of the subsidence of the Dias property.

[40] Mrs Dias testified further that the paving in front of their garage on Theresa Avenue had no cracks or indentation prior to the excavation but that this had manifested thereafter. She testified of extensive damage to her dwelling following the excavations in the form of cracked tiles, cracks in the concrete slabs from corner to corner, doorframes shifting, numerous cracks in the wall, windows being twisted out of place and bathroom units pulling away from the walls. At the inspection *in loco* numerous cracks in most of the rooms were pointed out, marked by pieces of masking tape which, the witness testified, had been put up by her and on which she had recorded the dates when the cracks had appeared.

[41] Under cross-examination it was put to the witness that the Loffelstein retaining wall on her property had not been properly constructed and had no foundation. Her response was to disagree and to point out that the wall had stood for 15 years without any problems and had been built according to an engineer's plan. Mrs Dias advised that the engineer, Mr Gadomski, could not testify in this regard since he was now an elderly man and no longer capable of giving evidence. She added that following its collapse hundreds of the Loffelstein bricks forming the wall had disappeared and must have been taken away at Mr Naumann's instance. It appears to be common cause that when the Dias' Loffelstein wall collapsed into Mr Naumann's excavation, he never informed them of this nor complained that it was not properly built. He used the Loffelstein bricks as fill and proceeded with the building of his upper retaining wall. It was also put to Mrs Dias that a storm water pipe which had admittedly pulled away from the house as a result of the subsidence and had been repaired by Mr Naumann indicating that there had been previous subsidence and repair. The witness disagreed with this proposition.

[42] During cross-examination on behalf of the first third party, it was put to Mrs Dias that the wall and embankment raised the front of her property above the natural ground level. The witness disagreed stating that this was just on one corner on the Llandudno side. She further testified that following the excavation on the Dias property in 1993 prior to construction at the boundary with Theresa Avenue, a lot of rocks and earth were taken off site rather than being moved to the garden of the property ie on the seaside.

[43] When Mrs Dias testified about matters within her direct knowledge her evidence was clear and credible. However, under cross-examination she repeatedly jousted with the cross-examiner and attempted to argue her case rather than simply give direct answers. What became clear was that prior to the subsidence and its consequences manifesting on her property she had paid little attention to what was taking place on the Naumann and Venter properties. Another hallmark of her testimony was a distinct tendency to magnify events relating to the excavation on the Naumann property and subsequent developments or to put a slant on them in favour of her view, no doubt sincerely and strongly-held, that it was this excavation which had caused all the problems which she and her husband had endured ever since 2008.

Mr Artur Dias (the "plaintiff")

[44] Mr Dias was 77 years old when he testified. He is a qualified toolmaker who was born and brought up in Portugal. He learnt English only in his late twenties or early thirties. Mr Dias spoke in heavily accented and less than fluent English and stated that he communicated with his wife in a number of languages. Mr Dias testified that he visited his Camps Bay property regularly while the dwelling was being built. He was there when the foundations were dug, as were the architect and engineer. Huge rocks were excavated and taken to the road to be removed in order to ensure no damage to neighbours' properties. When his house was completed in 1992/1993 he was very proud of it and it was in very good condition - "more or less 100%, yes". His walls were not damaged at all and everything worked in the house including the doors and windows. His pool never had any leaks. From time to time there was not much water in the pool because he would try to clean it upon returning to Camps Bay after long periods of time in Zimbabwe. The wind in Camps Bay would deposit a lot of dust and leaves into the pool and normal cleaning did not work. He testified that his garden had been in excellent condition and the irrigation and sewerage systems had worked. Mr Dias could not

remember when the excavation on the Naumann property started but he remembered seeing large machines excavating and many, many trucks taking the fill away. On one occasion he had sat on top of his Loffelstein retaining wall and observed Naumann's employees excavating huge rocks, some of them very close to his property. He had said to Mr Naumann on that occasion that the latter was digging under his ground and would damage his property but Mr Naumann told him that he must not worry because he knew what he was doing. Regarding the Loffelstein wall he testified that 80% of it had collapsed as a result of the excavations on the Naumann property but that 20% remained to this day. Hundreds of the Loffelstein blocks disappeared and he never saw them again. Mr Dias also testified about the crack in the dining room which was repaired after the excavations had commenced around the time of his son's wedding and which his wife had referred to in her testimony. He testified that after his son's wedding when he came back home there was another crack in the corner of the dining room.

[45] Mr Dias testified further about the damage suffered to his house after the 2008 excavations. These included cracks all over the house, the garden sinking and cracks appearing therein, the sewerage and irrigation systems breaking, the pool moving away from the house and cracking to an ever greater extent. He and his wife had called Mr Van Wieringen to take a look at the crack between the pool and the house and he had advised that they should cut the reinforced steel joining the pool to the house to take the pressure off the house. Mr Dias did this. He had attended the joint meeting at his house at the beginning of August when Mr Naumann and various engineers were present. No one had mentioned his skylight being broken or water leaks at his entrance, allegations which were made years later by Dr Day. At that time there had been no cracks in his lounge and only the two cracks in the dining room. He testified that his lounge presently had 100 cracks and his dining room 52 cracks, some of them from the ceiling to the tiles. Some were horizontal and some vertical. On the

entrance wall alone there were seven cracks. Mr Van Wieringen came back to his house when the pool showed more cracks and he showed him the cracks in his house. He saw another two cracks in his TV room downstairs and cracks near some small windows. His wife started putting tape on these cracks and he in fact had to purchase a high step ladder to put tape on cracks high up on the walls. Mr Van Wieringen also advised him to have the cracks in his garden grouted and at the same time to have the cracks in the pool so treated. Mr Dias testified that the contractor appointed by Mr Naumann, who did the grouting, was Fairbrother and that its foreman told him to supervise the workers doing the work. They were given rods about 3m long which they would put into the cracks in the garden to open them up so that more slurry, the water and cement mixture, could be pumped into the cracks. At some stage the foreman showed him the book in which he kept records of the process and indicated that 565 bags of cement had been pumped into cracks in his ground. This figure was not disputed.

[46] Mr Dias testified about the paving in front of his garage adjacent to Theresa Avenue. There had been no problem there before 2008. After the excavations he noticed a slight depression there but not as much as is now depicted in photographs. Later, when the rains came it became deeper and deeper with a similar process occurring on his neighbour, Mr Babrow's, driveway.

[47] Mr Dias testified that after 2008 his skylight started cracking with water leaking through the ceilings at the entrance to his house. He had tried to fix the ceilings and had used buckets to catch the water. The worst problem was that when it rained the water runs from Theresa Avenue to the bottom of his house, going through the ceiling and into the maid's room and into the kitchen. Two weeks before testifying half a square meter of the ceiling in the kitchen fell down. The witness produced a sample of that fragment which is Exhibit 1. As far as repairs were concerned he had tried to repair only one crack in the maid's room and tiles on the veranda which had caused leaks into his daughter's bedroom.

[48] Mr Dias also confirmed that he had been taking photographs on the public servitude ground alongside the lift shaft excavation on the Naumann property when the earth under his feet had collapsed and he fell. He had suffered concussion and had to be removed for medical treatment.

[49] Much of Mr Dias' evidence was largely uncontroverted. He stood firm against repeated suggestions that there had been pre-existing damage to the Dias property in the form of at least one major crack in his pool. Ultimately he was fully vindicated in this evidence when Dr Day abandoned his argument that at least one of the cracks in the pool must have existed prior to the events of June 2008. The main thrust of Mr Dias' evidence was that his dwelling had been in excellent condition prior to June 2008, so much so that he took great pride in it and that all the damage which it had sustained followed the excavations on the properties below him. He came across as a straightforward and entirely credible witness. On several occasions during his evidence he invited any experts appointed by the first defendant and the first third party to examine his house in greater detail to see whether there was any evidence of pre-existing damage to his property. During Mrs Dias' evidence when it appeared that her husband might

not testify for one or more reasons, including his weak English, much criticism and scepticism that his evidence would support hers was expressed on behalf of the first defendant and the first third party. This evaporated when Mr Dias testified regarding pre-existing conditions on the Dias property. I have no hesitation in accepting his evidence in full which also confirmed his wife's evidence on this score.

Dr John McStay

[50] Dr McStay was called as the plaintiff's principal expert witness. He described himself as an engineering and environmental geologist with 23 years of consulting experience. Much of this was in geo-technical site

investigations and ground engineering for buildings, major infrastructure, roads, ports and harbours. He holds a BSc in Geological Sciences from a UK university and a Doctorate of Philosophy from UCT. He has an impressive professional CV. Dr McStay has been in practice since 1992 but emphasised that he was not a consultant engineer. He is presently a director of WSP Environmental, a large international engineering consultancy firm of which he is a director and in charge of the geo sciences unit.

[51] In his first written opinion, Dr McStay's overall opinion was that the slope failure was an inevitable result of the excavations undertaken on the Naumann and Venter properties "given the extent of the soil removal" and that it was not triggered by pre-existing or additional loads from the structures on the Dias property. He wrote that the Dias property is situated on the seaward facing hill slope of Table Mountain on the second highest terrace of Camps Bay. The ground conditions consist of a considerable thickness of boulder talus, a transported soil deposit consisting of erosional debris from the mountain side. The talus soil contains coarse grain pebbles and massive boulder-sized rocks of sandstone in a silty and clayey matrix. The thickest talus deposits tend to form in gully features and represent localised historic landslide deposits and can be re-mobilised if disturbed. Natural soil slopes tend to be stable at a slope angle of between 45 degrees and 60 degrees. Slope failures can be triggered by heavy rains, loss of stabilising vegetation cover (fire damage) and by removal of lateral support. He opined further that construction on the mountain slopes of Camps Bay requires a cautious approach by experienced professionals. Dr McStay reviewed the remedial measures taken subsequent to the excavations, notably, the installation of ground anchors and expressed the view that the installations of such anchors below the foundations of an existing building is a relatively extreme solution only undertaken when the ground instability would be regarded as so severe that structural failure of the building is considered to be a likely outcome. In his view this was the only practical remedial option available to stabilise the slope. In his further opinion the magnitude of lateral and vertical instability observed on the Dias property resulted in the geo-technical engineer utilised by all the relevant parties at the time, Mr Van Wieringen, applying a series of "last resort remedial engineering measures in order to reduce instability and safeguard the property." In his further opinion Dr McStay expressed the view that the slope failure and ground movements represented a predictable consequence of "unsupported excavations works and removal of

lateral support." He expressed the further view that poor ground conditions, worsened by winter ground water flows, were destabilised by the excavation works resulting in the removal of lateral support to the Dias property and consequential subsidence and slope failure. He also was of the opinion that the ground movements and structural damage experienced on the Dias property were the result of a progressive series of slope failures forming what are termed "*en echelon slip planes*" ie a complex series of roughly circular failure planes developed in a large mass of overstressed soil. To the suggestion that the Dias property was no longer in its natural state, he expressed the view that in the built environment it is inherent that the natural ground has been modified to enable development.

[52] Regarding the suggestion that the stability of the Dias property was compromised by the development thereon and/or the development on neighbouring properties, Dr McStay observed that no such instability had been observed until 2008. In response to the suggestion that the defendants owed no duty of lateral support to the owner of developed land, Dr McStay pointed out that the large scale excavations had resulted in the subsequent slope failures and ground movement and these were entirely predictable. He pointed out further that the South African Lateral Support in Surface Excavation Code of Practice (South African Institution of Civil Engineers Geo-technical Division, 1989) (the "Lateral Support Code") states that lateral support must be given to properties surrounding an excavation. Regarding the proposition that the plaintiff had loaded its property by the placement of fills at the front thereof, Dr McStay opined that the Dias property was stable at the time of excavation and the terraforce block wall thereon (the "Loffelstein wall") and the configuration of the Dias property constituted "perfectly reasonable measures typical of many residential properties in Camps Bay, placing no significant risk on the properties downslope."

[53] Dr McStay issued a revised opinion after the trial had commenced on the basis that he had only had access to limited documentation when he filed his original expert summary. He repeated his initial conclusion that the movement of the Dias property was occasioned as a result of the removal of lateral support on the Naumann property when the excavations thereon were undertaken. He expressed the view that Mr Naumann had been under an obligation to consult an appropriately qualified geo-technical expert in order to investigate the extent to which his excavation might impact on the lateral support provided to his neighbours and the Dias property in particular. In his view the advice which he would have received would almost certainly have been to reduce the scale of the excavations and/or to provide ground anchors and/or piles to ensure not only continued lateral support to the Dias property but indeed the structural integrity of the Naumann property and the structures to be constructed thereon. He expressed the view that no instability to the Dias property subsequent to the construction of the Dias residence was occasioned by the pre-existing excavations on the Venter property until after the lateral support provided by the ground on the Naumann property was removed by the excavation thereon. Somewhat contentiously, Dr McStay revised his initial opinion that the most recent excavation on the Venter property had played a role in the subsidence. On reconsideration he expressed the

view that it a played a minimal, if any, role in the ground subsidence. In effect, as I understood his evidence, he was expressing the view that both historic and more recent excavations on the Venter property had played no role in the destabilisation of the Dias property.

[54] He again expressed the view that the Dias property mobilised as a progressive series of slope failures. These

failure planes had created the cracks which were subsequently filled with grout until they were largely arrested by the foundations of the Dias house. He regarded the final uppermost tension crack as that along the entrance paving between Theresa Avenue and the Dias house although he found it not possible to state whether that crack was cause by a further failure plane or by the tilting of the Dias house consequent upon its settlement. In his supplementary report Dr McStay observed that all told some 5413m³ of earth had been removed from the Naumann property in the excavation. This was the equivalent of approximately 9743 tons of earth which he regarded as a very significant quantity from a comparatively small property on the slopes of Camps Bay.

[55] Dr McStay again observed that the Dias property had stood unaffected for at least 16 years prior to 2008 and that there was no evidence that any of the other properties or their initial excavations caused any damage to the property prior to 2008 and that it was only after the major excavations on the Naumann property that the mobilisation of the Dias property commenced.

[56] Dr McStay testified that given the nature of the historic landslide deposits on the Camps Bay mountainside, their variability and thickness, the slope is prone to erosion and failure. This means that a cautious approach should always be followed for excavation and construction on that mountainside. Most failures that geo-technical practitioners have to deal with are related to excavation, being the removal of lateral support. In Dr McStay's professional career the excavation on the Naumann property constituted a very large excavation for a private property.

[57] Dealing with the effect of the excavation on the Venter property, Dr McStay relied on the discrepancy of the volume removed (compared to the Naumann property) and also with the inability to establish a timeframe suggesting that the Venter property excavations had played a role in the general subsidence. His opinion was, however, itself qualified ie that "if it was anything it was a minor contributory factor to the eventual collapse." As regards the Loffelstein wall, he testified that it was, to his understanding, built to prevent loose material falling onto the Naumann property ie erosional protection and that the additional load it created, as well as the fill, was "relatively minor." He explained that one of the differences between his opinion and that of Dr Day's related to the mechanism of the surface failure and in particular whether it was a main circular slip or whether it was a series of smaller slip planes immediately behind the face of the excavation, namely, a progressive failure as opposed to a deep seated slip circle. He made the further point that the existence of a deeper slip circle had not been demonstrated independently and by geological investigation. Both conclusions were in effect inferences which had been drawn. Commenting further on the two contrasting explanations, Dr McStay testified that in his view they both resulted from the removal of lateral support because the mechanism in each case was the

same. Dr McStay's opinion was that the cause of damage was the extensive excavations and their location (on the Naumann property) which amounted to "the removal of lateral support in the form of the earth and that was the main triggering mechanism for the slope instability. Whether that is a series of small progressive failures behind that excavated site plus the triggering of other deeper failure, appears to be largely irrelevant in terms of the actual (indistinct) mechanism itself. That mechanism was obviously impacted by winter rains, but that was entirely foreseeable. It appears that the timing of the failure was related to the failure to actually secure those retaining walls in time before winter seepage actually got behind the upper most retaining wall."

[58] Dr McStay also testified that the heavy rain that occurred at the end of July/beginning of August 2008 would have been in the order of something that one would have expected every two years or every five years "probably something in the order of a one in 5 year event." He added, however, that it would certainly be "within the design consideration for any structures on the hillside to maintain adequate drainage during construction and then after construction to deal with that degree of rainfall. So you could certainly not put this into a category of act-of-God, storm events."

[59] In regard to Dr Day's opinion and, for that matter, the revised opinion of Mr Van Gyssen, that, in engineering terms, the retaining walls constructed on the Naumann property had served their function, Dr McStay made the point that in the context of the present matter the function of the retaining wall or walls was to retain the earth behind it and by inference the property behind that as well but that, "in this instance, although the concrete of the wall is still intact, it did not perform its primary function of retention. It did not provide sufficient lateral support to stop lateral and vertical movement of the soil and damage to the Dias property, therefore it was not fit for purpose;" further in this regard, the retaining walls on the Naumann property had been in a state of failure because otherwise they would not have needed the remedial measures which were put in place, namely, the anchoring and buttressing.

[60] Regarding the ground fissures and the grouting which the ground subsidence necessitated, he testified that the fissures were so wide that the contractor could simply mix cement with water and pour them into open cracks on the ground. This he testified was "fairly unusual and particularly when you look at the volume of cement used." The cement mixture, he testified acted as "a glue binding onto the soil and increasing the friction between soil particles. It is what we would call soil improvement. But at the same time it is adding considerable amount of mass to an already unstable slope condition." He added that the cracks "would appear to be relatively deep, 5 meters or so." Dr McStay testified that the Dias house itself did not appear to have undergone extreme lateral movement but rather relatively small scale vertical settlement leading to the conclusion that the original foundation of the house was largely below the active slip circle causing the lateral movement. He agreed, as Dr Day had observed, that the building is now generally tilted northwards towards the original excavation on the Venter property and it was behaving as a rigid mass and

certainly showed no signs of having "broken its back" by having structural failure through its columns or slabs. Regarding the crack in paving between the garages of the Dias property and Theresa Avenue, Dr McStay testified he regarded it as the "final expression of this disturbed ground behind the failure surface." He noted that this movement was extensive, running across two properties and involving damage to a wall and therefore must have a broader cause which he regarded as settlement related to a vertical downward movement rather than just uplift. Dr McStay also testified that the fact that excavations on the Naumann property stood for some time before they affected the Dias property was not surprising.

[61] By the completion of his cross-examination, Dr McStay remained of the opinion that the deep seated movement under, *inter alia*, the Dias and Naumann properties was a slope failure triggered by the removal of lateral support. His further opinion was that the timeframe for the slope failure coincided with the commencement and the bulk of the completion of the excavation. This occurred over a period and was not a single definitive event in time. As he put it "it must have actually commenced before measurements were taken, otherwise the measurements would have never taken place, the slope was already in failure . . . the slope does not fail immediately in that fashion on deep-seated circle of this nature. It fails over time."

