VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

CIVIL DIVISION

VCAT REFERENCE NO. D777/2004

DOMESTIC BUILDING LIST

CATCHWORDS

Domestic Building, appeal from the decision of a warranty insurer, "defective building work", cause of damage, failure to build in accordance with good building practice making the home vulnerable to other poor building practice, independence of expert witnesses, failure to call an obvious witness nor explain their absence, the rule in *Jones v Dunkel*, awareness of site conditions, designing and/or building in accordance with site conditions, fill on site.

APPLICANT:	Joe Ciantar t/as Dalrymple Homes
FIRST RESPONDENT:	Housing Guarantee Fund Limited
JOINED PARTY:	Cheryl and Lino Giampa
WHERE HELD:	Melbourne
BEFORE:	Senior Member M. Lothian
HEARING TYPE:	Hearing
DATE OF HEARING:	28 November 2005 to 2 December 2005
DATE OF ORDER:	16 December 2005
CITATION:	[2005] VCAT 2648

ORDERS

1. The decision of the First Respondent is affirmed.

2. The parties have leave to apply for costs.

SENIOR MEMBER M. LOTHIAN

APPEARANCES:

For the Applicant:	Mr D Pumpa of Counsel
For the Respondent:	Mr J Forrest of Counsel
For the Joined Party:	Mr Galloway, solicitor, who attended on the first day and has been given leave to attend to make submissions regarding costs.

REASONS

1. This is a case where there is, without question, building distress caused by a foundation failure. The relevant foundation is beneath the south wall of the garage, and its failure has caused the wall to rotate vertically, so that the top of the wall now leans outward and the garage floor upon which it sits has cracked. The parties agree that movement of the wall and floor appears to have stopped, and there is an indication that were an independent builder engaged to rectify, the cost would be between $10,000.00 and $20,000.00. The issue between the parties is whether the Respondent ("HGFL") has properly directed the Applicant ("Builder") to rectify.

2. It is the opinion of the expert upon whom the Builder relied at the hearing, Dr Haberfield, that the most likely cause of distress is a collapse in a trench immediately to the south of the garage wall. It is the opinion of the experts upon whom the HGFL relied at the hearing, Mr David Lawrence and Mr Tim Gibney, that the most likely cause of distress is compaction of filled material beneath the edge beam of the garage floor, on which the south wall sits. Dr Haberfield has a PhD in Geotechnical Engineering and practises mainly in large scale buildings. Mr Lawrence is a geologist with an extensive practice in distressed buildings of domestic scale. Mr Gibney is a consulting structural engineer and geotechnical engineer whose practice deals almost entirely with housing.

3. The experts who appeared agree that the garage floor has sunk at the southern wall at least 20 mm and probably approximately 56 mm and that there is concrete below three sections of the edge beam which is not part of the edge beam (referred to by Dr Haberfield as "the imputed underpinning" and in these reasons as "the alleged underpinning"). Mr Gibney and Mr Lawrence accepted the evidence of Dr Haberfield that there are gaps between the edge beam and the alleged underpinning and that there are

voids beneath the alleged underpinning and beneath the edge beam where there is no alleged underpinning. A void was observed during the site inspection, large enough to insert a hand into.

- **History of the dispute**

4. A building contract was signed by the Owners and Builder on or about 6 July 1999 for the construction of a dwelling and garage for $131,505.00. Warranty insurance was arranged with HIH Casualty and General Insurance Limited ("HIH") and by virtue of the insolvency of HIH and the enactment of the rescue scheme, a claim was made by the Owners against the HGFL.

5. The Builder says that pursuant to s46 of the *House Contracts Guarantee Act* 1987, if a claim was made by the Owners upon the HGFL, the HGFL was entitled to give reasonable directions to the Builder in respect of rectification of building work, but only to the extent that HIH would have been able to require that work to be done under the relevant HIH policy. The Owners made a claim on HGFL dated 28 July 2004, alleging that the southern wall of the garage suffers from building distress. The HGFL made a determination which was communicated to the Builder in a letter dated 18 October 2004. The HGFL directed the Builder to "complete the works required to be rectified as indicated in the enclosed schedule of works and direction to fix by 18/11/2004". The schedule of works was "cause and effect of building distress".

6. On 15 November 2004, the Builder appealed the decision of the HGFL of 18 October 2004. The application seeks an order to annul and reverse the Respondent's decision dated 18 October 2004, an order that the Respondent pay the Applicant's costs of and incidental to this proceeding and such further orders or relief as the Tribunal deems appropriate. As Mr Pumpa for the Builder said in his closing address, the question for the Tribunal is not

whether there has been a breach of contract or a tort, but only whether the HGFL was justified in making the decision of 18 October 2004. While this is true, there is clearly a defect to the building and issues of negligence and potential breach of contract are relevant to the question of whether there is defective building work which is the responsibility of the builder.