Challenges to Dr McStay's evidence

[62] Dr McStay was cross-examined at length and his evidence was heavily criticised by Counsel on behalf of the first defendant and the first third party. Mr Dickerson, for the first defendant, submitted that the only material conflict of opinion between Dr McStay and Dr Day was the former's contention that the slip circle slope failure was caused by the removal of lateral support in contrast to Dr Day who contended that it was not. But he argued that Dr McStay's qualifications and expertise in relation to the subject of his professional opinion were sorely lacking; further that he was neither independent not objective, had tailored his evidence to suit the plaintiff's case and had ventured an opinion on legal matters in respect of which he had no qualifications.

[63] His argument regarding the inadequacy of Dr McStay's qualification was based on the contention that although he purported to testify as a consulting engineering and environmental geologist he was precluded from doing so because he was not registered as a natural scientist under the Natural Scientific Professions Act 27 of 2003 and that in performing such work, Dr McStay was in fact committing a criminal offence under the provisions of the Act. It would appear that Dr McStay's professional qualifications do not meet the requirements for registration of the South African Council for Natural Scientific Professions. The second basis for the first defendant's attack on Dr McStay's qualifications was that he was not an engineer and therefore not qualified to express some of his opinions.

[64] In *P v P*,1 it was held that it is the function of the judge to decide whether the witness has sufficient qualifications to be able to give assistance. I

would add that I do not see it as the function of the Court to determine whether a particular expert witness has complied with all the professional and legal requirements for him or her to practise in their chosen field and, for want of such compliance, to automatically treat such person's evidence as inadmissible. That, as I see it, is primarily the function of the relevant regulatory or disciplinary body, if necessary acting pursuant to a complaint. In any event I would expect that if a party takes the position that a witness purporting to give an expert opinion is not qualified to do so then that point should be raised as an objection and argued at the earliest opportunity rather than allowing such a witness' evidence to proceed and raising that point *en passant* in cross-examination without asking for a ruling.

[65] Having regard to Dr McStay's CV, the academic qualifications which he holds and his professional experience, I am of the view that he is indeed qualified to express an expert opinion in this matter.

[66] The second tranche of criticism against Dr McStay was based on what was said to be the superficial nature of his investigations and evaluations prior to reaching his conclusions and opinions. In this regard reliance was placed on his alleged wholesale acceptance of an account obtained from Mr and Mrs Dias and his allegedly contrived attempt to distance himself from the large slip circle failure as the mechanism of the slope failure. I certainly do not understand Dr McStay's evidence or opinion to represent a wholesale retreat from or rejection of the slip circle failure explanation of the ground mobilisation. In my view, furthermore, it is not necessary for the purposes of this matter to determine whether, as Dr McStay would have it, the mechanism was a series of *en echelon* smaller slip circle failures or, as Dr Day would have it, there was one large slip circle failure. These two mechanisms do not exclude each other but appear to overlap and constitute variations of essentially the same mechanism. Nothing material turns on the difference between these two (inferred) mechanisms of slope mobilisation. Another major ground of criticism of Dr McStay's evidence was what was described as his *volte face* regarding the role of the Venter excavations. Here it was argued that whereas Dr McStay had initially opined that the Venter excavation together with the Naumann excavation had triggered the slope mobilisation, in his supplementary report filed on 3 March 2017 he expressed the view that the Venter excavation had not caused or contributed to the problem; further that this opinion was only expressed after the plaintiff had reached a settlement with Venter involving payment by the latter of an undisclosed amount of money. I shall deal with this criticism when I deal with the issue of lateral support.

Ms Valentia Papanicolaou

[67] Ms Valentia Papanicolaou is a professional land surveyor who qualified with a BSc in surveying in 1988 and has practised in that field ever since. She is a member of Cape Geomatics CC and specialises in precise engineering surveying as well as cadastral surveying. In the former field, measurements are much more precise, down to millimetres, and its main application is in the engineering field. She has been monitoring excavation phases for imminent movement since 2001. Generally, her *modus operandi* is to arrive on a site

once the excavation has reached a certain level,

to then put up initial targets and further targets progressively as the excavation deepens. Thereafter, once a week she will go to the site to take measurements. These measurements of target movement give notice of imminent failure of natural support ie the failure of the supporting structures to keep the excavation in its place. Large variations in this context would be 10mm which would be something for her to be concerned about. She has extensive experience of excavations in Camps Bay, Clifton, Bantry Bay, Sea Point and Green Point, virtually every large excavation. The reason for the considerable monitoring done in these areas is because basement areas are excavated for parking space; secondly, many excavations are supported laterally by piles, foundations and granite as opposed to an open excavation and thirdly, because of the pronounced slope in those areas.

[68] Her first involvement in the present case was when Mr Van Wieringen requested her to start monitoring on the Venter property and on the top retaining wall on the Naumann property. She began monitoring on 26 July 2008 and a few days later was asked to go onto the Dias property and commence monitoring and measurements there. Later she initiated measurements on the Babrow property and the Stylemark property. Ms Papanicolaou presented a compendious document setting out all her recordings and measurements. The X co-ordinate in the tables represents the movement in the Llandudno to Sea Point direction or vice-versa, the Y co-ordinate reflects movement from the mountain to the sea or vice-versa and the Z co-ordinate reflects the vertical lift or fall. Ms Papanicolaou referred to minutes of a joint experts meeting held on 22 February 2016 in which the following was recorded and agreed to by her:

> "3. It is agreed that the zone of major slope movement recorded by the survey between the end of July 2008 to the beginning of September 2008 included the Naumann property, the front garden and pool on the Dias property stopping short of the house, and most of the Venter property stopping short of the Venter/Stylemark boundary. The direction of the movement in this zone is predominantly towards the sea;
>
> 4. There has been a significant reduction in the rate of movement subsequent to end November 2008 when the majority of the anchors through the Naumann retaining walls were installed. The upper retaining wall has (sic) subsequently moved up slope by a few millimetres;
>
> 5. It is agreed that there may have been unrecorded movement prior to commencement of monitoring on 26 or 28 July 2008;
>
> 6. It is agreed that the Dias house has moved significantly less than in the zone referred to in (3) above and the direction of movement is mainly towards Sea Point with a lesser seaward component. Babrow's house has also moved significantly less than in the zone referred to above both towards the sea and towards Sea Point ie diagonal to Barbara Road".

[69] Ms Papanicolaou testified that all of the monitoring points sank by different amounts except one point which rose indicating that the Dias house was not sinking uniformly. She referred to various movements monitored and measured, one of 206.7mm over a few days which was such a great distance that at the time she had wondered whether she was doing her job properly. She was asked if she saw such a degree of movement often and her reply was that she had never come across this before. This was target

MO3. At a later stage the witness did measurements relating to the Venter property for a new owner who required such data before he demolished and re-excavated. She confirmed that the old Venter structure had been completely demolished and new one built with piled walls and lateral support and in respect of which she had performed monitoring services. She added that soil anchors were installed and retaining walls anchored for the new dwelling on the Venter property.

[70] The witness was strenuously cross-examined and criticised at the instance of the first defendant. Lines of attack were that she was not impartial and that she had not disclosed certain levelling data. I do not regard it as necessary to deal in any depth with these criticisms save to state that I was satisfied that Ms Papanicolaou gave evidence impartially and that she at no stage sought to hide any of her data from any party. Another line of attack upon the witness was that she would not make concessions which favoured Dr Day's opinion or theories. The witness repeatedly replied that she was primarily a data capturer and not an interpreter of the movements she captured and recorded. She conceded that the data she captured represented the movement of a large piece of land in the shape of an arc albeit very roughly so. She testified repeatedly that she was unable to give explanations on matters which she had not measured or monitored. Ms Papanicolaou was the first expert and major witness called by the plaintiff. My impression was that the first defendant and first third party inappropriately strained to make their case through this witness when in truth her role was that of a data capturer, albeit a sophisticated and highly qualified one.

[71] I formed a favourable impression of the witness who made every effort to confine her evidence to the data which she had captured and to her discipline of land surveying. I did not gain the impression that she was partial to the plaintiff's case or anyone else's for that matter but rather that she did not wish to stray beyond her field of expertise. The attack on her concerning her failure to disclose certain levelling data was in my view not substantiated nor was the criticism that she would offer opinions when they were favourable to the plaintiff but not otherwise.

Mr Johannes Van Gyssen

[72] Mr Van Gyssen is an engineer with a BSc in civil engineering who first registered as a professional engineer in 1976 and practised thereafter in Cape Town. His expertise lies solely in the field of building structures, mainly

domestic, commercial and industrial buildings. He testified that the summaries relating to the opinions of Drs McStay and Day were of a geo-technical nature and fell outside his field of expertise. He testified that he had had regard to the architectural drawings by the architect who had designed house Dias and had satisfied himself that the building had generally been constructed in accordance with those plans; furthermore that the drawings by the structural engineer relating to the dwelling had indicated the various structural aspects of the dwelling which appeared to have been duly executed in construction. He noted that the building was constructed as close to Theresa Avenue as possible, that the building structure was fully framed and consisted of a reinforced concrete frame with brick infill panels. It featured various retaining walls below the house, all of which

are integral with the building structure and that the building structure was fairly rigid, this being due to the various components such as retaining walls, floor slabs, beams, etc.

[73] Upon his inspection in early 2017, he noticed numerous defects in the building including roof leaks, loose ceilings, numerous internal plaster cracks and water or damp penetration through walls, deformed windows and sliding doors, numerous cracked floor tiles, cracks at brick and concrete intersections and a severely cracked pool structure. He expressed the view that at that stage there were too many unknowns to conclude that the dwelling was capable of repair. He observed also that the ground between the edge of Theresa Avenue and the Dias house had an obvious crack.

[74] Regarding criticisms raised by Dr Day in regard to the lack of movement or expansion joints in the dwelling he stated that the decision whether to install these in a building rests entirely with the appointed structural engineer and that such joints are not mandatory. He opined further that fully framed buildings such as the Dias house do not normally have such joints and there is no necessity to have joints for a building of that size and type of structure. In his opinion, the building had complied with the National Building regulations although with the defects it had suffered since 2008 the building was no longer compliant in many respects.

[75] Mr Van Gyssen expressed the further opinion that the excavations below the Dias property, ie not on its property, caused considerable ground movement on the Dias property, well in excess of that recommended. The ground surrounding the house had clearly been disturbed and the movement of the house indicated that its foundations had also been disturbed. The movements which the structure had suffered were not of a regular nature such as vertical settlement only. It had tilted and settled irregularly and it had twisted. He expressed the further view that the building was still in the process of stabilising itself due to the disturbance of the ground and that this in turn would lead to further movement. He opined further that reinforced concrete has some degree of flexibility, being reinforced with steel. It will thus tolerate some degree of movement and will bend or deflect without any real appearance of being distressed, up to a point. However this is not the case for rigid and brittle materials such as the plastered brickwork, floor tiling, skim plaster board ceilings, glazing roofing and roof lights. The original support of the aforementioned rigid and brittle materials in house Dias has been disturbed by the movement of the supporting concrete structure, which movement had been irregular.

[76] Commenting on Mr Naumann's report and criticism that the structure lacked soft joints, Mr Van Gyssen opined that if any defects had existed because there were no soft joints these would have appeared long before 2008. Cracks to the plaster would have become apparent within a few years of construction and would presumably have been dealt with. He expressed the further opinion that there was no evidence of poor building practice and he observed that the original builder, Douglas Benson Construction, was a master builder with considerable experience and that construction of the Dias residence had been monitored both by the appointed architect and engineer. He expressed the further opinion that it was far more probable that the excavations and subsequent movement of the

structure caused the damage to the Dias house rather than the defects relied upon as contained in Mr Naumann's report.

[77] Mr Van Gyssen expressed the view that the allegations in the first defendant's experts' reports that the dwelling on the Dias property was poorly designed and constructed was no more than unjustified speculation. Mr Van Gyssen also prepared a supplementary report in which he addressed certain issues raised in an expert supplementary summary of the first defendant's expert engineering witness, Mr Moffet. Since Mr Moffet did not testify, it is not necessary at this stage to deal with the contents of Mr Van Gyssen's report save in relation to the retaining walls on the Naumann property.

[78] Mr Van Gyssen testified that he had conducted numerous inspections of cracked or cracking houses. In regard to the swimming pool, he disagreed with the suggestion that attaching the pool to the house was a significant design fault or that the pool had caused the house to collapse. In his opinion Mr Van Wieringen's alleged advice to saw off some of the steel ties between the pool and the house was an act borne of panic. As regards the ground disturbance between the Dias' garage and Theresa Avenue, he disagreed that it was caused by a lack of compaction stating that the only conclusion he could reach was that it must have been the result of the settlement of the ground due to the 2008 event. He conceded that he had been unaware that the top retaining wall on the Naumann property had no anchors. When it was put to him that the anchors were used to stabilise the slope and not the walls, the witness had no comment.

The first defendant's case

[79] On behalf of the first defendant, Mr Naumann first testified and was then followed by Dr Day, the geo-

technical engineer proffering his expert opinion.

Mr Michael Naumann

[80] Mr Naumann testified both as a factual witness on behalf of the first defendant but also as an expert witness. In his rule 36(9)(b) summary he was described as a qualified quantity surveyor with 38 years' experience in the construction industry. The summary of his expert opinion indicated that he would testify that soft joints are required for the walls of domestic structures such as the plaintiff's dwelling since, if not, there will inevitably be cracking within a few years as a result of movements in the materials caused by natural fluctuations in temperature with the passage of time and seasons. He was also to testify that no soft joints were observed in the Dias house and if present at all must have been plastered over. His further opinion was that most of the cracking observed in the plaintiff's house was not structural but typical of cracks which appear as a result of the omission of soft joints. His opinion was further that movement or expansion joints are also required in floors and tiling to allow for movement caused by fluctuations in temperature and change in environmental conditions and the omission of such expansion joints will inevitably result in cracking within a few years. His further opinion was that there were no expansion joints in the flooring and balconies of the plaintiff's dwelling

and the cracking in the interior floors and tiling of the plaintiff's house was caused by that omission. He was further to testify that the majority of cracks in the plaintiff's house marked by masking tape have no structural significance and are typical of those caused by "incorrect building practices being followed." Finally, he was to testify that there was evidence of similar cracks which had been repaired and painted, presumably before 2008.

[81] When called, Mr Naumann testified that although he studied quantity surveying for three years he did not graduate and his CV was therefore inaccurate in that respect. In 1983 he had started Naumann Construction and since then he had built about 60 houses in Cape Town and factories in industrial areas. Many of the houses were in the Camps Bay/Clifton area. Since 1987 he has been a member of the Master Builders Association. He built, and handed up, a helpful scale model of the excavation on the Venter and Naumann properties, also showing the higher surrounding properties which is exhibit 2. He is married to Mrs Petropolus (out of community of property), the first defendant and owner of the Naumann property. In 2003 he and his wife began to think of building a house on the property and to this end first he commissioned a topographical plan from a land surveyor. In 2005, he met with Messrs Moroff and Kuhne, the consulting engineers and predecessor to the first third party, and engaged them on the project. He also appointed an architect to design the house but not to oversee its construction. He and his wife had always planned that they would build a house on the erf. Building the house designed required certain title deed relaxations and to this end he had meetings with the Camps Bay Ratepayers Association and neighbours and reached an agreement. These neighbours included Mrs Dias. On an occasion in 2006 he had met with Nik Moroff, gone to the site of the Naumann property and also walked up to the Dias property. He testified that the Dias' pool was empty caked with dirt on the floor and in his view at that stage the house needed a coat of paint. Moroff and Kuhne were duly appointed as the registered person in terms of the National Building Regulations and gave the necessary undertakings relating to the plans for the Naumann dwelling. The plans were eventually approved by the City Council. The project began on 8 March 2008 with a contractor named Monterama commencing the excavation. It began at the bottom on the Barbara Road level and thereafter moving from the top level down. The excavation on the top level was completed by 26 March 2008. The extent of the excavations was calculated with reference to the contour plans and are depicted on exhibits S1 and S2. The latter shows that the top excavation involved the removal of 606m^3, the middle level 347m^3 and the bottom level 1699m^3. This was the equivalent of 3950 bulk meters. Exhibit S1 also shows the lift shaft excavation on the middle level which was conducted later in July and which formed the second phase of the excavation and which entailed the removal of a further 1480m^3 of earth thereby making a total of some 4232m^3 of soil removed in the excavation on the Naumann property.

[82] After the first phase of the excavation the bulk excavation was trimmed by hand and a trench foundation for the top concrete retaining wall was cut. This trimming by hand took place in April, May and June 2008.

Mr Naumann testified that there were rocks all over the site, many of which had to be cracked using blasting shots. His evidence regarding the depth of the excavation adjacent to the Dias property was not clear but it would appear to have been 5.3 meters on the Sea Point side and approximately 3.8 meters on the Llandudno side. Mr Naumann explained that the trench for the foundation of the back retaining wall was dug some 600mm in from the boundary of the Dias property in order to avoid having to remove a very large boulder underlying the boundary with the Dias property. Mr Naumann testified regarding the manner in which he dug the foundation and constructed the retaining wall following his receipt on 29 April 2008 of an instruction and drawings from the engineer in this regard. He also testified that he had requested Moroff to design all retaining walls in such a manner so that there would be no buttressing of the proposed structure against any of the walls. These walls were also built in accordance with a bending schedule from Moroff.

[83] When Mr Naumann was cross-examined generally about whether these walls were built in conformance with the plans, instructions and bending schedules, his responses were unsatisfactory in several instances. It became clear that in various respects the walls were not built in accordance with the plans and bending schedules. The primary reason for this appears to be that Mr Naumann did not consider himself bound by these documents or the instructions or directions of Moroff but would make whatever adjustments he

considered appropriate in the circumstances without obtaining fresh plans and/or building approval. Evidence confidently given by him in chief on the dimensions of the wall proved, in cross-examination, to be inaccurate. It also became apparent that Mr Naumann was very dependent on the paper trail in the form of invoices when he reconstructed the program of excavation and construction and the dimensions of the building works.

[84] Having regard to the chronology of events it would appear that foundations for the top and lower retaining wall were cast towards late May with the foundation for the middle retaining wall, the concrete wall on the Venter boundary and the first lift of the bottom retaining wall around 10 June 2008 with further lifts of these walls being completed over the remainder of the month and the bottom retaining wall being completed around 20 July. None of these dates can however be fixed with certainty. Mr Naumann testified that the initial plan was for the retaining walls to be freestanding since he did not want to be tied to have to commence buildings connected to the walls. In this way he could pause the project at any time without having to build the house structures and could focus on his commercial building projects.

[85] What is clear is that as at the date of the major movement after the commencement of measurements, 26-30 July 2008, none of the three retaining walls nor the concrete wall on the Venter boundary had been fully completed. The witness testified regarding subsidence of an excavation face during the excavation for the lift shaft around mid-July 2008 but which he minimised. He also testified that earlier on arrival on the site on 9 June 2008 it was found that the Loffelstein retaining wall on the Dias property had collapsed. Mr Naumann then had the Loffelstein bricks broken up and used them as backfill behind the wall after it was cast. He did

not inform the Dias' that their block wall had collapsed or, by definition, advise them that it was defective for a lack of a foundation. Nor did he seek permission from them to use a large part of their collapsed wall as backfill.

[86] Mr Naumann testified that he first learned of ground movement on the Venter property in mid-July when told thereof by a representative of Nick Moroff and he went to do an inspection. After receiving Mrs Dias' telephone call around 23 July 2008 to inform him about the damage to the pool on her property he went to inspect it the following day and saw the crack which had occurred when the rail pulled out. Mr Naumann made no mention in his evidence of observing any other damage to the Dias property in general that day or to the pool in particular. There was intense rainfall from 27-28 July. He testified further that he had attended the general meeting at the Dias house on 1 August 2008 but again gave no evidence as to any damage which he had seen in the entrance, lounge or dining room in line with the first defendant's case that even before the subsidence the Dias dwelling had been cracked and defective. He explained that on that occasion he had not been conducting an inspection of the house as such. He later gave evidence concerning the foundations of the house on the Dias property but it soon emerged that he had not personally witnessed any such investigation and his evidence was inadmissible.

[87] Mr Naumann testified regarding the remedial work which he undertook following Mr Van Wieringen's advice in early August. The grouting on the Dias property was completed in September 2008, ground anchors were installed at Mr Naumann's expense and this was completed in November 2008. Piles were installed on the middle platform on his property and a 400mm thick concrete raft slab was cast over the piles. In addition a concrete wedge slab was cast between the middle and the top retaining walls which had the effect of buttressing the foundation of the back/top retaining wall.

[88] Under cross-examination Mr Naumann conceded that the ground on the Dias property behind the upper retaining wall had moved laterally towards Barbara Road and down the slope and that the ground behind the upper retaining wall moved in the same direction as the upper retaining wall. He conceded too that the upper retaining wall had been built in order to replace the soil which had been removed in the excavation. The backfill which had been urgently brought back onto the Naumann property on the instructions of Mr Van Wieringen was to replace the soil which had been initially excavated. The purpose of the soil anchors which were installed was to prevent the slope from moving laterally any further. The soil anchors went through and were anchored by the middle retaining wall and once installed the rear retaining wall stopped moving. The lift shaft excavation was 13m in length, 5.5m in width and 9.5m deep. It was excavated up to about 6m from the Dias property and done without any bracing or support. It involved blasting at least one large boulder and many others which needed to be broken and removed. The shaft was excavated during heavy rains and there was one partial collapse.

[89] Mr Naumann testified that he acted in essence as an owner/builder in relation to the Naumann property and that it was not the only site on

which he was working at the time. The rest of the sites on which he was working at the time were for paying customers. That is why the retaining walls on the Naumann property were designed in such a way that they could be built and then left ie the Naumann residence building project did not have to be a continuous one.

[90] Mr Naumann appeared to have had little if any communication with the Dias' during the excavation and building process. He did not inform them when their Loffelstein wall collapsed nor earlier when he removed a boulder which was partly underneath that wall. Mr Naumann testified that the wall collapsed on a Sunday evening after rain. When it transpired that there was no rain on that particular day, Mr Naumann testified that it was an accumulation of rain which had caused the collapse. He had not informed the Dias' that their wall allegedly did not have a foundation because he "didn't think it was a problem." He was aware of "problems on the Venter property' but did not inform the Dias" of this. Mr Naumann was also cross examined regarding an exchange of emails between himself and a Mr Gouvias representing Moroff and Kuhne in May 2008

regarding serious concerns raised by Mr Gouvias in regard to what he saw as the dangerous situation presented by the exposed and undermined Loffelstein wall (then still standing) on the Dias property.

[91] On 22 May 2008, ie some two weeks before the Loffelstein wall collapsed, Mr Gouvias emailed Mr Naumann as follows:

> "We are extremely concerned wrt . . . the back wall excavation. We feel that the loose material as well as the terraforce wall which has been undermine (*sic*) poses a clear and immanent (*sic*) danger to those who are asked to work below, or in the immediate vicinity of the excavation. All work on site is to cease till such time as this earthbank has been made safe. We offer two options to achieve said safety below".

There followed a suggestion that either the earth wall be shored using stays or alternatively that the contractor ("Mr Naumann") cut the slope to a safe grade "after obtaining permission from the neighbour".

[92] Mr Naumann's email response the following day said no more than the following on this topic: "(t)he contents of your email are noted. We have been concerned about building this wall before you even designed this structure!!!" Mr Naumann testified that he ignored the concerns raised by Mr Gouvias because the actual designer, Mr Kuhne, was not involved in the warning and secondly, because Mr Gouvias was a "junior associate of that firm. He was neither design engineer nor was he was the responsible person."

[93] Mrs Dias was also taken to other email correspondence between Mr Naumann and Mr Gouvias and in particular, an email from Mr Naumann to Mr Gouvias on 14 July 2008 in response to the latter apparently this time having raised concerns about the lift shaft excavation. Mr Naumann's reply read:

> "Please write a letter and tell me that you do not take any responsibility for the site, that you have warned me of all the dangers involved and that it is all my responsibility. In that way you are covered and no responsibility can devolve on you or your firm.
>
> I am fully aware of the problems of this site. I have been aware of them since before the design stage. I cannot help it if there are such enormous boulders in

> the site that the sides collapse. The design if (*sic*) for concrete retaining walls - not ground anchors. I cannot build the retaining walls before the excavations are done. I cannot shore it before it is excavated. I cannot build before it is excavated".

[94] This in turn elicited the following response from Mr Gouvias:

> "There is a clause in the ECSA regulations which requires us to take 'due care'. This includes dangers on site at any stage of the project's construction. That is all I am trying to exercise. I feel that the excavation could have been approached differently, then again I haven't had to dig a hole this big before. It may be that you in full control of what is going on, but I think it would be best for you to speak to a specialist geotechnical engineer such as Mike Van Wieringen to limit your exposure".

[95] As Mr Naumann's cross-examination proceeded it emerged that the retaining walls had not been built in accordance with the approved plans or even the engineer's instructions. Mr Naumann explained that he had negotiated a fixed price with the engineers for the design of the house, its foundations and retaining walls and, in order to cut down on expenses, had agreed with them that they would not have to do new drawings for the changes which inevitably would be required. Mr Naumann gave this explanation for why he did not build in accordance with the engineer's drawings. However, in due course it emerged that the rear retaining wall was also not built in accordance with the approved building plans nor with the bending schedules.

[96] Mr Naumann also testified that at a stage in the process prior to the excavations, he had been prepared to build something not on the approved plan and that he had intended to submit plans with a portion of that which would have been built not being reflected since otherwise the Council would not have approved the plans. In the result, for other reasons, he ultimately did not do this. What became clear from this evidence was that as the owner/builder and as someone with considerable experience in the construction industry, Mr Naumann constructed retaining walls that were neither in accordance with the engineer's drawings, specifications or building schedules and, where it suited him, he ignored the advice and clear warnings of his engineers. Very little of Mr Naumann's evidence, as opposed to the summary of his expert opinion, was devoted to the alleged defects in the design and construction of the Dias dwelling.

[97] First defendant's Counsel argued that Mr Naumann was a forthright, honest and reliable witness the content of whose evidence and who demeanour could not be faulted. I cannot fully agree with this evaluation which overlooks the witness' shortcomings. The details of how the built project deviated from plans only came to the fore under persistent cross-examination and much of what was promised ahead of Mr Naumann's evidence, such as all the defects in the Dias dwelling, did not materialize. His recollection of events around 2008 was not very clear and based largely on the paper trail of invoices relating to sub-contractors. It appears that Mr Naumann was reluctant to defer to anyone when it came to his building project and believed that he knew best what to do. His attitude towards his own consulting engineers and towards the Dias' was high-handed if not arrogant. Mr Naumann is clearly "a man of action" and does not easily brook opposition to his chosen path even if this requires

bending the rules in order to obtain the result he wants. To his considerable credit, however, when the potentially catastrophic dimensions of the subsidence became clear he acted immediately in implementing the remedial measures which prevented the situation becoming much worse.

Dr Peter Day

[98] Dr Day, the first defendant's expert witness, is a civil engineer with 38 years' experience specialising in geo-technical engineering who is employed as a consultant and is also an adjunct professor of geo-technical engineering at the University of Stellenbosch. He is a locally and internationally recognised specialist geo-technical engineer with a particular speciality in the field of lateral support. Dr Day is the author of many published articles of a specialist nature, also in the field of excavation and lateral support, the recipient of various professional awards and has served in several positions of responsibility within his profession. Dr Day's curriculum vitae is particularly impressive and his reports were comprehensive and meticulously prepared. He is also a co-author of the Lateral Support Code, recognised as a normative bench mark in South Africa.

[99] In the initial summary of his opinion, which he confirmed in his evidence, Dr Day expressed the view that the damaged portions of the Dias property were caused by the movement of the unstable hill slope which in turn was the result of the cumulative effect of the natural geo-technical features of the area, the development and loading of the plaintiff's property and other properties on the slope as well as a number of excavations into the slope dating back to the early 1980's. Dr Day stated that the movement of the slope at the end of July 2008 was triggered by the excavation at the toe of the slope on the Naumann and Venter properties combined with surcharging of the top of the slope on the Dias and Babrow properties.

[100] He expressed the view that the instability of the slope was not a consequence of the removal of lateral support on the Dias property but a result of general instability of the hill slope. His opinion was further that any failure or ground movement arising solely from the removal of lateral support would have had only a localised effect. He reasoned that since no failure of the ground was observed in the area immediately behind the retaining walls this confirmed that the cause of the observed ground movement was the result of general instability of the slope rather than the removal of lateral support. He added that prior to the commencement of the excavation on the Naumann property, the plaintiff and surrounding property owners contributed to the instability of the slope over several decades by the construction of structures thereon which altered the natural state of the land. He stated that from a geo-technical perspective there were a multiplicity of causes of the mobilisation and subsidence of the scree slope and that the evaluation and extent of the degree of the other contributing factors involves "complex, factual and geo-technical considerations." He observed that since the installation of ground anchors and piles on the Naumann property, movement of the slope in the direction of the Naumann property had effectively ceased.

[101] In his October 2015 report entitled "Reasons for opinion on slope instability", a comprehensive 43 page document with annexures comprising maps, diagrams and photographs, Dr Day incorporated a section which sought to deal with a critical issue in this matter under the heading "Slope Failure or removal of lateral support?" Here he crisply restated his opinion as follows:

> ". the ground movement was not caused by the removal of lateral support. It was the result of a reduction of load at the lower end of the slope leading to a failure of the slope in which the excavation was formed rather than a failure of the excavation itself. Furthermore it was not simply the reduction in load occasioned by the excavation on the Naumann property that caused the movement it was the cumulative effect of numerous excavations along the eastern side of Barbara Road dating back to the 1980s."

[102] By way of further explanation he stated as follows:

> "On a natural slope in undisturbed ground, the weight of the soil at the top of the slope is a disturbing force i.e. one which promotes downward and outward movement on an underlying potential failure surface. The disturbing force is resisted by the weight of the soil at the toe of the slope and by the shearing resistance of the soil along the failure plane. For a slope to remain stable, the nett effect of the resisting forces must be greater than the nett effect of the disturbing forces . . . The formation of an excavation at the toe of the slope has two effects. Firstly, it reduces the weight of the soil at the toe. Secondly, in the case of soil that derives part of its strength from friction, it reduces the shearing resistance of the soil over the part of the failure plane below the excavated area. If the stability of the slope prior to excavation was already marginal, the formation of the excavation could cause failure of the slope. Note that it is not the excavation itself that fails, but the slope in which the excavation has been formed. It is thus a slope failure, not removal of lateral support.
>
> At the time of the slope mobilisation at the end of July 2008, the excavation on the Naumann property was substantially complete. Most of the retaining walls had been completed and were fully or partially backfilled. These retaining walls were constructed in accordance with the design prepared by the Engineer. Neither the excavations themselves nor the retaining walls failed. The lateral support afforded to the neighbour's property was therefore not compromised. What took place was an overall failure of the slope that encompassed the excavation, the retaining walls and the front garden of the neighbour's property. Even after the slope mobilised the retaining walls continued to support the ground behind them including the portion of the neighbour's land that fell inside the failure zone."

[103] A supplementary expert summary was filed on behalf of Dr Day in November 2016, the purpose of which was for him to explain the difference between the mechanisms of failure arising from the removal of lateral support and mechanisms of failure arising from slope instability which in his view are "materially different". It reads in part:

> "Removal of lateral support
>
> Removal of lateral support is associated with the formation of an excavation with vertical or near vertical sides, thereby locally reducing the lateral (horizontal) stresses in the ground behind the excavation face. Where necessary, the lateral support so removed is substituted by a retaining structure. Retaining structures typically include concrete retaining walls, soil nails or ground anchors. If these structures do not adequately compensate for lateral support

removed by the excavation, the retained soil behind the excavation face may undergo lateral and vertical movement and slump into the excavation".

[104] Dr Day then refers to a diagram depicting what he describes as a removal of lateral support and then sets out the "principal characteristics of removal of lateral support" which he describes as follows:

"4.1 a potential failure surface develops immediately behind the excavation face . . .

4.2 if the retaining structure lacks sufficient stiffness to resist movements of the ground, settlement and movement of the retained ground is localised . . .

4.3 if the retaining structure fails or moves excessively, the ground between the wall and the potential failure surface may slump into the excavation.

4.4 little or no movement of the ground occurs below excavation level.

4.5 the failure mechanism can be prevented and ground movements reduced by installing retaining walls, soil nails or ground anchors or other forms of lateral support to restore (partially or completely) the lateral stresses that existed in the ground prior to excavation.

4.6 the primary cause of both ground movement and failure is a reduction in the lateral (ie horizontal) pressure exerted on the face of the excavation (my underlining).

Slope Instability

5. Slope instability is associated with loss of equilibrium of sloping ground . . . movement occurs along a single or multiple failure surfaces which may be curved (typically concave upwards) or planar. The area of slope instability is not localised and confined to an area of excavation (as in the case of lateral support). Slope instability is also not necessarily confined to a particular erf or erven: it is a geo-technical phenomenon which will pervade a general area".

[105] Dr Day then refers to an attached diagram reflecting, in his opinion, the principal characteristics caused by slope instability, which are:

"6.1 bodily (*en masse*) movement occurs on the ground above the failure surface;

6.2 the movement may be rotational or translational in nature, or a combination of the two;

6.3 the position and shape of the failure surface depends on a number of factors including the nature of the ground . . ., the geometry of the slope . . . the position of the water table;

6.4 with a rotational failure, a scarp may develop at the top of the failing mass and bulging may occur at the toe;

6.5 the strength or stability of any retaining structure contained within the failing mass is of no consequence to the overall stability of the slope, as any force exerted by such retaining structure are internal forces within the failing mass. Thus even if stressed anchors were installed to completely restore the lateral stresses in ground an excavation face, these would not improve the stability of an unstable slope unless the anchors extended beyond the failure surface into the stable ground below;

6.6 the primary cause of the instability is a lack of equilibrium between the forces acting on a failure plane and the forces exerted by the ground above the failure plane including any load supported on such ground. This lack of equilibrium can be due to many influences including

changes in soil properties (eg due to rainfall), a rise in the water table, changes in slope geometry, seismicity and external loading".

[106] In his evidence Dr Day confirmed the contents of his main and supplementary reports. He testified that when an excavation was formed the removal of the soil from the excavation removes both the weight of the soil from the base of the excavation but also the lateral pressure which that soil exerts or exerted on the surrounding soil. However, he voiced the opinion that lateral support is that which you have to do to preserve the stability of that face in the light of having removed that lateral pressure. He illustrated what he saw as the difference between the failure of lateral support and slope instability by way of a physical model which is depicted in the photographs at exhibits V1-V4. When block 1, representing the excavation, was removed it could either provoke a localised failure of a perpendicular excavated face (represented by a wedge marked 2 which, as is depicted in Exhibit V3, has moved both laterally and downwards) or a slip circle failure with the excavated face itself not failing locally as depicted in exhibit V2 and V4.

[107] It would appear that Dr Day's distinction between a failure of lateral support and a slope instability failure is one which he personally draws since he referred to no authoritative definition upon which he relied. Dr Day was not able to refer the Court to any definition in this regard. In answer to a question from the Court, Dr Day stated that the Code of Lateral Support contained no definition of that concept, although "that was the first place he looked (record page 2968)". In answer to a further hypothetical question from the Court as to what would be the cause of failure where a slip circle failure occurs solely as a result of the depth of an excavation but where there is no failure of an excavation face, Dr Day stated that in his view the proximate cause of such a failure would be slope instability rather than the removal of lateral support. He clarified his response when he testified that in his opinion no matter how deep an excavation is which precipitates a slope failure or slope instability, unless there is a failure of an excavation face (whether through a slip circle or otherwise) that is not a failure of lateral support. In this regard he stated further that:

"The qualifying thing is that the failure of lateral support gives rise to movements local to the wall whereas slope instability is something which encompasses something far greater. It is not within the control of the person who is excavating and providing support to his faces".

[108] He described slope instability as "virtually a force *majeure*" situation.

[109] On another occasion Dr Day was asked whose definition was it that the failure of lateral support must manifest in a failure on the same level as the retaining wall and, further, whether that was an engineering definition or a legal definition. Dr Day's answer was oblique, namely that he did not know whose definition it was but that "we do from monitoring of new excavations know the extent of movements which is occasioned by the insufficient lateral support having been applied" (record page 2775).

[110] Pressed further, Dr Day qualified his earlier view by stating that he did not see the slip circle as "an act of God, it is accumulation of a series of factors and to hold one person, who happened to be the last person who performed that excavation, solely responsible for the stability of the entire

slope does not make any sense to me whatsoever". He added: "It cannot be denied that the excavations which took place were part of the cause of this failure. A critical question is whether or not this was a slope failure of an already compromised slope or a removal of lateral support. That is the issue." Earlier he had stated that although the slope had "previously moved" and was "compromised" he did not know whether it was brought to "the point of failure."

[111] A little further on in response to the Court's observations that the slip circle had an element of lateral movement in it, Dr Day responded: "(t)here is no doubt there is a lateral movement, that is entirely correct, but was the cause of that lateral movement removal of lateral support or the removal of weight from the toe of the excavation. That is the issue. And in my mind the excavation faces from which lateral support was removed by removal of the ground did not fail and the retaining walls had been constructed. The primary cause or the proximate cause of the slope movement was the removal of weight from the toe. I think that that summarises the entire argument in one sentence". He added that there was "definitely removal of lateral support by the formation of the excavations. That is inevitable. The question is whether or not it was that removal of lateral support which caused the failure or whether it was the removal of weight of material from the toe of the slope."