7. The Builder says that on 24 March 2004, the Owners contacted him by telephone to advise that there was a problem with the brick wall to the garage. He inspected on approximately 27 March 2004 and said that since construction of the house the area adjoining the property alongside the garage wall was covered in mulch and the trees that had been planted after construction of the garage were higher than the ridge line of the garage. The Builder says he formed the view that the damage was caused by the trees and told the Owners he would get an engineer's report, but if it was not his fault as builder then the Owners would pay the cost of the report.

8. The Builder had Rohan Gregory of FMG Consulting report and on 14 April 2004 he set out his findings that the cracking to the brick wall was caused by trees and was not the Builder's problem.

9. The Owners obtained their own engineering report from Foundation Exploration dated 15 June 2004. The Builder says that Foundation Exploration drilled two bore holes, one on the adjoining property in what the Builder now believes is a service trench and the other well away from the property. The Builder says that the findings by Foundation Exploration that the garage wall is founded on fill materials which extends for at least 50 mm beneath the footings is inaccurate as "what the bore hole actually shows is the depth of fill where the bore hole has been taken rather than the depth of fill beneath the garage slab".

10. The Owners claimed on the HGFL on 24 July 2004. On 22 August 2004 the Builder wrote to the HGFL to say that the slab was founded 100 mm into natural material and that the most likely causes of distress were the neighbouring trees, the trench and water gathering in this trench. He attached a diagram of the trench which showed the 45 degree angle of repose beneath the edge beam. The "angle of repose" is the line which shows the soil which is likely to collapse into a trench or pit. It is noted that the Builder did not suggest in this letter that the trench had collapsed.

11. Mr Trevor Kilgour inspected for the HGFL and suggested that it obtain an independent geotechnical report. A report was obtained from DM Lawrence Soil Testing Pty Ltd. Mr Lawrence is a geologist and is not an engineer. When asked in examination in chief whether the absence of engineering qualifications restricted his capacity to act as an expert in this matter, Mr Lawrence gave the extraordinary response that it improved his capacity to do so, as the evidence he gave related to the reaction between the building and the soil. It is noted that in his letter to the HGFL of 12 July 2005, he pointed out that structural design is outside his area of expertise.

12. Points of Claim on behalf of the Builder were filed on 20 May 2005. By that date Mr & Mrs Giampa ("the Owners") had been joined to the proceeding as Joined Parties on the Tribunal's own motion. The property in question is the Owners' home at 20 Viewgrand Way, Greensborough. The Owners gave evidence on the first day and after that took little part in the proceeding. They said that their preference is for the Builder to return to site to rectify the beam, wall and garage slab.

- **HGFL's capacity to order the Builder to rectify**

13. Mr Pumpa's first submission in closing was that the warranty policy had not been put before the Tribunal by the Respondent, and the Tribunal was therefore not in a position to determine whether the direction given was in

accordance with the policy. I indicated that in the absence of the policy, I would assume that the direction was of a type that could be made under the policy and that I would therefore determine whether the direction was properly given by deciding whether there is "defective building work" within the meaning of s44 of the *House Contracts Guarantee Act 1987* as amended.

14. The Builder was given until 9 December 2005 to decide whether he wanted to provide the policy and make further submissions about the capacity of the HGFL to make the direction under the terms of the policy. On 8 December the Tribunal received a letter from the Builder's solicitors, the relevant parts of which are:

> "1 We refer to the above matter and to the Telephone Mention scheduled for 9 December 2005 at 10:30 am ("the Mention").
>
> 2. We advise that any submission relating to the failure to put the Policy before the Tribunal is withdrawn following the Policy being provided to our client's Counsel and therefore there would appear no need for the Mention to proceed."

15. I therefore continue to assume there was nothing in the policy to prevent the HGFL from ordering the Builder to rectify defective building work.

- **Allegation of trench collapse**

16. The Builder submits that the HGFL Determination was not a reasonable direction because, he says, the building distress was not caused by any failure of the Builder. He says it was caused by the action of an unidentified person excavating a service trench in the neighbouring property alongside the wall which undermined the southern edge beam of the waffle slab. The HGFL denies that the service trench undermined the edge beam.

17. The Builder says, to the extent that the garage waffle slab was constructed on fill, the fill was well compacted and firm to stiff. The HGFL denies the

fill could adequately support the structure. The Builder did not identify the person who constructed the service trench but said that the work was done approximately six months after completion of the garage and that attempts to back fill the service trench were inadequate, resulting in loose, un-compacted soil. He gave no explanation of how he estimated the timing of the trench works and said nothing about any attempts to discover the identity of the person who dug the trench. Moreover, the Builder says, there have been attempts by unknown persons to underpin the edge beam with mass concrete, which were unsuccessful. The HGFL denies that the edge beam was underpinned by unknown persons.