The law regarding the duty of lateral support

[112] Only limited common ground could be found between the parties regarding the scope of our law of lateral support. The points of difference extended to the proper interpretation of leading cases on the subject and included the questions of whether the South African law of lateral support is the same as the English law and the effect of the judgment in *Anglo Operations* 2 on previous judgments of our courts.

[113] The main content of these differences concerned the question of whether the right to lateral support is owed only to land in its natural state and, secondly, if this be the case, what is meant by "natural state."

[114] I shall firstly set out the positions adopted by the parties. The plaintiff contended that the duty of lateral support is not limited to land in its natural state, this being a limitation based on the erroneous assumption that our law is the same as English law. In the event, however, that the duty is owed only to land in its natural state, a claim for damages in respect of buildings will still lie where such artificial structures impose no additional burden on the neighbouring land. In that event the onus of proof in lies on the party alleging that the land was no longer in its natural state.

[115] In a supplementary note the plaintiff advanced a new argument, based on *Regal v African Superslate (Pty) Ltd*3 where it was held that although certain principles may coincide, the English law of nuisance is not our law. The plaintiff argued that the principles applicable in determining the scope of the duty of support in our law are reasonableness, that liability flows from

the control of land which ownership brings and that it is a landowner's duty to prevent damage to his neighbour. Applying these principles to the present matter, it was submitted, the first defendant had, through her unreasonable excavations, removed the lateral support her property owed to the plaintiff's property and was thus strictly liable for the damages suffered by the plaintiff.

[116] The first defendant's Counsel described the duty of lateral support in our law as a case by case rule of neighbour law transplanted from English law and strongly influenced by English law principles. The duty of lateral support is owed only to contiguous land and extends no further than to maintain such land as if it were in its natural state. As a consequence of these limitations the duty cannot be construed as imposing a duty to stabilise a slope on which a number of properties are situated. The first defendant submitted further that the authorities are clear that the right to lateral support relates only to undeveloped land. The first defendant did concede that liability for damage to artificial structures on land could follow when the injured party discharged the onus of establishing that the subsidence would have occurred even if such structures had not been present on the land. The first defendant submitted further that the new argument advanced by the plaintiff based on *Regal* was without substance, particularly insofar as it countenanced that the duty of support was not limited to land in its natural state and that certain principles said to be extracted from *Regal* (such as reasonableness) applied to actions based on the right to lateral support.

[117] The first third party laid emphasis on the right to lateral support being based on strict liability which, it contended, required the remedy to be limited to instances where direct causation was proved and where there was an actual or literal loss of support. It contended further that the duty of lateral support clearly lay in respect of undeveloped land but seemed to suggest that where the land is developed the existence of the duty would depend on an evaluation of the "practical realities" pertaining, presumably, to the properties in question and what gave rise to the alleged breach.

[118] In view of the uncertainty regarding the present state of our law on this subject I propose to firstly consider the two leading cases and thereafter the views of academic writers.

[119] *London and SA Exploration Company v Rouliot*[4] concerned the right of an owner of land to lateral support to adjacent land but within the context of mining operations. It was held by the Court, comprising De Villiers CJ, Smith J and Buchanan J, that the right of an owner to lateral support from adjacent land was recognised by the law of the Cape Colony. De Villiers CJ remarked that it was an extraordinary circumstance that there should be a dearth of authority in the "Dutch law-books" upon the question of lateral support probably, he surmised, because the question had never been of practical importance "seeing that there are no mines in Holland and a necessity for deep excavations must seldom have arisen."[5] The learned Chief Justice held that in "the absence of direct authority, this

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Court may well be guided by well-established principles of the Roman law and of modern systems of law, provided that they do not lead us to conclusions inconsistent with the Dutch law".[6]

[120] *Anglo Operations Ltd v Sandhurst Estates (Pty) Ltd*[7] was a mining case concerning the competing rights of the holder of mineral rights and the rights of the surface owner and, in particular, whether the mineral rights holder was entitled to divert a stream to facilitate open cast mining activities.

[121] The Court held that the principle of lateral support established in *Rouliot*'s case was important only as a principle of neighbour law and that it applied to lateral support between neighbouring land owners only.[8] It held further that the relationship between a land owner and the holder of mineral rights in respect of the same property is regulated by the principles of servitudes and not by the principle of lateral support.

[122] There appears to be general agreement that there is a degree of confusion and lack of clarity on the origin of the right of lateral support in our law which originates from uncertainty and dissent about historical origins of the principles. To a certain extent this lack of clarity was resolved by the Supreme Court of Appeal in *Anglo Operations* when it decided that it was not important to decide whether the law regarding lateral support originated in Roman, Roman Dutch or English law because a right of lateral support had been adopted in early case law as part of South African law.

[123] In *Anglo Operations*, Brand JA on behalf of the Court said the following of the decision in *Rouliot*:

> "The gravamen of the decision in this case was that a rule, similar in content to the English rule of lateral support, which provides landowners, as an intrinsic element of their ownership, with the right of adjacent support of their land, should be incorporated into our law".[9]

[124] The Court also had to deal with the case of *Coronation Collieries v Malan*,[10] in which the central question was whether an underground miner owed the landowner a duty of vertical or subjacent support of the surface. In this regard Brand JA stated:

> "Unlike the Court *a quo* I do not believe that the question regarding the continued recognition of the principle of lateral support is one that we have to concern ourselves with in this case. It is clear that the principle was adopted in Rouliot as a rule of neighbour law. The real question in this case is whether that principle of neighbour law should have been extended, as was done in the Coronation Collieries case, to govern the relationship between mineral rights holders and the owners of the same land".[11]

[125] Referring again to the decision in *Rouliot*, Brand JA stated:

> "Equally erroneous, in my view, is the statement that De Villiers CJ decided to incorporate the English doctrine of lateral and subjacent support, with all its

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> ramifications, into our law. On the contrary, I agree with the statement by the court *a quo* (at 366B) that what had happened in Rouliot was that:
>
> > 'De Villiers CJ and Smith J simply introduced, as Judge-made law, a rule which they regarded as common to all civilised systems of law because, as they perceived it, a lacuna existed. The Judges did not concern themselves with the exact pedigree of the rule. . . . The rule was introduced because it was regarded as just and equitable'".[12]

[126] The importance of *Rouliot* and *Anglo Operations* together, would appear to lie, firstly, in the recognition that the principle of lateral support is a rule of neighbour law, introduced because it was regarded as just and equitable, and secondly, that it is not simply a carbon copy of the English law of lateral support.

[127] Widely diverging claims were made by the parties in the present matter regarding the effects of the decision in *Anglo Operations* on the principle of lateral support in non-mining cases. On behalf of the plaintiff, it was contended that the decision in *Anglo Operations* has put paid to the mistaken notion that our law of lateral support is the same as English law and that the right of lateral support applies only to land in its natural state, most notably expressed in *East London Municipality v South African Railways and Harbours*.[13]

[128] By contrast the first defendant's Counsel contended that the implications of the finding in *Anglo Operations* that "the principle of lateral support formed no part of Roman Dutch Law" are that all prior decisions in which our courts sought to determine the contents of the rule of lateral support with reference to Roman Dutch law were mistaken and now represent bad law and, secondly, that all the cases following on *Rouliot* which determined the content of the lateral support rule with reference to English law were correct in doing so.

[129] In my view neither of these propositions is entirely correct. In the first place *Anglo Operations* did not reject the gravamen of the decision in *Rouliot* which was that "a rule, similar in content to the English rule of lateral

support, which provides land owners . with a right of adjacent support of their land, should be incorporated into our law" (my underlining). Thus the influence of the English law of lateral support was explicitly recognised. However, *Anglo Operations* held that it was erroneous to suppose that "De Villiers CJ decided to incorporate the English doctrine of lateral and subjacent support, with all its ramifications, into our law." Furthermore, the Court in *Anglo Operations* approved the *dictum* by the lower court that *Rouliot* simply introduced, as judge-made law, a rule which they regarded as common to all civilised systems of law because, as they perceived it, a lacuna existed and that the judges in *Rouliot* did not concern themselves with the exact pedigree of the rule, the rule being introduced because it was regarded as just and equitable. In my view in *Anglo Operations*, the Supreme Court of Appeal did not purport to state that our law of lateral support as between neighbours was exactly the same as that as the English law nor did it claim that the provisions of English law are

inapplicable. There was no need for the Court to do so since that question was not before it, the issue which it decided being the question of subjacent support as between mineral rights holders and land owners in relation to the same piece of land.

[130] Thus the decision in *Anglo Operations* does not directly shed any further light on one of the central issues in the present matter which is whether the duty of lateral support between contiguous pieces of land extends to buildings on that land or only the land in its natural state and, if the latter, the scope of any exceptions to this rule.

[131] As Professor Milton has pointed out, although the right of lateral support to land was accepted without any question by the courts after *Rouliot's* case, there has been considerable disagreement as to whether that right extends to land with buildings on it.14

[132] In *Johannesburg Board of Executors and Trust Company Ltd v Victoria Building Company Ltd*,15 Morice J held that the right of support in our law was owed both to land and to buildings and Chief Justice Kotze concurred in this stating "it is fair and just that such should be the law."16

[133] The principle established in the *Victoria* case was approved of by the Cape Courts in *Phillips*,17 where De Villiers AJ held that "the Roman Dutch law recognises a right of lateral support for land and buildings as between adjoining tenements." Similarly in Natal the principle was upheld in *Grieves v Anderson*, *Grieves v Sherwood*.18

[134] However, in 1951 in *East London Municipality v South African Railways and Harbours*,19 Reynolds J unequivocally rejected the principle established in the *Victoria* case and held that the right of lateral support extends only to land in its natural state and not to constructions such as buildings upon it. The Court concluded that:

> "As regards artificial constructions on land our law is the same as the law of England . . .
>
> By the Law of England it is clear that this right of support of land to land is only given and limited to such amount of support as is required by the supported land in its natural state".20

[135] The approach adopted in *East London Municipality* was unquestioningly followed by the Natal Courts in *Demont v Akals' Investments (Pty) Ltd and another*.21 There it was held that:

> "An owner of land is normally entitled to expect and to require from land contiguous to his own such lateral support as would suffice to maintain his land in a condition of stability if it were in its natural state. A landowner can,

> of course, alter the condition of his land, for example by excavating or building on it, but he cannot normally, by the mere fact of doing that, acquire greater or different rights to lateral support."22

Similarly in *Gordon v Durban City Council*,23 the view taken by Reynolds J in *East London Municipality* was endorsed.

[136] These decisions were criticised by plaintiff's Counsel who pointed out that in *Demont's* case, Selke J's formulation of our law relating to the duty of lateral support was made without reference to any authority and appears to have been drawn from an uncritical acceptance of Reynolds J's judgment in *East London Municipality*. In *Gordon's* case, the statement of our law in the *East London Municipality* case was followed without the Court considering whether it was correct or not. Even in the latter case, Counsel contended, the Court found for the plaintiff notwithstanding that there was a building on its land, concluding that "the weight of the plaintiff's building made no appreciable difference."

[137] Nonetheless, the statement by Professor Van der Walt, that "(d)espite the early disputes about its origin, it was therefore generally accepted by 1980 that the right of lateral support forms part of modern South African law and that it is essentially similar to English law, except for specific points where it had developed further locally, particularly in cases about mining" appears correct.24 Noting that the decision in *Anglo Operations* established a distinguishing principle in terms of which the operation of the right to lateral support is restricted within the sphere of neighbour law, he analysed the implications of the *Anglo Operations'* principle, *inter alia,* in regard to non-mining cases. He notes that although it is usually said that the right of lateral support applies to land in its natural state and not to buildings "this aspect has been dealt with inconsistently in the non-mining cases involving excavation on one property that caused withdrawal of lateral support from the neighbouring property and resulted in subsidence of the soil."25 Professor Van der Walt identifies the decision in *East London Municipality* as being the leading case within the sphere of non-mining cases to deviate from or reject the early decisions of our courts which recognise a right of lateral support for land and for buildings, the prime exemplar thereof being the *Victoria* case.26 He makes the point that there is a

difference of opinion regarding the proper direction of our law in this regard, *inter alia*, in his reference to Professor Milton's view that it was wrong to restrict the right of lateral support to land in its natural state.27

[138] In *East London Municipality*, Reynolds J first recognised the right of support of land to land in our law with the general statement that "our law is the same as the law of England as regards the right of support of land to land and seems to rest on the principle that it is not so much a principle as a right given in the nature of things."28 Later he dealt with the

contention that our law differed from the English law inasmuch as lateral support is not restricted to land in its natural state but extends to buildings. He noted that the main authority for this proposition rested on the strength of the decision in *Victoria*. He analysed that decision finding that the references to the Roman law in that case did not support the view which Morice J expressed and then stated:29

> "Moreover on principle it is difficult to see how a right of support for all buildings, even those increasing the natural burden of support, can apply. The right of support of land to land in its natural state rests on principles common to all systems of jurisprudence . . . (h)ence on principle there can be no right of support for artificial constructions which did not in nature exist".

And concluded:

> "I therefore find myself in agreement . . . that as regards artificial constructions on land our law is the same as the law of England . . .".

[139] Reynolds J then went on to state that English law is clear "that this right of support of land to land is only given and limited to such amount of support as is required by the supported land in its natural state" and later that the "natural state" of land "must surely mean that the land to be supported is in such a state at the time of the withdrawal of support that no extra burden artificially there (ie not placed there by nature) increases the amount of support it then requires beyond the amount it will require if that artificial burden were not there so as itself to cause subsidence which would not otherwise have occurred if the land was without that burden"30 The learned Judge then reviewed the English authorities, finding them in support of this view.

[140] It is notable however that Reynolds J's analysis of the law and his finding that our law was the same as that as English law was *obiter* inasmuch as the circumstances of that case did not concern land upon which buildings had been placed. Rather, it involved the grant of a public road and the laying of cables along that road in circumstances where, as the learned Judge pointed out:

> "The matter was not raised by either side in the pleadings that the cables imposed any extra burden or weight that occasioned the subsidence. There was no evidence led on this point and advisedly so for the evidence of the geologists, etc., indicated any possible extra burden had nothing to do with the subsidence".31

[141] The plaintiff's Counsel also argued that Reynolds J reached his conclusion after himself relying on the *Rouliot* case but in circumstances where the Supreme Court of Appeal in *Anglo Operations*, having reference to the same case, reached a different conclusion. The point is well made. The Court in *Rouliot* found that the right of an owner of land to lateral support from adjacent land was recognised by the law of the Cape Colony. This it did "in the absence of direct authority" and "guided by well-established principles of the Roman law and of modern systems of law, provided they do not lead us to conclusions inconsistent with the Dutch

law." The court nowhere found that our law on this subject was the same as the law of England. In *Anglo Operations*, as certain key passages referring to *Rouliot* (quoted in paragraphs 123-125 above) make quite clear: the doctrine of lateral support was introduced as judge-made law because it was just and equitable, was adopted as a rule of neighbour law and was not a slavish importation of the English law into our system.

[142] In these circumstances, it would appear to me, there is no authoritative or binding decision in our law that limits a land owner's right of lateral support to the land in its natural state only, as is the case in English law. There are, furthermore, cases, most notably *Victoria*, where it was held that the right extended to support to buildings on the land. What is more our law in regard to the right of lateral support is squarely located within the law of neighbours in which one of the guiding principles is that of reasonableness.

[143] The arguments in favour of the duty of lateral support extending to buildings or artificial constructions on land were comprehensively set out by Professor Milton.32 He pointed out that, as was recognised by Lord Penzance in *Dalton v Angus*,33 the English rule works obvious injustice.34 Professor Milton thus posed the central question as being whether South African law will accept this same (English) tradition of high regard for the rights of an owner to full enjoyment of his land, including the right to cause a neighbour's house to collapse with impunity, or whether it will adopt the more just and equitable rule (he submitted) that a right of support is owed to buildings. Professor Milton argues that the exception whereby the English law does not apply to all artificial erections on land "so long as the presence of the buildings does not materially affect the question, or the additional weight did not cause the subsidence which followed the withdrawal of support" was doubtfully of any real value.35

[144] In this regard, Professor Milton stated:

> "It is an inevitable tendency of modern life for more and more people to gravitate to cities. As a result larger buildings must be erected to accommodate them and provide employment. The larger the buildings, the greater the pressure on the soil and the less the duty of lateral support owed by neighbouring

land. This, it is submitted, is an illogical and unrealistic approach and, on principle, it should not be preserved".36

[145] Turning to policy considerations, Professor Milton expressed the view that it was difficult to discover the reason for the rejection of the doctrine of the *Victoria* case and submitted that it was unwarranted. In this regard he stated:

> "(a)s has been seen, Roman law had no special rules regarding lateral support. The matter was approached on general principles of property law. Any interference with rights of enjoyment of land, including the withdrawal of lateral support, would have given rise to an action based on Roman law equivalents of nuisance. On this simple basis there would have been no distinction drawn between removal of support of land with or without buildings on it".37

[146] He then goes on to state that the modern doctrine of nuisance is essentially concerned with the balancing of the conflicting interests and rights of neighbouring owners of land.

[147] In regard to foreign law, Professor Van der Walt notes that in both Dutch and German law the right of support applies to built up land as well as land in its natural state.38 He adds that "restriction of the right of lateral support to land in its natural state has been subjected to growing criticism recently, not least because of the anomalies it causes" and that the Court of Appeal of Singapore recently overturned the classic principle on this point and extended the right of support to buildings, relying on the principle of *sic utere tuo ut alienum non laedas* ("use your own property so as not to invade the rights of another"), an innovation that might be followed by other final courts of appeal, it was said at the time.39

[148] Professor Milton sought to find policy reasons for the rejection of the doctrine established in the *Victoria* case, expressing the view that its rejection was unwarranted.40 The first of two factors which he considered as influencing the direction taken from the mid-twentieth century in our law was that bylaws and building regulations in urban areas "guarantee" that buildings will not be rendered dangerous or caused to collapse by the removal of lateral support of adjoining properties with the result these rules have made it "unnecessary" for the courts to evolve rules to deal with the removal of lateral support in such areas.41

[149] The second policy reason he identifies is the development of a body of law regarding mines and mining which has influenced the law of lateral support to land and which strikes a compromise between the rights of enjoyment in land and the interests of the mining industry.42 Professor Milton expressed the further view that it was this concern with the definition of mining rights which caused the law of lateral support under normal

conditions to be diverted from the course set by the *Victoria* case and finds that there was no justification for applying the decision in *Douglas Colliery v Bothma*,43 a mining law case, to the ordinary rules of lateral support as Reynolds J did in *East London Municipality*. He submits, in conclusion, that a clear distinction must be made between the right of support as existing in private property law and as existing in mining law and that in the former case the doctrine of the *Victoria* case is to be preferred. Professor Milton's view is encapsulated in the following passage:

> "The English law clearly regards the right to excavate on land as a superior right to that of erecting buildings up to the limits of adjoining proprieties. But in a modern urbanised society with heavily built up areas this bias in favour of rights to excavate with impunity cannot be tolerated. Modern law clearly prefer the right to erect buildings without fear of their destruction as being more important that an unlimited right to excavate on land".44

[150] In significant respects the views expressed by Professor Milton have been borne out by the decision of the Supreme Court of Appeal in *Anglo Operations*, particularly in its endorsement of the court *a quo*'s observation that it was incorrect to state that in *Rouliot* "*De Villiers CJ decided to incorporate the English doctrine of lateral and subjacent support, with all its ramifications, into our law.*"45 Instead the Court agreed with the statement of the court *a quo* that what had happened in *Rouliot* was that the Court introduced the doctrine of lateral support as Judge-made law because a *lacuna* existed and it regarded this as just and equitable. I interpret these *dicta* in *Anglo Operations* as rejecting the notion, principally expressed in *East London Municipality*, that our law of lateral support in non-mining cases is or must follow the contours of the English law (and which seems to have been accepted as axiomatic in many cases subsequent to *East London Municipality*).

[151] What is more, I find the reasons and views expressed by Professor Milton on why the doctrine in the *Victoria* case is to be preferred, persuasive. It is significant that, notwithstanding that the excavations which lie at the heart of this matter took place in a well-developed and long established suburb in a major metropolitan centre and where, apparently, all planning approvals were obtained and all building by-laws and regulations were observed, a calamitous subsidence took place. It led to the complete demolition of two dwellings, the cessation of building activity on the first defendant's property ever since and the necessity for extensive repairs on the two properties neighbouring those on which the excavations were formed. From the perspective of the plaintiff, the building by-laws and regulations did anything but, to use Professor Milton's language, "guarantee that buildings will not be rendered dangerous or caused to collapse by the removal of lateral support of adjoining properties."46 It must also be borne in mind that the introduction of the duty of lateral support into our law as Judge-made law clearly implies that this law may be developed and adjusted as the demands and exigencies of modern society may require.

[152] In the result, I do not consider myself bound by and respectfully disagree with the principle enunciated in *East London Municipality* and prefer the view that the duty of lateral support in relation to contiguous pieces of land is owed to buildings as well.

[153] However, too broad a formulation of the right or duty of lateral support could lead to conceptual and equitable difficulties, particularly where the contiguous parcels of land are situated on a slope. Where a property has been unduly or unreasonably loaded through the erection of disproportionately large or heavy structures, it would seem unfair in my view that a neighbouring piece of land should attract an equivalently onerous duty of lateral support.

[154] In a supplementary argument, plaintiff's Counsel argued that the first defendant's excavations had constituted unreasonable use of her property. In making this argument Counsel relied on certain principles of neighbour law as appear in passages from *Regal*.47 In *Regal*, the then Appellate Division held that the English law of nuisance had not been substituted for our law and that it was necessary to investigate our own common law sources. In arguing for the touchstone of reasonableness in the present matter, plaintiff's Counsel relied, *inter alia,* on the following passage from *Regal*:

> "In hoofsaak het ons hier te doen met wat buurreg genoem kan word. As algemene beginsel kan iedereen met sy eiendom doen wat hy wil, al strek dit tot nadeel of misnoeë van 'n ander, maar by aangrensende vasgoed spreek dit haas vanself dat daar minder ruimte is vir onbeperkte regsuitoefening. Die reg moet 'n reëling voorsien vir die botsende eiendoms - en genotsbelange van bure, en hy doen dit deur eiendomsregte te beperk en aan die eienaars teenoor mekaar verpligtings op te lê. Sommige van die beperkings ontstaan direk daaruit dat 'n eienaar se eiendomsregte op sy grense eindig. (Dernburg System 1 par. 162). Hoewel dit nie 'n strakke reël is nie, is dit hom gevolglik nie geoorloof om te doen wat iets op sy buurman se grond laat kom of 'n direkte uitwerking daarop het nie".*48*
>
> And further: 'n Oorweging wat meermale teengekom word, is dié van billikheid."*49*

[155] Bearing in mind the manner in which the plaintiff pleaded his case, it is not open to him to mount an alternative case based on the alleged unreasonableness of the first defendant's excavations. That is not the case which the latter was called upon to meet. I see no bar however to the concept of reasonableness playing a role in determining the scope of the duty of lateral support, more particularly in determining whether a duty of lateral support extending to buildings can be limited where the property damaged by a breach of this duty had been unreasonably loaded by artificial constructions.

[156] In the result, I consider that the appropriate approach is to hold that a duty of lateral support extends not only to land but also to buildings, save where such land has been unreasonably loaded so as to place a disproportionate or unreasonable burden on the neighbouring land.

[157] In the circumstances of the present case, it is common cause that the first and second defendants were the owners of land contiguous to the plaintiff's property. In the light of my finding that a duty of support is owed in these circumstance both to land and buildings, both defendants were under a common law duty to provide lateral support to the plaintiff's property. This largely answers the first of the separated issues save that it does not deal with the question of whether the plaintiff unreasonably loaded his property through the construction of a residential dwelling thereon, a question which I now address.

[158] In my view, there is no basis on which to find that the plaintiff unreasonably loaded his property. The dwelling constructed on the Dias property, although substantial, was in no way out of keeping with numerous similar dwellings on the same slope in the same suburb. I accept the evidence of Mr Van Gyssen that the dwelling was properly designed and built. In regard to the terracing of the property and the construction of the Loffelstein wall, Dr McStay testified that it is inherent in the built environment that the natural ground has been modified to enable development to take place and, furthermore, that the Loffelstein wall constituted perfectly reasonable measures typical of residential properties in the area and placed no significant risk on properties downslope. Similarly, I accept this evidence. Above all, as the evidence indicates, the Dias dwelling, garden and wall stood unaffected for at least 16 years before the excavations on the Venter and Naumann properties in 2008. The evidence is that no fill was brought onto the Dias property when it was developed; at most some terracing was done using existing fill. In the circumstances, on my view of the correct legal approach to the duty of lateral support, there is no room for a finding that the plaintiff forfeited his right to lateral support from his neighbours by unreasonably loading his land.

The remaining separated issues

Did the excavations breach the duty of lateral support and, if so, did this lead to the slope mobilisation?

[159] The starting point in dealing with these issues is the question of the condition of the plaintiff's property, in particular the dwelling, prior to the events of 2008. The thrust of the attack from the first defendant was that the dwelling was poorly constructed, in poor condition and cracking prior to the excavations which took place in 2008. The evidence from the plaintiff and his wife was, in broad terms, that they had spared no expense in building their "dream house", had hired reputable builders, architects and engineers and that the house had been built to high standards; furthermore, that prior to 2008, apart from one or two minor faults such as a cracked tile or a lick of paint being required, the house had been in impeccable condition. The evidence of the plaintiff and her husband regarding the condition of their house prior to 2008 was detailed and convincing and was borne out by photographs of the dwelling taken in those years. This evidence was supported in the first place by that of the neighbours. Mr Wentzel made it his business to keep an eye on the condition of properties in Theresa Avenue and he noticed no flaws in the plaintiff's property. Mr Babrow's evidence was even more pointed. He visited the

plaintiff's property regularly pre and post 2008 and found it to be in immaculate condition prior to the excavations. By contrast after 2008 he had witnessed the ever growing number of cracks and structural defects in the house.

[160] The plaintiff's evidence was also supported by that of Mr Van Gyssen, an engineer who examined the architectural drawings for the plaintiff's dwelling and satisfied himself that it had been built in accordance with those plans. Mr Van Gyssen had extensive experience in the field of residential dwellings and in inspecting cracked dwellings. He testified that it had been built by a reputable master builder and monitored both by the appointed architect and an engineer. He expressed approval of the structural design of the dwelling which was executed in accordance with the plans and he dismissed suggestions that the many cracks which manifested in the house after 2008 were a result of defective design or construction. He testified that if this had been the case these defects would have manifested within a few years after construction of the dwelling. He further testified that the decision whether to install expansion joints in a dwelling rested with the appointed structural engineer and these were not mandatory. He expressed the further opinion that fully framed structures such as the Dias dwelling do not normally have soft joints.

[161] The evidence from the defendants regarding the condition of the plaintiff's dwelling prior to 2008 was sketchy at best. Mr Naumann proffered an expert opinion in the capacity of a qualified quantity surveyor with extensive experience in the construction industry. He is not a qualified quantity surveyor, however, and his view that the plaintiff's dwelling required soft joints and without them would inevitably have cracked within a few years as a result of movement was contradicted by factual evidence that the house was in excellent condition prior to 2008 and by Mr Van Gyssen's evidence. Notwithstanding the summary of his opinion and despite the fact that he had visited the plaintiff's dwelling on or about 1 August 2008, Mr Naumann only saw one (recent) crack in the pool (to which his attention was drawn by the plaintiff) and could describe no damage to the rest of the dwelling. As an experienced builder and being aware at the time that his excavations were being blamed for the damage to the Dias property, it is unlikely that he would have missed a general deterioration in the condition of the house. One must also take into account that, insofar as Mr Naumann proffered an expert opinion, he could hardly claim to be impartial.

[162] The only evidence in support of Mr Naumann was that of Dr Day, a civil engineer but specialising in geotechnical engineering and particularly in the field of lateral support. An important and recurring theme in Dr Day's evidence was that there had been a pre-existing crack in the pool on the plaintiff's property which suggested that even prior to the 2008 excavation the dwelling had been under structural strain. Ultimately however Dr Day had to abandon his argument that the pool had previously sustained structural damage when it turned out that the pool had not been cracked before 2008.

[163] Having regard to the evidence as a whole I am satisfied that the plaintiff's dwelling was properly designed and constructed and that prior to 2008 it was in excellent condition, structurally and otherwise.

[164] The reverse image of the question addressed above is the extent of the defects in the plaintiff's property and when these manifested themselves. Both the plaintiff and her husband testified in detail of the pool beginning to detach itself from the house which commenced with the pool rail popping out of the wall and a hairline crack between the house and the pool on or about 23 July 2008. This had been preceded by furrows appearing in her lawn and a dip in the lawn nearby a feature rock. This was the day when the second defendant abandoned his property as large cracks appeared in his newly built garage floor. From this point on extensive damage began to manifest in the plaintiff's dwelling in the form of cracked tiles, cracks in concrete slabs, shifting doorframes, cracks in the wall, windows being twisted out of place and units attached to the walls pulling away. On the advice of Mr Van Wieringen, and ever since then, the plaintiff's wife marked all these cracks with masking tape and dated them. Mr Dias confirmed his wife's evidence in this regard in all material respects testifying that his lounge had, at last count, 100 cracks and his dining room, 52. An inspection *in loco* served to confirm the damage to the dwelling in the form of numerous cracks some of which led to water leaks. It is so that the degree of damage has been accentuated by the fact that, on the advice of Mr Van Wieringen, the plaintiff has not had any remedial or repair work done to the house since 2008. Even taking this factor into account, however, the extent and severity of the accumulated damage is plain to see. The evidence of this damage and when it began to appear was overwhelming and uncontroverted. Whatever the precise nature of the geological event in and around July/August 2008, I find that on the evidence and on the probabilities it was responsible for the damages which manifested in the plaintiff's house.

[165] A great deal of evidence was heard, mainly that of the experts, concerning the nature and mechanism of the geological event which took place over the period of July and August 2008. Dr Day expressed the opinion that the inferred mechanism indicated a "rotation slip failure along a dish shaped failure surface with downward movement over the upper portions of the slope and heave at the toe." Dr McStay concluded that the ground movements and structural damage experienced at the plaintiff's property were the result of a progressive series of slope failures forming what are termed "en echelon slip planes" ie a complex series of roughly circular failure planes. As both experts recognised, the exact nature of the slip circle failure could not be determined with certainty since it could only be inferred rather than physically observed. In my view it is unnecessary to determine which of these theories is to be preferred since in my understanding they are but variations of the same mechanism.

[166] The real difference between the two main expert witness and the key issue in this matter concerned the question of whether the slip circle failure was due to a failure of lateral support or not. Dr McStay's initial opinion was that the ground movement represented the triggering of a slope failure due to the removal of lateral support by the excavation of a large mass of soil and boulders on the properties of the first and second defendants. Dr McStay considered possible causes and factors contributing towards the ground movements such as poor soil conditions, groundwater seepage, heavy rainfall and previous construction work

on the overall

slope. He expressed the view nonetheless that the conditions affecting the stability of the plaintiff's property were not unforeseen and could reasonably be anticipated given the location, prevailing physical environment and winter rainfall.

[167] In a supplementary report Dr McStay concluded that the excavations carried out on the second defendant's property during 2008 played a minimal, if any, role in the removal of the lateral support previously afforded to the plaintiff's property. Dr McStay explained this deviation from his original opinion on the basis that he had initially been unaware that excavations on the second defendant's property had been completed by 2 April 2008, that thereafter considerable ground was excavated from the first defendant's property and, all in all, because the excavations from the Venter property were approximately one tenth of those on the Naumann property which was immediately adjacent to the Dias property.

[168] Dr Day's opinion throughout was that the damage to the Dias property was caused by the movement of the unstable hillslope on which it was situated and that instability in turn was the result of the cumulative effect of the "natural geotechnical features" of the area, the development and loading of the Dias property and other properties in the area on the affected slope and a number of excavations into the slope dating back to the early 1980's. In his view the movement of the slope towards the end of July 2008 was triggered by the excavation of ground at the toe of the slope on the first and second defendant's properties "combined with surcharging of the top of the slope by the placement of fill material" on the Dias and Babrow properties. His opinion was further that the instability of the hillslope was not a consequence of the removal of lateral support to the Dias property but of general instability of the hillslope. In his view any failure or ground movement arising solely from the removal of lateral support would only have had a localised effect ie it would have been confined to the areas immediately behind the retaining walls built on the Naumann property. Since no failure of the ground was observed in such areas, this confirmed that the cause of the general observed movement was the result of general instability of the slope rather than the removal of lateral support.

[169] Dr Day added that prior to the excavation on the Naumann property the plaintiff and surrounding property owners had contributed to the instability of the slope over several decades by the construction of structures and the loading of surrounding properties, in most instances accompanied by terracing of the sites, all of which activities altered the "natural state of the land."

[170] Before considering in greater detail the views of the respective experts on whether there was a failure of lateral support or not, it is appropriate to have further regard to some of the principles applicable when courts consider the evidence of expert witnesses. Firstly, it is trite that the opinion of expert witnesses is admissible only where, by reason of their special knowledge and skill, they are better qualified to draw inferences than the judicial officer. Secondly, expert/opinion evidence is admissible when it

can appreciably assist the court.50 Thirdly, the opinions of expert witnesses are admissible only where, by reason of their special knowledge and skill they are better qualified to draw inferences than the judicial officer.51 In this regard an expert witness should not usurp the function of the court.

[171] It is for the court to determine whether the topic demands expert evidence. The court does not defer to scientific opinion as to whether expert evidence is required or permissible.52

[172] An expert witness must be objective. As it was put in Jacobs and another v Transnet Ltd t/a Metrorail:53

> "It is well established that an expert is required to assist the court, not the party for whom he or she testifies. Objectivity is the central prerequisite for his or her opinions . . . An expert . . . must be made to understand that he is there to assist the court. If he is to be helpful he must be neutral. The evidence of such a witness is of little value where he, or she, is partisan and consistently asserts the cause of the party who calls him".

[173] Three issues were separated for determination by this Court, the second being whether the excavations carried out by the defendants breached any duty of lateral support and, thirdly, whether as a result of the plaintiff's property being so deprived of such lateral support on one or both of the defendants properties the scree slope on which the plaintiff's property and residence was situated mobilised and subsided in or about June 2008.

[174] In his written heads of argument the first defendant's Counsel maintained this distinction between the second and third issue but characterised the third as being the question of whether there was legal causation. In my view the second and third issues overlap since the issue of causation is integral to the question of whether there was a breach of the duty of lateral support by one or both of the defendants. Accordingly I will address the two issues in the same discussion although giving full attention to the issue of causation which is central to the first defendant's arguments.

[175] First defendant's Counsel contended further that in large measure the second and the third issue, which as I have said overlap, fall to be resolved on the basis of expert opinion evidence and that the facts which are relevant are of limited scope and beyond any material doubt. Counsel for the first defendant correctly observed that the main conflict of opinion between Dr McStay and Dr Day were their opposing contentions as to whether the slip circle slope failure was caused by the removal of lateral support or not. He submitted that Dr McStay's evidence was poor and could not be relied upon. His criticisms in this regard were built upon what were described as Dr McStay's dubious qualifications and expertise in relation to the topic, his alleged lack of independence or objectivity and his propensity to tailor his evidence to suit the plaintiff's case. I have

already dealt with the challenge to Dr McStay's qualifications and his expertise in expressing the opinions which he has done.

[176] In certain instances Dr McStay did stray somewhat beyond his field of expertise such as expressing an opinion that Mr Naumann had been negligent in the manner in which he had gone about conducting the excavations. This question, which in any event is not relevant, would fall within the Court's purview. However, this predilection to stray into areas of the Court's authority was not confined to Dr McStay alone. Both expert witnesses expressed firm conclusions, based on facts which were largely common cause, as to whether there was a failure of lateral support. That decision is, I consider, ultimately one which must be made by the Court and, although it may be informed by scientific considerations, is not one where the Court is entirely dependent upon, or can be appreciably assisted by, scientific evidence or opinions and must therefore evaluate and choose between the conflicting opinions of the experts.

[177] The overall conclusion as to whether there was failure of lateral support is very much one which the Court can and must determine, based on the evidence in front of it, including, to the limited extent relevant, the expert evidence. Put differently, even if the only expert opinion before the court was that of Dr Day's, in my view the Court would in principle be entitled to arrive at the opposite conclusion, namely, that there was a breach of the duty of lateral support. Obviously the opposite position also holds true, namely, if the only expert opinion before the Court was that of Dr McStay's, it would not be precluded from reaching the conclusion that there had been no breach of the duty of lateral support. This point is borne out by Dr Day's evidence that, notwithstanding his expertise and learning in the area of lateral support and the fact that he had co-written the Lateral Support Code, there was no definition of exactly what lateral support entails. This underlines the fact that the question of what constitutes, at least in law, lateral support or a breach thereof is not an arcane or esoteric matter in which the Court is unable to formulate its own view without the assistance of experts.

[178] Counsel raised other criticisms of Dr McStay's evidence, namely that he was not, and did not profess to be, an engineer and was therefore not qualified to do calculations for retaining walls and in respect of lateral support. This criticism is partly met by the remarks which I have made above in respect of the concept of lateral support but also by the fact that the details of design and construction of the retaining walls is in my view not fundamental to the questions which the Court must determine.