18. Dr Haberfield said that the trench collapse would, most likely, have been instantaneous and could have occurred at any time while the trench was open. He confirmed, under cross examination, that there was no visual evidence to support the theory of trench collapse, and the theory is supported only by his mathematical modelling. This modelling is quite persuasive, but in this proceeding it should have been part, rather than all, of the Builder's case, for the reasons given below.

19. Mr Lawrence said that he did not believe trench collapse, if it had occurred, would cause the distress suffered by the house. Under cross-examination he said that his opinion would not change if the trench were 800 mm deep rather than 500 mm. His opinion on this point seemed to be based only on his view that compaction of the soil was the most likely cause of damage and was unconvincing.

20. Mr Gibney said he did not believe there had been a trench collapse. He considered the back-filling within the trench was sufficiently compacted to support the surrounding soil and that it would be unlikely that the trench would be open for longer than a day because of occupational health and safety considerations. The Tribunal noted that digging a trench hard up

against the foundations of a building is sufficient indication that the person responsible has a cavalier approach to such matters.

21. The presence of the voids beneath the alleged underpin is curious and no expert has given an entirely convincing explanation. Dr Haberfield said they were consistent with collapse of the trench, but if this were so there must have been a second trench collapse after the alleged underpinning had set. Mr Gibney suggested an explanation was a wash out from beneath the slab, but as Dr Haberfield said in answer to a question on this point, for there to be a wash out there must be a place for substantial amounts of water and soil to go, which tends to support the hypothesis of a trench collapse. The experts agree that, even in its damaged condition, the slab could cantilever to some degree. In accordance with the opinions of Mr Gibney and Mr Lawrence, the only credible explanation for the presence of the voids is settlement of the fill under its own weight, which might have occurred after initial settlement, or it might have occurred after a trench collapse.

22. The lack of direct evidence about who dug the trench and what happened there is a serious deficit in the Builder's case. In particular, if the alleged underpin concrete was placed subsequent to and because of a trench collapse, there would be at least one person with a vivid memory of what had occurred. Mr Forrest referred me to the rule in *Jones v Dunkel* (1959) 101 CLR 298. I note the Builder's failure to call a witness to the trench collapse, or even explain the lack of such a witness in circumstances where the identity of the person responsible for digging the trench should be able to be obtained from the neighbour or the electrical authority associated with the trench. I accept Mr Forrest's assertion that these failures lead to the inference that such a witness would not assist the Builder's case, and as the Builder is the applicant, he bears the burden of proving his case.

23. Mrs Giampa said under oath that she knew nothing about the excavation of the trench or the alleged underpinning, that she is friendly with the neighbours to the south, but that the trench is on Council property. The Owners' house is at the end of an access road, and the land adjacent to the south wall of the garage is the nature strip for the neighbours' property.

- **Site drying caused by trees**

24. The experts who appeared agree a cause of the building distress is drying of the soil below the waffle pod concrete slab due to trees and large shrubs located in the adjoining garden bed dewatering the site, but none of them attribute more than minor contribution to damage to this cause.

- **The alleged underpin**

25. It has been suggested for the HGFL that the alleged underpinning was, in fact, blinding concrete poured by the Builder. This explanation is rejected. Mr Gibney gave evidence that the design required approximately 35.5m^3 of concrete whereas 39m^3 was delivered. Taking into account the amount of concrete lost in the concrete pump (approximately .5 m^3), 3m^3 appears to be unaccounted for. It is noted that all the Pioneer Concrete invoices on which the HGFL relied (Respondent's documents 158 to 165)[*] are dated "7/10/99". It follows that the "blinding concrete" would have to have been poured on the same day that the slab was poured. It is noted from the report of Dr Haberfield that there are gaps between the alleged underpinning and the edge beam which, it is found, is inconsistent with all the concrete being poured on the same day.

26. The missing 3m^3 of concrete is indeed curious, but falls short of proof that the Builder poured blinding concrete and then the edge beam, separately, on the same day.

[*] Whenever there is a reference to an "applicant's document" or "respondent's document" it is a reference to the page number in the Tribunal Book provided by that party.

The Soil Report

27. The HGFL says that the building distress was caused by the Builder's failure or refusal to comply with recommendations contained in the soil report. In particular the HGFL says that the Builder should have had a further soil report undertaken subsequent to the excavation and that the slab beams should have been founded in at least 50 mm of natural material. The Builder said that, to the best of his knowledge, the geotechnical engineer was not called back for a further inspection once the site cut was made.