[179] A further criticism of Dr McStay's evidence was that his investigation and evaluation was superficial and based on a reading of evaluations, reports or accounts by others. In my view this is not a fair criticism. Neither of the experts was a first-hand witness to the events of 2008/2009 and both of them had to rely on the reports and evaluations of either their client or those professionals who preceded them in analysing and reporting on the problem. This leads into the singular fact that neither party called as an expert witness the one person who appeared to be best qualified to express an opinion on the circumstances leading up to and surrounding the slip circle failure of July/August 2008, namely, Dr Van Wieringen. He played a critical role in the events, having been instructed by all parties to

provide expert advice, and he was on hand as the critical events unfolded in July/August 2008 and in subsequent months. The fact that neither party saw fit to call him as a witness was puzzling to say the least given their repeated attempts to rely on observations he made at the time as recorded in correspondence and reports which were discovered.

[180] One criticism of Dr McStay's evidence which does carry weight and which reflects to some extent on his objectivity is the about turn which he made regarding the role of the excavations on second defendant's property. In his initial report, Dr McStay expressed the view that together both excavations had triggered the slope mobilisation. In late February 2017, the plaintiff concluded a settlement with the second defendant. In a supplementary expert summary filed on 3 March 2017, Dr McStay expressed the further opinion that the excavation on the Venter property had not caused or contributed to the problem. Dr McStay sought to justify his changed opinion on the basis that he had not previously been aware of the details of the timing and volumes of the excavations on the two properties belonging to the defendants. However when regard is had to the dates of the hearing and the postponements and when Dr McStay had access to the relevant documentation, the indications are that his change of opinion was probably at least partly influenced by the changed stance of the plaintiff towards the second defendant following the settlement which had been concluded.

[181] However, similar criticisms can be directed at Dr Day's evidence since in my view he too identified too closely with his client's case and failed at times to evince the objectivity which a court of law expects from an expert witness. This propensity was illustrated by Dr Day's reluctance to accept that the Dias property had been in good structural condition prior to 2008 and his insistence, based on the scantiest of evidence, that the swimming pool had sustained pre-existing damage, namely an alleged crack in the swimming pool which, it later transpired, was not there before 2008. Faced with evidence that the plaintiff's dwelling was in pristine condition before 2008, Dr Day responded that he had "difficulty with that evidence." However, as was pointed out by the plaintiff's Counsel, it is for the Court to decide what the facts are and not for an expert who first saw the Dias property some seven years after the subsidence.

[182] There is no doubt that Dr Day is a recognised specialist geotechnical engineer with a particular specialty in the field of lateral support and with considerable experience behind him. His CV speaks to the eminence which he has achieved in his particular field both through his professional activities and his academic career. His reports were also carefully drawn and reasoned. However, the essential elements of Dr Day's opinion and the reasoning process which lay behind must be identified and critically analysed. As set out in the summary of his

evidence they are the following:

1. The damage to portions of plaintiff's property was caused by movement of the unstable hillslope on which the plaintiff's property was situated. That instability was the result of the cumulative effect of the natural geotechnical features of the area, the development and loading of the plaintiff's property and other properties in the area on the

affected slope and a number of excavations into the slope dating back to the early 1980's;

2. The movement of the already unstable slope at or about the end of July 2008 was triggered by the excavation of ground at the toe of the slope on the first and second defendants' properties, combined with surcharging on the top of the slope by the placement of fill material on the properties of the plaintiff and Babrow;

3. Thus the instability of the hillslope was not a consequence of the removal of lateral support to the plaintiff's property as alleged but of general instability of the hillslope;

4. Any failure or ground movement arising solely from the removal of lateral support would have had only a localised effect ie would have been confined to the area immediately behind the retaining wall. No failure of the ground was observed in such areas, confirming that the cause of the observed movement of ground was the result of general instability of the slope rather than the removal of lateral support;

5. For these reasons Dr Day is of the opinion that the scree slope on which the plaintiff's property and residence was situated did not mobilise and subside as a result of the removal of lateral support by way of the excavation on the Naumann property;

6. Prior to the commencement of the excavation on the Naumann property, the plaintiff and surrounding property owners contributed to the instability of the slope over several decades by the construction of structures and the loading of surrounding properties, in most instances accompanied by the terracing of the sites. These activities altered the natural state of the land;

7. There are a multiplicity of causes of the mobilisation and subsidence of the scree slope from a geotechnical perspective. The evaluation of the extent and degree of the other contributing factors involves complex, factual and geotechnical considerations.

[183] Before subjecting the main elements of Dr Day's opinion to closer scrutiny, two important general observations must be made. The first is that although Dr Day purported to confine himself to "the geotechnical and factual questions pertaining to lateral support", implicit (if not explicit) in his opinion is the assumption that the removal of lateral support must have a localised effect in the sense that its effects must be seen upon or in relation to the retaining walls which were constructed on the first defendant's property. The natural consequence of this assumption is that any failure of the ground which reflects or manifests in a general instability of the hillslope was not regarded by Dr Day as a consequence of the removal of lateral support to the plaintiff's property. Apart from the question of whether these assumptions are logically or legally sound, in my view they represent an intrusion into what ultimately is the Court's domain, namely, a determination of whether the excavation activities constituted a breach of the duty of lateral support owed to the plaintiff's land. As was pointed out in *Linksfield Park Clinic*, albeit in the context of the measure of proof, there are differences in the approach of judicial officers and expert scientific witnesses. It is with some justification that the first defendant's Counsel

submitted that Dr Day's view of what constitutes lateral support could not be imposed upon the Court.

[184] I now turn to deal with particular statements or concessions made by Dr Day in his evidence which tend to cast a different light on the central issue to be determined. These concessions related to the role of the excavation on the first defendant's property on the slip circle failure and the role and significance of the remedial measures undertaken by or on behalf of the first defendant after the major ground movement in July/August 2008.

[185] In regard to the former, in short Dr Day was constrained to concede that the excavations on the first defendant's property played a significant role in the slope instability which manifested in July/August 2008. Dr Day testified that it was clear that "no one is disputing that the excavations contributed to the failing"; the excavations were "an essential part of this failure" and "the failure of the slope was the reason why the front portion of the Dias property subsided." Dr Day conceded that "the movement of both the Dias' garden and the Dias' house were triggered or caused by the same set of circumstances and are related." He conceded further that Mrs Dias' evidence that before 7 June 2008 undulations had formed in her front garden and the ground had fallen away, constituted "the initial commencement of ground movement", "that's when the slope started to move" and "the slope started to talk to us". In response to the question "so what was the major event post April 2008 that caused the distress?" Dr Day answered that "the major event was the removal of ground which then set the process of slope instability in motion, coupled with rainfall". Finally, in response to the question "so Dr Day, is it not clear that, but for the Naumann excavations, the land on the Dias property behind the Venter property would not have failed?" Dr Day responded "if excavations had not been formed we wouldn't be here today".

[186] The crucial role of the excavations on the Naumann property was illustrated by the model which Dr Day constructed to illustrate the mechanisms of a slip circle failure and which is depicted in photographs V1 to V4. It is only once block number 1, representing the material excavated off the Naumann property, is removed that the slip circle phenomenon occurs i.e. the bowl-shaped movement leaving a scarp and uplift at the toe,

as is illustrated in photograph V2, or, at the very least, is poised to occur awaiting one or more further triggering factors such as excess rains which reduce the shearing strength of the soil. A further concession made by Dr Day was that the affected ground had mobilised downwards and outwards. "It moved both downwards, it settled in other words, and it moved down the slope. This is within the mobilised area and that mobilised area extended below the outer edge of the pool".

[187] The conclusion reached by Dr Day, namely, that there was no failure of lateral support, was more fully described by him when he was challenged in relation to the fact that the plaintiff's property had moved down slope as a result of the removal of lateral support. His response was: "I do not believe that the primary cause was the removal of lateral support because none of the vertical faces from which pressure had been removed underwent any form of failure. It was the removal of weight from the lower portion of the slope ." In this passage one sees, again, that Dr Day gives

lateral support a limited meaning, one apparently where the sideways (lateral) force of land is paramount. However, certainly seen from the perspective of the complaining land owner, common sense would suggest that whether the damage-causing subsidence is the result of a loss of the downward pressure of earth on the neighbouring (excavated) property (but nonetheless impacting on the stability of the neighbour's land) rather than the sideways pressure of the earth (or both), is of no practical relevance at all.

[188] Dr Day conceded that the bulk of the measures taken to arrest the slope failure were implemented on the Naumann property. As emerged from Mr Naumann's evidence these commenced with the installation of plastic sheeting onto the garden of the Dias property to prevent the ingress of further water, the virtually immediate transporting back to the Naumann and Venter sites of substantial quantities of backfill to replace the soil which had initially been excavated, the installation of the soil anchors extending from the middle retaining wall on the Naumann property deep into the slope underneath the Dias property, the installation of piles in the middle terrace of the Naumann property coupled with the casting of a 400mm thick concrete slab over the piles as well as the casting of a concrete wedge slab between the middle and the top retaining walls which had the effect of buttressing the foundation of the back retaining wall.

[189] All these steps entailed expenditure of millions of rands on the part of Mr Naumann or the first defendant and will apparently form the subject of a pending counter claim. It is of no little significance in my view that many of these steps involved either adding weight to the Naumann property or using it as a launchpad from which to stabilise the slope reaching into and under the plaintiff's property. It is also not without significance that in Dr Day's first report (exhibit W) he stated as follows: "Movement monitoring shows that the installation of the anchors effectively stabilised the Naumann excavation with minimal (< 2mm) further down-slope movement being recorded on the retaining walls, the garden in front of the Dias' house and the southern end of the Dias' house after 25 November 2008". At a later stage in that report he also recorded "(i)n all instances, the movement slowed significantly after 10 November, after the ground anchors had been installed through two of the retaining walls on the Naumann property." Dr Day conceded that certain structural cracks within the plaintiff's dwelling, the cracking of the pool, the patio and in the front garden were all associated with ground movements. In the light of the evidence as a whole, to the extent that Dr Day disputed that the vast majority of the balance of the cracks and damage to the plaintiff's house were not caused by the ground movement preceding and following the slip circle phenomenon of late July, early August 2008, I find that on the probabilities his opinion cannot be sustained.

[190] Despite the voluminous evidence, the salient features of the matter were or soon became common cause. In an experts meeting held on 22 February 2016, Dr McStay, Dr Day and Ms Papanicolaou, as well as the first third party's engineer, agreed on amongst others the following salient points:

"Survey matters

1. The zone of major slope movement recorded by the survey between end July 2008 to beginning September 2008 included the Naumann

property, the front garden and the pool on the Dias property stopping short of the house and most of the Venter property stopping short of the Venter/Stylemark boundary. The direction of the movement in this zone is predominantly towards the sea (ie down-slope of the plaintiff's property);

2. There has been a significant reduction in the rate of movement subsequent to end November 2008 when the majority of the anchors through the Naumann retaining walls were installed. The upper retaining walls has (*sic*) subsequently moved upslope by a few millimetres;

3. There may have been unrecorded movement prior to commencement of monitoring on 26 or 28 July 2008.

Engineering and Geotechnical considerations

9. The formation of excavations on the Naumann and Venter properties unloaded the toe of the slope causing movement of the slope on one or more failure surfaces; . . .

14. It is agreed that the slope is sensitive to disturbance and prone to movement. Moffet and Day maintain there is evidence of movement of the slope dating back to the early 1980's; . . .

16. It is agreed it is possible to develop on this slope if the correct precautions are taken; . . .

21. It is agreed that the installation of anchors and filling of cracks on this site were appropriated (*sic*) actions. (Day and Moffet do not agree that anchoring below adjacent property and filling of cracks are 'extreme measures)."

[191] In commenting on the two contrasting explanations for the slip circle failure ie one large slip circle or a series of *en echelon* slip circle failures, Dr McStay testified that:

> "In my view they both resulted from the removal of lateral support, because its mechanism is the same. The one is deeper seated and it implies that the retaining walls retained a certain element of the verticality and the whole soil moved as a mass whereas when we start looking at the detail of the measurements it is fairly obvious that (there is) a lot of local scale deviations movement from the survey data and that the nature of the (indistinct) surfaces themselves".

[192] Dr McStay's opinion was that the cause of the damage was the extensive excavations and their location which amounted to:

> "the removal of lateral support in the form of the earth and that was the main triggering mechanism for the slope instability. Whether that is a series of small progressive failures behind that excavated site plus the triggering of other deeper failure, appears to be largely irrelevant in terms of the actual (indistinct) mechanism itself. That mechanism was obviously impacted by winter rains, but that was entirely foreseeable . . ."

[193] As Dr McStay explained "once you have a zone of soil which has been disturbed, it's lost its shear strength, then it has a knock-on effect in terms of the material behind it. The analogy would be a domino ferry when one domino tipples over the next. And that is essentially what happens with slope failures. The first failure occurs, the soil mass is weakened and then further failures occur until we finally reach a new point, the stable equilibrium".54

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[194] Dr McStay testified with regard to the heavy rain that occurred at the end of July/August 2008 "we did find that in 2001 the rainfall figures were higher than in 2008. So it does tend to suggest what we are dealing with, probably something in the order of one in five year event". It would certainly be "within the design consideration for any structures on the hillside to maintain adequate drainage during construction and then after construction to deal with that degree of rainfall. So you certainly not put this into a category of act of God storm events."

[195] Whilst Dr Day was of the opinion that in engineering terms the upper retaining wall built by Naumann served its function, Dr McStay made the common sense point in the context of the case that the function of the retaining wall was to retain the earth behind it, and by inference, the property behind that as well. "In this instance although the concrete of the wall is still intact, it did not perform its primary function of retention. It did not provide sufficient lateral support to stop lateral and vertical movement of the soil and damage to the Dias property, therefore it was not fit for purpose."

[196] In Dr McStay's opinion the retaining walls were in a state of failure because otherwise they would not have needed the remedial measures which were put in place, being the anchoring and buttressing. As explained in cross-examination by Dr McStay, an excavation inevitably involves the removal of lateral support. Dr McStay testified that the fact that the excavations on the Naumann property had "stood" for some time, before they affected the Dias property was not surprising as a "lag of two to three months before you see a failure is nothing remarkable in terms of what I have experienced before with slopes. The onset of winter rains plays a critical role . . . I am not implying that one day somebody digs a hole and the next day it collapses. I don't see it as being that short term happening, as the bullet in the gun scenario suggests but there is a longer term which plays out here and we have seen the recorded movement is not this immediate spontaneous collapse. It takes place over a period of time." Notwithstanding a strenuous cross-examination Dr McStay remained unmoved in his opinion that the deep-seated movement under the first defendant's property was a slope failure triggered by the removal of lateral support. As regards its timing his opinion was that with such a deep seated failure the scarp may appear quite suddenly but that movement may have been occurring deeper within the soil for some time. The timeframe for the failure he opined "would coincide with the commencement and the bulk of the completion of the excavation . . . as I said from the start of the excavation to the point of the failure at the scarp. It's the entire period, it's not a single definitive event in time."

[197] This opinion would appear to tally with the plaintiff's' evidence that there was indeed movement below the feature rock prior to 7 June 2008, with that of Mr Naumann's who testified that the plaintiff's Loffelstein wall collapsed on or about 9 June with the evidence that the pool rail pulled out from the wall on or about 23 July 2008. This all provides clear evidence of prior ground movement.

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The evidence of Mr Van Gyssen on lateral support

[198] It was argued on behalf of the first defendant that Mr Van Gyssen was called by the plaintiff principally to testify that the retaining wall on the Naumann property had failed and had not replaced the excavated earth as far as lateral support was concerned but that he had recanted in this view. This is not strictly correct since his opinion as expressed in the summary of his first report and opinion did not deal with this subject and related principally to the condition of the plaintiff's house, the manner in which it had been designed and built and the effect upon it of the ground movement. He was, however, as part of a supplementary report, led to comment on the report of the first third party's expert who had expressed the view that the retaining walls constructed on first defendant's property had not failed and thus had successfully replaced the removed earth as far as lateral support was concerned. Mr Van Gyssen initially expressed a contrary opinion on the basis, correct insofar as it goes, that the lateral walls had themselves moved (although as part of the general body of earth involved in the slip circle failure). When he was cross-examined by the first third party's Counsel on this subject Mr Van Gyssen testified that he had not been aware of any general agreement regarding the slip circle issue which in any event was outside his field of expertise. When the common cause facts were put to

him i.e. a mass movement of the earth (in which the ground and the retaining walls moved together) he expressed the view that in that instance the wall itself "most probably did not fail". In response to the Court's questions Mr Van Gyssen indicated that his concession that the top retaining wall had not failed in its purpose arose from the fact that he had not previously been aware of the slip circle manifestation which was a geo-technical issue the mechanics of which were not within his field of expertise.

[199] In my view this "concession" on the part of Mr Van Gyssen does not take the matter much further either way. He was expressing a view which fell outside his field of expertise and which, moreover, ultimately lies within the province of the Court. The opinion which he was qualified to give, namely, that in his view the plaintiff's dwelling was properly designed, constructed and that the numerous defects which he found in it on inspection were the result of ground movement, appeared balanced and was the result of investigations he carried out. His evidence in this regard is to be preferred to that of Dr Day and Mr Naumann on the same subject.

The essence of the first defendant's argument

[200] In essence the first defendant argued that by 2008 the stability of the slope upon which the plaintiff's property rested, and which slope comprised various other properties, had been compromised by development attributable to a variety of persons excluding only the first defendant, ie until excavations began on her property. Bearing in mind that neither the plaintiff's property nor other affected properties on the slope were in their natural state, the argument proceeded, there was no *a priori* duty of lateral support; secondly, it was further contended the duty which the plaintiff sought to impute was one extending beyond lateral support owed to his contiguous property by the first defendant's property, to an (impermissible) duty to maintain the entire slope.

[201] These arguments can be met at various levels. In the first place, if I am correct in holding that the duty of lateral support in our law is owed to land and buildings, the presence on the plaintiff's property of a dwelling prior to the subsidence is *prima facie* irrelevant. Secondly, I am unable to accept the argument that the plaintiff improperly seeks in effect to rely on a duty on the part of the defendants to support the entire slope on which all the affected properties were situated. It is, in a very real sense, merely incidental to the plaintiff's claim that what can be described as a slope, and one comprising several properties, subsided. The plaintiff's claim relates to her property alone and it is, strictly speaking, irrelevant that the subsidence which affected her property also affected a number of neighbouring properties. The question is whether the defendants breached their duty of lateral support towards her property. The fact that by means of the same excavation/s they may have breached their duty of lateral support to other properties is in my view legally irrelevant to the present matter.

[202] The first defendant repeatedly sought to characterise the plaintiff's case as one which relied upon a breach of the first defendant's non-existent obligation to support the entire slope. But through these contentions the first defendant was merely reframing the duty of lateral support relied upon by the plaintiff so as to characterise the plaintiff's cause of action as falling outside of the scope of a lateral support claim as it is generally known. The repeated references to the manner in which the plaintiff pleaded its case with reference to the subsidence of the slope were similarly misconceived. In paragraphs 4-7 of his particulars of claim the plaintiff pleaded excavations by the defendants on their respective properties in May, alternatively June 2008, which excavations, he alleged, deprived the plaintiff's property of the lateral support to which it was entitled. In the crucial paragraph 8, the plaintiff pleaded that in consequence of the aforesaid excavations "the scree slope on which the plaintiff's property and residence is situated and constructed mobilised and subsided through the mechanism of a shallow slip circle with uplift at the toe." In paragraph 9, the plaintiff pleaded that the aforesaid mobilisation of the slope and subsidence caused extensive damage to his residence and other improvements on his property.

[203] A reading of the pleaded allegations plainly reveals the plaintiff's case was that mobilisation and subsidence of the scree slope was the mechanism through which the failure to provide lateral support manifested and caused the consequential damage to the plaintiff's property. There is, generally speaking, no closed list of mechanisms or manifestations of a failure to provide lateral support to a contiguous property. This was expressly recognised in Gijzen v Verrinder,[55] which involved an action for relief based on the removal of lateral support. As in the present case the excavation complained of was made right up to the boundary line and the defendants maintained throughout the trial that the plaintiff never had a cause of action. There was no evidence of any subsidence on the plaintiff's land at any one time along the boundary at the site of the excavation. In fact the evidence was that the loss of soil complained of by the plaintiff

was occasioned on an ongoing basis by rain water and erosion. Henning J held that:

> "As far as I have been able to ascertain the cause of the complaint in reported cases based upon the deprivation of lateral support has usually been the subsidences caused in consequence thereof. By subsidence I understand a falling down or caving in. Nowhere, however, have I been able to find a statement to the effect that it is essential for a cause of action based on the removal of lateral support that a plaintiff should establish that a subsidence in this sense has occurred."[56]

[204] In the present matter the plaintiff's land did indeed subside although, as in *Gijzen*, the face of no excavation failed. The fact is that notwithstanding the construction of a total of three retaining walls by the first defendant, the plaintiff's property moved laterally and downwards towards the excavation on the Naumann property. In the event Henning J held that even the loss of soil as a result of rain water and erosion was actionable on the grounds of the removal of lateral support. As the learned Judge explained:

"In the instant case the defendant excavated right up to the boundary line, and in so doing effectively and directly impaired the stability of the plaintiff's property, a direct consequence of which was that in the normal course of events the plaintiff was bound to lose some of his soil. I do not think that subsidence in the sense of a falling down, collapsing or caving in of land, is the only circumstance which would warrant a plaintiff having a cause of action based on the removal of lateral support. It is no doubt true that in the vast majority of cases damage is caused in this manner, but, in my opinion, it would be unrealistic to confine the right of action to circumstances in which loss is occasioned in this particular manner. I can see no distinction between a situation where, following upon the removal of lateral support, lumps of soil fall down during a rainfall and a situation where the soil is gradually eroded by rain water. There is no magic in the word subsidence. In each of the instances postulated there would be a disturbance of the natural surroundings of ground because of the removal of lateral support."57

[205] I respectively associate myself with the reasoning of the learned Judge which I consider is authority for the proposition that there is no closed list of mechanisms through which a removal of lateral support will manifest *vis-à-vis* a neighbouring property.

[206] There are further reasons why I am unable to accept the first defendant's argument that the subsiding of a slope on which a number of properties are situated, including a contiguous property whose owner sues for a breach of the duty of lateral support, falls outside of the scope of such an action. One reason is the inherent illogicality of the proposition that if an excavation is of such large proportions that it causes not simply a localised subsidence or failure but one which undermines an entire slope comprising multiple properties, then the owner of a contiguous property cannot sustain an action based on a breach of the duty of lateral support. To accept this reasoning would mean that a land owner whose excavation or breach causes far-reaching damage affecting a number of properties escapes liability whilst land owners, the consequences of whose breach are much more modest, are saddled with strict liability.

[207] A further reason why I am unable to accept Dr Day's opinion that there was no failure of lateral support is the narrow definition which he seeks to give to the concept of lateral support and the artificial distinction which he seeks to draw between the vertical and the horizontal pressure exerted by earth. In arguing that the slope mobilisation was not a result of a lateral support, the first defendant relied on Dr Day's opinion that, to quote from his expert summary:

". . . ground movement was not caused by the removal of lateral support. It was the result of a reduction of load at the lower end of the slope leading to a failure of the slope in which the excavation was formed, rather than failure of the excavation itself . . ."

[208] In the same summary Dr Day proceeds further:

"The formation of an excavation at the toe of the slope has two effects. Firstly, it reduces the weight of the soil at the toe (B). Secondly, in the case of a soil that derives part of its strength from friction, it reduces the shearing resistance of the soil (C) over the part of the failure plane below the excavated area. If the stability of the slope prior to excavation was already marginal, the formation of the excavation could cause failure of the slope. Note that it is not the excavation itself that fails, but the slope in which the excavation has been formed. It is thus a slope failure, not removal of lateral support".

[209] Underlying Dr Day's opinion is the assumption or proposition that if the excavation face itself does not fail then there can be no failure of lateral support, notwithstanding that the entire body of earth in which the excavation is made itself shifts downwards or laterally or both, with the further consequence that neighbouring properties relying for support on this body of earth move laterally or downwards with consequential damage. Dr Day did not provide any authority, scientific or otherwise, for defining a failure of lateral support as being limited to the face of an excavation. Nor in my view does it follow as a matter of logic or science that such a limitation must be placed on the concept of lateral support. The purpose of that support is to protect the integrity of contiguous land. In my view to limit the duty of lateral support to circumstances where the face of an excavation fails, but to exclude the operation of a duty of lateral support where the excavation remains intact but the property as whole shifts through the mechanism of a land slide which causes contiguous properties to move laterally or downwards, would be illogical and defeat the very purpose of the rule. It would moreover be artificial. It is obvious that a body of soil exerts both downward and lateral pressure. In this regard Van Der Walt states as follows:58

"Given the natural downward and lateral pressure of the soil, it stands to reason that artificially demarcated individual land parcels must rely on mutual lateral support to preserve the natural condition, position and topography of each land parcel. When this support is removed through works or excavation on one property and the adjoining land becomes unstable, the affected landowner is deprived of the normal use and enjoyment of her land".

The author writes further "Badenhorst, Pienaar and Mostert similarly take as their point of departure the entitlement of every landowner to expect

from neighbouring landowners "such support as would suffice to maintain his land in a condition of stability".59

[210] These two passages provide support for the notion that the duty of lateral support is not confined to such support as will maintain the face of an excavation irrespective of what further consequences an excavation will have for the stability of contiguous land.

[211] In his evidence, Dr Day provided his own definition of lateral support when he testified as follows:

". . . when you form an excavation you remove both the soil from the excavation, which removes the weight of soil

from the base of an excavation, but you also remove the lateral pressure which that soil exerts or exerted before it was removed on the surrounding soils.

Now lateral support is that which you have to do to preserve the stability of that face in the light of having removed that lateral pressure".

[212] In other words Dr Day removes from the operation of the duty of lateral support the downward pressure of soil notwithstanding that such pressure can also play a role in preserving the stability of contiguous land. In so doing Dr Day unjustifiably and illogically conflates two separate concepts, namely, lateral support and the lateral pressure of soil. Apart from the fact that Dr Day could refer to no working definition of lateral support, the only academic article that he referred to provides no clarity on the question of what constitutes lateral support.60 As mentioned, in his evidence Dr Day sought to distinguish a slope failure from a failure of lateral support stating that the latter is confined to the area of excavation as opposed to a slope failure which results in a global movement of an entire area. In this context he added that soil nails, which he hypothesised could be installed to support the face of the excavation, would have "absolutely no influence on the stability of the slope because that entire excavation is moving with the slope." I pause here to point out that this is at odds with the evidence (including Dr Day's evidence) in the present case which was that movement in the slope as a whole reduced to little if anything once all the remedial measures were taken by the first defendant immediately after the worst movements. These measures included ground anchors and piles driven into the base of the first defendant's property. Dr Day continued:

"So it is not a failure of the excavation *per se*, it is a failure of the slope encompassing the excavation. So that is my distinction between a lateral support failure which is a failure of the excavation face and a slope failure which is an overall failure which encompasses the entire excavation and any retaining structure which is built to support that excavation".

[213] On behalf of the first defendant it was contended that Dr McStay's opinion that ". . . the causative mechanism of the ground movements was a triggering of a slope failure due to the removal of lateral support by excavation of a large mass of soil and boulders on 13 and 11 Barbara

Road" was a bald *ipse dixit* lacking any authority or reasoning. It was further criticised on the basis that his evidence lacked any explanation of what constituted lateral support. However, Dr McStay did testify that the cause of the damage was the extensive excavations and their location which amounted to "the removal of lateral support in the form of the earth and that was the main triggering mechanism for the slope instability". Dealing with the fact that the retaining wall on the boundary of the Dias property had not failed he testified that "in this instance, although the concrete of the wall is still intact, it did not perform its primary function of retention. It did not provide sufficient lateral support to stop lateral and vertical movement of the soil and damage to the Dias property, therefore it was not fit for purpose."

[214] Ultimately what was presented to the Court were the opinions of two geotechnical engineers. One asserted that a failure of lateral support must manifest at the face of the excavation and that if an excavation results in a general landslide but no failure of the excavation surface, then it is not a failure of lateral support. On the other hand the plaintiff's expert took an opposing point of view, namely, that the fact that the retaining wall stood and therefore there was no failure of the face of the excavation did not mean that there was no failure of lateral support where the excavation was instrumental in a wholesale landslide which led to lateral and downward movement of the plaintiff's property. In that instance the retaining wall had failed to perform its overall function which was to ensure the stability of the property behind it.

[215] It was further argued on behalf of the first defendant that the retaining walls constructed on Naumann's property did not fail and successfully retained the soil that was behind it; furthermore, that it is not the function of a retaining wall, whose overt purpose is to provide lateral support - to hold back a slip circle movement. The flaw in this argument is the assumption that the duty of lateral support is exhaustively satisfied by the building of retaining walls which remain standing. However, if in a given situation the contemplated excavation is of such an extent that a slip circle failure might occur which will not be prevented by the construction of a retaining wall or walls, then quite clearly the duty of lateral support requires more extensive preventative measures in order to be satisfied. As the circumstances of the present case indicate these measures were available in the form of piles, ground anchors, better timing of the entire building project etc., measures which were in some instances successfully implemented albeit *ex post facto*.

[216] The thrust of the first defendant's case, with which the first third party associated itself, was expressed in the following passages from Dr Day's evidence when it was put to him that the bulk of the earth removed in the excavation provided lateral support to the plaintiff's property and not just the excavation face. He answered as follows:

"The failure which we had was a failure which encompassed five properties. We are not talking about something which occurred in one localised area. We are talking about the mobilisation of a slope. The primary cause for the mobilisation of that slope was the removal of the vertical load afforded by the soil, above the failure plane, within the two excavations on the Venter property and the Naumann property".

[217] It was then again put to Dr Day that the bulk of earth that was removed was providing lateral support to the Dias property and he replied:

". . . M'Lord, yes, the earth did provide lateral support to the Dias property in that when you have a weight of ground you have horizontal forces acting within that ground. The question is whether there is any *nexus* between the removal of the horizontal component, that lateral component and the failure of the slope and the answer there is no. There is

absolutely no *nexus* between the two. The cause of the failure of the slope is a removal of weight and not the removal of any lateral support".

[218] Dr Day continued:

"No, the excavations were an essential part of this failure. They were one of the contributing factors to the failure and no one is denying that. The question is whether or not it is removal of lateral support or a slope failure.

Mr Bey: And as I understand your distinction is, you say lateral support is horizontal pressure and anything that has to do with vertical pressure you say is irrelevant in the debate of lateral support. Is that correct? . . . My Lord, yes, the word lateral means sideways.

And that is your engineering approach to this?

. . . No My Lord, it is a dictionary definition".

[219] In my view Dr Day errs when he concludes that a failure on the contiguous property caused primarily or exclusively by the removal of the vertical pressure of soil does not constitute a failure of the duty lateral support. This is to unjustifiably and artificially limit the concept and the doctrine of lateral support. Even if Dr Day's viewpoint was scientifically accepted this does not necessarily mean that the Court is bound to accept it as defining the scope of the duty of lateral support in law.

[220] Finally, it was argued on behalf of the first defendant that the vertical forces in question related to the slope as a whole, encompassing five properties, and not just to the adjacent Dias property with the result that even if the weight countering these vertical forces could be viewed as some form of "lateral support" the fact that it supported the entire slope and not simply the plaintiff's property took it out of the realm of the duty of lateral support. However, I have already considered and rejected the argument that a failure of lateral support can only be localised and therefore that failures of a slope encompassing several properties precludes the (strict liability) duty of lateral support.

[221] In my view the dispute between the experts turns on the question of whether lateral support is to be given a wide or a narrow definition. In the narrow definition any vertical force removed as a result of an excavation is irrelevant; provided the vertical face of no excavation fails, the duty of lateral support is satisfied. I am aware of no precedent or authority for affording the concept of lateral support this narrower definition. It is, furthermore, neither a purposive nor sensible interpretation since it does not protect the interests of the contiguous land owner whose primary concern in these circumstances is the stability of his property, irrespective of whether his neighbours' excavation removes that stability through the failure of the vertical face of an excavation or through the removal of weight at the toe of the slope causing a general landslide or slip circle failure. Ultimately, notwithstanding the spirited debate and differences of opinion between the experts and although I have engaged with them ex

abundante cautelae, I consider that the question of the extent of the duty of the definition of lateral support is a question which can be determined by the Court and in which expert scientific opinion has at best a limited role to play.

[222] In my view, Dr Day's distinction between the failure of an excavation face and the failure of a slope in a greater body of soil as a manifestation of a failure of lateral support is illogical and does not appear to have scientific authority. For the reasons furnished above I consider that lateral support must be given the wider, purposive definition, one congruent with the role which the doctrine plays in our law, namely, a special remedy which safeguards the integrity and stability of contiguous land. Although I consider that the question of whether the slip circle failure constituted a failure of lateral support could be answered without recourse to the evidence of the experts, I have fully engaged with their evidence. It is therefore incumbent on me to evaluate Drs McStay and Day as witnesses. Apart from Dr McStay's rather unconvincing about turn in regard to the role of the excavation on the Venter property, I was favourably impressed by his evidence as a whole. The opinions which he expressed were rational and backed by consistent reasons. What came through in his reports and evidence was a practical and common sense approach which demonstrated his wide experience in the field. This was well illustrated in my view by his observations regarding the hazards of building on the Camps Bay slope and the cautious approach which this necessitated as well as his observations disputing the success of the retaining walls on the Naumann property simply because they remained standing. The proposition (which he disputed) that they were successful in their function notwithstanding the slope circle failure puts one in mind of the mythical surgeon proclaiming an operation a complete success - apart from the fact that the patient did not survive.

[223] As far as Dr Day is concerned there is no doubting his expertise as a geo-technical civil engineer and his evidence was very helpful in understanding the geological aspects of what took place on the site from March 2008 until the remedial measures were completed. Although I do not doubt Dr Day's sincerity or his professional integrity, I gained the distinct impression that he became overly wedded to his client's case, including the notion that the geological event was not a failure of lateral support. Dr Day's unwillingness to accept that the Dias dwelling was not in excellent condition prior to 2008, based on speculative or weak evidence indicating the contrary, suggested that he fell into the trap of approaching some of the issues in the matter in a less than balanced manner.

Causation

[224] A further defence or legal argument raised on behalf of the first defendant was the issue of causation, the overall contention being that the plaintiff had failed to discharge the onus of proving this requirement.

[225] The first element of the argument was the contention that the central issue before the Court was not whether the slope mobilisation was caused by the Venter and/or Naumann excavation but instead was

whether the slope mobilisation was caused by a removal of lateral support on the

Venter and/or Naumann properties. I have already found, however, that a removal of lateral support can manifest as a slope mobilisation.

[226] In the second part of the argument, the first defendant's Counsel dealt with what he contended was the multiplicity of factors which caused the slope mobilisation. Counsel referred to the two requirements of causation as an element of liability viz factual causation, requiring a factual enquiry whether the relevant act or omission caused the harm giving rise to the claim and, secondly, legal causation, being the question of whether the relevant act or omission was sufficiently closely or directly linked to the harm for legal liability to ensue.

[227] Reliance was placed by the first defendant on the case of Lee v Minister of Correctional Services.61 In that case the Constitutional Court approved the sine qua non or "but for" test long employed by the Courts in determining factual causation notwithstanding its dictum that the "test is not without problems, especially when determining whether a specific omission caused a certain consequence".62 The Constitutional Court went on to state63:

> "(i)n the case of 'positive' conduct or commission on the part of the defendant the conduct is mentally removed to determine whether the relevant consequence would still have resulted. . . However, as will be shown in detail later, the rule regarding the application of the test in positive acts and omission cases is not inflexible. There are cases in which the strict application of the rule would result in an injustice, hence a requirement for flexibility. The other reason is because it is not always easy to draw the line between a positive act and an omission. Indeed there is no magic formula by which one can generally establish a causal *nexus*. The existence of the *nexus* will be dependent on the facts of a particular case".

[228] Clearly factual causation must be proved notwithstanding the fact that the claim is for a failure of lateral support where liability is strict. The test was classically set out in *International Shipping Company (Pty) Ltd v Bentley*,64 where Corbett CJ stated in the following terms:

> "The enquiry as to factual causation is generally conducted by applying the so-called 'but-for' test, which is designed to determine whether a postulated cause can be identified as a *causa sine qua non* of the loss in question. In order to apply this test one must make a hypothetical enquiry as to what probably would have happened but for the wrongful conduct of the defendant. This enquiry may involve the mental elimination of the wrongful conduct and the substitution of a hypothetical course of lawful conduct and the posing of the question as to whether upon such an hypothesis plaintiff's loss would have ensued or not. If it would in any event have ensued, then the wrongful conduct was not a cause of the plaintiff's loss; *aliter*, if it would not so have ensued".

[229] Nugent JA, in *Minister of Safety and Security v Van Duivenboden*,65 stated as follows:

> "A plaintiff is not required to establish the causal link with certainty, but only to establish that the wrongful conduct was probably a cause of the loss, which

> calls for a sensible retrospective analysis of what would probably have occurred, based upon the evidence and what can be expected to occur in the ordinary course of human affairs rather than an exercise in metaphysics".

[230] First defendant's Counsel argued that a primary cause of the slope mobilisation in July 2008 was general slope instability predating the Naumann and Venter excavations and that its instability was the result of a number of historical factors including poor soil conditions, prior excavations on the Venter and Stylemark properties and finally a winter with a significantly high rainfall intensity. For the purposes of dealing with this argument all these contributing factors can be accepted as having played a role. Counsel also argued that the Venter excavations in 2008 would have exacerbated what was a pre-existing problem on the property. In this context it was contended that the Naumann excavation was but one of a multiplicity of contributory causes.

[231] This picture, however, does not do justice to the facts. It is clear that the excavation on the Naumann property was extensive. It was described by Naumann's own engineer as "a hole the size of which (he) had never to dig before" and involved the removal of approximately 5413m³ of earth, 57 blasting shots as well as the removal of many large boulders. On the adjoining Venter property, 574m³ were removed in the excavation which required 22 blasting shots. When the slip circle failure occurred 1057m³ of fill was brought back by Mr Naumann and deposited on the two sites to stabilise the slope. In numerous passages in his evidence, Dr Day conceded that without the excavations on the Naumann (and Venter) properties the slip circle failure would never have occurred. The multiplicity of factors which were identified by first defendant's Counsel were, save for the winter rainfalls (themselves quite predictable), part of a pre-existing state of affairs.

[232] It was argued on behalf of the first third party that there was no clear direct and exclusive link between the Naumann excavations and the slip circle earth mobilisation during 2008. In support of this argument it was pointed out that the excavations on both properties stood unsupported for some months without incident. There may well have been no apparent subsidence or earth movement for a period of time after the excavations were complete but once the winter rains fell (and around the time the Loffelstein wall collapsed), the ground movements which led to the slip circle commenced apace. The suggestions that the 1980 Venter excavations had already brought the slope "to the point of failure", a submission made by both first defendant and the first third party on several occasions, is grossly overstated and unsupported by the evidence.

[233] In the present case the exercise prescribed in Bentley presents no difficulty; had the first defendant not

effected his excavation, the overwhelming probability is that no slip circle failure would have occurred. Although not strictly relevant, it is also probable that had the excavation been effected but only after expert geo-technical engineering advice had been taken and with appropriate safeguards such as ground anchors, piles or other measures, the slip circle failure would similarly not have taken place. In these circumstances I see no difficulty at all with the question of factual causation. If the fact of excavations on the Naumann property (and on the

Venter property) in 2008 is thought away it is quite clear that the slip circle failure would never have occurred.

[234] It is doubtful whether it is necessary to have regard to the question of legal causation since liability under the duty of lateral support is strict and the question of reasonable foreseeability does not arise. Indeed first defendant's Counsel himself contended, at an earlier junction in his heads of argument, that both fault and foreseeability were irrelevant inasmuch as there were no allegations in the particulars of claim regarding these aspects and the plaintiff advanced a cause of action predicated on strict liability. Even if legal causation had to be proved then in my view that requirement is fully satisfied. Given the extent of the excavation which Mr Naumann planned and the topography of the terrain in which his property was situated, it was obviously foreseeable that difficulties such as those which came to pass might arise. That this was recognised by Mr Naumann himself and his consulting engineers emerges, if only belatedly, from the correspondence which passed between them during May and July 2008 during the course of the excavation and which is set out in paragraphs 91-94 above. This correspondence speaks for itself concerning the foreseeability of slope stability/lateral support issues.

The consent/waiver defence

[235] This issue was not strenuously pursued by Counsel in argument but it was not abandoned so I shall deal with it. The first defendant contends that her property owed no duty of lateral support to the plaintiff's property because the plaintiff had agreed that the excavations could be carried out and thus consented to the removal of earth providing lateral support, and its replacement with retaining walls. It is so that the first defendant sought and obtained the written approval of surrounding property owners, including the plaintiff, for the construction of the dwelling she proposed to build and that this included the excavation. However, in clause 2.7 of the self-same agreement the first defendant and her husband, Mr Naumann, (referred to therein as "the applicants") undertook to "ensure security integrity of neighbouring properties during the construction phase." That would necessarily include the duty to ensure that any excavation did not cause a failure of lateral support to neighbouring properties including the plaintiff's. In any event, although it is a well-established principle that a right to lateral support can be waived and lost, as was stated in *Rouliot* any such waiver or loss would not be presumed and has to be clearly established. The following passage appears in that judgment:

> "If the right of lateral support exists as a natural right incident to the plaintiff's land - as in my opinion it does - the parties to the contract must be deemed to have contracted with a view to the continued existence of that right. If they had intended that the plaintiff should be deprived of this natural right ought not the defendant have stipulated to that effect? I am of the opinion that in the absence of such a stipulation the presumption is in favour of an intention to preserve a well-established natural right of property rather than to part with such a right66".

[236] A reading of the agreement concluded between the first defendant and her neighbours contains no direct reference to the excavation let alone a stipulation that neighbours were foregoing their right to lateral support. The onus to establish a waiver of the right to lateral support rests upon the defendant who pleads it.67

[237] In heads of argument the defence pleaded by the first defendant that the plaintiff had consented to the first defendant's excavation and thereby waived any right of lateral support was watered down to the contention that the plaintiff had agreed that the excavations could be carried out and had thus consented to the removal of earth providing lateral support and its replacement with retaining walls. These are two different concepts however and even the latter does not equate to a waiver of any right of lateral support. In my view the first defendant has failed to prove that the plaintiff waived his right to the lateral support which his property was owed.

The position of the second defendant

[238] The plaintiff's action initially sought to hold the first and second defendants jointly and severally liable for his damages. The action was initially opposed by the second defendant who was represented by Counsel during the early stages of the trial. When the matter recommenced after a postponement the second defendant was no longer represented and the plaintiff's Counsel advised that the plaintiff had settled its claim against the second defendant. At this stage Mrs Dias was still under cross-examination. In due course the plaintiff filed a notice of withdrawal of his action against second defendant which says no more than this had occurred pursuant to a settlement concluded between the parties. During argument the question arose as to the effect of the plaintiff's purported withdrawal of its action against the second defendant on any relief which the plaintiff might obtain. On behalf of the plaintiff it was contended that with effect from filing the notice of withdrawal, namely, 24 February 2017, there was no longer any *lis* between it and the second defendant, that it sought no order as against the second defendant and accordingly that no such order could be granted.

[239] Two difficulties arise with regard to this proposition. In the first place the order made by Saldanha J in terms of rule 33(4) identified the prior issues to be determined which also involved a consideration of the role and

liability of the second defendant in his capacity as owner of a neighbouring property at the relevant time. That order has never been amended and should the issues be decided in favour of the plaintiff as against the first and second defendants then the first defendant might well have a right of recourse against the second defendant.

[240] The second difficulty with the plaintiff's approach is that his notice of withdrawal against the second defendant was a unilateral act which did not enjoy the consent of the first defendant or the first third party, nor

that of the Court. Rule 41(1)(a) of the Uniform Rules of Court provides as follows:

> "A person instituting any proceedings may at any time before the matter has been set down and thereafter by consent of the parties or leave of the Court withdraw such proceedings, in any of which events he shall deliver a notice of withdrawal . . . "

[241] In the commentary in 'Erasmus Superior Court Practice'68, the authors state that in the absence of such consent or leave, a purported notice of withdrawal will be invalid. More significantly they add "the court has a discretion whether or not to grant such leave, and the question of injustice to the other parties is germane to the exercise of the court's discretion. It is, however, not ordinarily the function of the court to force a person to proceed with an action against his will or to investigate the reasons for abandoning or wishing to abandon one69". In *Karoo Meat Exchange Ltd v Mtwazi*,70 it was held that once the state of set down has been reached in litigation a discretion vests in the judicial officer as to whether the proceedings should be terminated or not. To hold otherwise, to allow the plaintiff an absolute and not a qualified right to terminate the action at will, might lead to injustice. In this regard Diemont J stated as follows:

> "Once the case has been set down for hearing the court has an interest to see that justice is done both in regard to the merits of the dispute and in regard to the costs. When the case has progressed to the stage of being set down for hearing, the parties can no longer do as they please. The court cannot be deprived of its control merely by reason of the fact that the plaintiff has served a notice of withdrawal . . . [T]hese considerations persuade me that it is right and proper that once the stage of set down has been reached in litigation a discretion should vest in the judicial officer as to whether the proceedings should be terminated or not. To hold otherwise, to allow the plaintiff an absolute and not a qualified right to terminate the action at will, may lead to injustice71".

[242] The rationale for this approach and for the rule is well illustrated in the present case. The first defendant, and quite conceivably the first third party as well, have an interest in determining, should they be held liable for any damages, whether the second defendant may also be liable for damage suffered by the plaintiff. Should the second defendant be treated in these proceedings as if he were no longer a party thereto by reason of the settlement agreement arrived at and the plaintiff's notice of withdrawal against him, the first defendant and the first third party may have to institute separate proceedings against the second defendant or alternatively join him at this late stage as a further third party. All these issues could have been fully ventilated had the plaintiff sought the consent of the first defendant and the first third party to the withdrawal of his action against the second defendant or had the Court been approached for its consent. In that event, had the plaintiff been successful the order made by Saldanha J separating the issues and including the second defendant within the ambit of those issues could have been amended. None of these steps were

taken. The plaintiff simply purported to withdraw his action against the second defendant irrespective of the outcome *vis-à-vis* the first defendant and the first third party.

[243] In my view the present circumstances illustrate why the plaintiff does not have an unqualified right to withdraw his action against the second defendant. I should mention that the possibility that the Court could ultimately make an order which affected the second defendant was conveyed to his legal representative shortly after the filing of the notice of withdrawal but they chose to take no further part in the trial. In the result the form of the draft order sought by the plaintiff in which the second defendant is excluded cannot be granted.

[244] The view that I take then is that the issues as defined by Saldanha J must be answered insofar as they apply to the second defendant as well. As I have indicated in my reasoning, each of the three issues separated in terms of rule 33(4) must in my view be answered in favour of the plaintiff.

The second defendant's liability

[245] It remains to determine whether any liability on the part of the second defendant has been established on the evidence for any damages which may have been suffered by the plaintiff.

[246] In the first place it was common cause that the Venter property bordered on the plaintiff's property and therefore its owner owed a common law duty to provide lateral support to the plaintiff's property. In regard to the second and third issues, in my view the evidence has established that the excavations which were carried out on the second defendant's property in or about May or June 2008 breached this duty of lateral support. This was the view initially expressed by Dr McStay on behalf of the plaintiff and there was no countervailing evidence from the second defendant. Dr McStay's view only changed in this regard subsequent to the plaintiff arriving at a settlement agreement with the second defendant. Furthermore, Dr McStay's reasons for the change in his opinion were not convincing and there was no cogent evidence supporting his revised opinion in this regard. Although the excavation on the second defendant's property was relatively small in comparison to that on Naumann's property, on the probabilities it must have contributed towards the overall loss of stability

in the slope and was a manifestation of a failure to provide appropriate lateral support to the plaintiff's property. The failure of the slope impacted severely on the second defendant's property and the movement of the plaintiff's house was both downwards and in the direction of the second defendant's property. In these circumstances, although it is not possible on the evidence put before the Court to determine precisely to what extent the respective excavations led to or contributed to the slip circle failure, on the probabilities the excavations on Venter's property played a material role in rendering the slope unstable.

Costs

[247] Given that the plaintiff has been successful in respect of each of the three separated issues he is entitled to the costs of the trial. Since the action was

defended by both the first defendant and the first third party it is appropriate that they bear the plaintiff's costs jointly and severally.

[248] The costs of the rule 33(4) application were reserved for determination by the trial court. That application was brought by the first defendant and the first third party and opposed by the plaintiff even though he too considered that certain issues should be separated. The grounds of opposition were that the plaintiff wanted certain further issues added to those to be heard first. It would appear that the Court did not favour the plaintiffs' approach in this regard although it did grant him some relief which found expression in the wording of paragraph 2 of the order. In the circumstances, I consider that the plaintiff should pay two thirds of the first defendant's and first third party's costs in that application.

[249] In the result the following order is made:

1. It is declared that:

   1.1 The first and second defendant owed the plaintiff a duty to provide lateral support to the plaintiff's property;

   1.2 The excavations carried out on the first defendant's and the second defendant's property in May or June 2008 breached this duty of lateral support, as a result whereof the scree slope on which the plaintiff's property and residence were situated and constructed, mobilised and subsided in or about June and July 2008.

   1.3 The first defendant and the first third party are, subject to paragraph 1.4 below, to pay the plaintiff's costs jointly and severally, the one paying the other to be absolved, including the qualifying expenses of Ms Papanicolaou, Dr McStay and Mr Van Gyssen.

   1.4 In relation to the separation application the plaintiff is to pay two thirds of the first defendant's and first third party's costs therein.

For the plaintiff:

RWF MacWilliam SC instructed by *Smith Tabata Buchanan Boyes*

For the first defendant:

JG Dickerson SC and *M Steenkamp* instructed by *Edward Nathan Sonnenbergs*

For the second defendant:

L Wessels instructed by *Werksmans Attorneys*

For the 1st third party:

M Seale SC instructed by *Mellows & De Swardt*

For the 6th third party:

S Olivier SC instructed by *Hardam & Associates*

Footnotes

1 2007 (5) SA 94 (SCA) at para [16] [also reported at [2007] 3 All SA 9 (SCA) - Ed].
2 *Anglo Operations Ltd v Sandhurst Estates (Pty) Ltd* 2007 (2) SA 363 (SCA) [also reported at [2007] 2 All SA 567 (SCA) - Ed].
3 1963 (1) SA 102 (A) [also reported at [1963] 1 All SA 203 (A) - Ed].
4 (1890-1891) 8 SC 74.
5 *Ibid* at 91.
6 *Ibid.*
7 2007 (2) SA 363 (SCA).
8 *Ibid* at para [14].
9 *Ibid* at para [8].
10 1911 TPD 577.
11 *Anglo Operations* at para [14].
12 *Ibid* at para [17].
13 1951 (4) SA 466 (E) at 474 [also reported at [1951] 4 All SA 43 (E) - Ed].
14 See JRL Milton *The Law of Neighbours in South Africa* 1969 *Acta Juridica* 123-269 ("*Milton*") at 200.
15 (1894) 1 Off Rep 43 ("*Victoria*").
16 *Ibid* at 48.

17 *Phillips v South African Independent Order of Mechanics and Fidelity Benefit Lodge and Brice* 1916 CPD 61 at 65.
18 (1901) 22 NLR 225 at 227.
19 1951 (4) SA 466 (E) at 474A-B.
20 *Ibid* at 484C-E.
21 1955 (2) SA 312 (N) [also reported at [1955] 2 All SA 202 (N) - Ed].
22 *Ibid* at 316B-C.
23 1955 (1) SA 634 (N) at 638B-D [also reported at [1955] 1 All SA 400 (N) - Ed].
24 *The Law of Neighbours*, Juta, (1ed), Ch 3 at 92.
25 *Ibid* at 122-3.
26 *Ibid* at 123-4.
27 *Ibid* at 122. See *Milton* at 200.
28 Above at 473G.
29 *Ibid* at 484A-D.
30 *Ibid* at 484E and H.
31 *Ibid* at 485F.
32 Above.
33 (1881) 6 AC 740.
Lord Penzance said that if the question had not been governed by precedent he would have held that " . . . it would not be inconsistent with legal principles to hold, that where an owner of land has used his land for an ordinary and reasonable purpose, such as placing a house upon it, the owner of the adjacent soil could not be allowed so to deal with his own soil by excavation as to bring his neighbour's house to the ground. It would be, I think, no unreasonable application of the principle "*sic utere tuo ut alienum non laedas*" to hold, that the owner of the adjacent soil, if desirous of excavating it, should take reasonable precautions by way of shoring, or otherwise, to prevent the excavation from disastrously affecting his neighbour. A burden would no doubt be thus cast on one man by the act of another done without his consent. But the advantages of such a rule would be reciprocal, and regard being had to the practicability of shoring up during excavation, the restriction thus placed on excavation would not seriously impair the rights of ownership".
34 *Milton* at 208.
35 *Ibid* at 209.
36 *Ibid.*
37 *Ibid.*
38 *Law of Neighbours* above, at 124.
39 Above at 124-5 with reference K Gray and SF Gray Elements of Land Law, (5ed), (2009) 1.2.29 and the case of *Xpress Print Pty Ltd and L and B Engineering (S) Pty Ltd* [2000] 3 SLR 545.
40 *Milton* at 209.
41 *Ibid* at 210.
42 *Ibid.*
43 1947 (3) SA 602 (T) [also reported at [1947] 3 All SA 230 (T) - Ed].
44 *Ibid* at 209.
45 *Anglo Operations* at para [17].
46 *Milton* at 210.
47 Above.
48 *Ibid* at 106H-107A.
49 *Ibid* at 108E.
50 *Rex v Vilbro and another* 1957 (3) SA 223 (A) [also reported at [1957] 3 All SA 200 (A) -Ed] and Zeffert and Paizes *The South African Law of Evidence*, (2ed), at 321-3.
51 *P v P* 2007 (5) SA 94 (SCA) at para [16].
52 *Michael and another v Linksfield Park Clinic (Pty) Ltd and another* 2001 (3) SA 1188 (SCA) [also reported at [2002] 1 All SA 384 - Ed] and Zeffert and Paizes at 323.
53 2015 (1) SA 139 (SCA) at para [15] [also reported at [2014] JOL 32306 (SCA) - Ed] quoting *Stock v Stock* 1981 (3) SA 1280 (A) at 1296F.
54 See para [217.10] of the plaintiff's heads and pages 1405-1420 of the record.
55 1965 (1) SA 806 (N) [also reported at [1965] 1 All SA 476 (N) - Ed].
56 *Ibid* at 810E.
57 *Ibid* at 810H-811C.
58 *Law of Neighbours* at 88.
59 *Ibid.*
60 Clough GW and O'Rourke TD (1990) "Construction induced movement of *in situ* walls. Design and Performance of Earth retaining structures", Geotechnical Special Publication 25. ASCE, New York.
61 2013 (2) SA 144 (CC) [also reported at 2013 (2) BCLR 129 (CC) - Ed].
62 *Ibid* at para [40].
63 *Ibid* at para [41].
64 1990 (1) SA 680 (A) at para [65] (700F-G) [also reported at [1990] 1 All SA 498 (A) - Ed].
65 2002 (6) SA 431 (SCA) at para [25] [also reported at [2002] 3 All SA 741 (SCA) - Ed].
66 *Rouliot* above at 94.
67 *Laws v Rutherford* 1924 AD 261 at 263 and *Road Accident Fund v Mothupi* 2000 (4) SA 38 (SCA) at para [19] [also reported at [2000] 3 All SA 181 (SCA) - Ed].
68 Vol 2, at D1-550.
69 *Ibid.*
70 1967 (3) SA 356 (E) [also reported at [1967] 3 All SA 374 (E) - Ed].
71 *Ibid* at 359B-G.