28. The Builder said that he engaged Mr Lord of Draft Comps Services, a civil engineer and draughtsperson, to prepare the plans for the property based on copyrighted plans owned by Phoenix New Homes and Land ("Phoenix"). The plans prepared for the job included footing details for a waffle raft class site M. The soil tests had been prepared by GHA Soils and Footings and rated class M. The Builder said he normally obtains the soil report for building projects however for this project the Owners obtained and supplied the soil report and an allowance was made for the cost of the soil report in the contract price. There was contradictory evidence about this point and it is found that the Owners' evidence was unreliable on this point. The Owners said that the Builder asked them to obtain the soil report, but it was established that the soil report was obtained before the Owners and Builders met for the first time. Mrs Giampa said under cross examination that they got the soil report when Daryl de Cruz of Phoenix Homes asked them to do so and that Mr de Cruz asked them on behalf of the Builder. There was no evidence that the Builder was involved in the project by this stage, although it is noted that he did not give specific evidence on this point. The building contract was not signed until 6 July 1999, and although the date of the "client details" completed by Phoenix was 24 May 1999 (Applicant's document 177), it is noted that at the bottom of the page there is a handwritten note: "Site Costs not included. Estimated at $3,500 if "H" class

s/a". On balance it is found that the soil report was obtained by the Owners at the suggestion of Mr de Cruz, but not on the authority of the Builder.

29. The significance of the provenance of the soil report is that if it was defective, the defect was not the responsibility of the Builder as between Owners and Builder.

30. The significance of the M classification is that it is inconsistent with fill existing on site. The Site Classification was a three page document dated 19 May 1999. The recorded geology was "Silurian mudstones and clays", the foundation strata was "Light brown silty clays" and the likelihood of effect of trees was "N/A". The second page of the site classification describes the site as "grassed and there are trees evident on the site, and within 5m on the neighbouring properties that could significantly effect the footings of this construction." It is also stated that "Excavation of the site subsequent to this report may affect the classification shown. If this occurs, or if an alternate footing system is required, then please forward this report to our office for revision."

31. Regarding footing recommendation, the site classification stated: "We recommend that the slab shall be class M with beams founded at a minimum of 50mm into the natural material which may be in no case less than 200 below finished level." Item 7.1 of the Specifications called for the concrete floor slab to be constructed in accordance with the Engineer's design. Drawing 5, which was Builder's document 144 stated at note 1: "The building site is to be scrape of [sic] vegetation and roots and cut to form a level bench."

Fill

32. The Builder said that he made a request on 10 August 1999 of the Nillumbik Shire Council regarding property information. He said the

property information provided did not indicate the presence of any existing fill on the property.

- **Site cut only, or cut and fill?**

33. The Builder asserted that he cut the site only, and did not fill any portion.

34. The Builder said that the site was cut and scraped to a depth of approximately 1.5 metres at the north east corner of site grading down to approximately 200mm at the south west corner at the side of the garage wall. He said that no fill from the cut was placed anywhere on site let alone on the house footprint and that when the site was cut there was a consistent soil profile of white shaley material which he understands is commonly referred to as reef. He said that he asked the building surveyor to inspect the cut, the inspection was undertaken and the work was approved to continue.

35. Mrs Giampa said that the Owners did not pay the Builder to remove any soil or rock from site. Clause 6.3 of the Specifications is "Removal from Site/or Spreading of surplus Soil and/or Rock" – it has been ticked as "Not required" and below it has been written in "Surplus soil to be spread by Builder on the Property. Owner to remove extra + any rock."

36. The Builder was cross examined on the question of whether the edge beam was founded on fill. His answers tended to be evasive and to focus on his insistence that if there was fill, he was unaware of it at the time of the site cut and placing of footings. It is found that there was fill beneath the edge beam and that the edge beam was not founded in natural ground as recommended by the soil report.

37. In cross-examination Mr Lawrence was asked whether it is possible that instead of the site being cut and filled, as he assumed, it could have been all

cut. He said that while this is possible, it is unlikely. He referred to Applicant's document 333 which is a map showing the locality of the site, including lots 21 to 25. The provenance of the map was not made clear, but it appears to have been provided by the developer who sold the land. It makes mention of drainage.

38. There are two numbers at the point where the western side of the road intersects with the Owners' property, which is also the south-eastern most point of the garage. They are "NS 120.72" and "FS 120.40". Mr Lawrence interpreted them to mean that the natural soil level was .32 m higher than the finished soil level. If his interpretation is correct, and if the map indicates that the work has been done, the developer has cut the subject lot rather than filling it. There is a hand-written notation showing fill on another lot, but no evidence was given about whose writing it was or whether it purported to show all the fill on the development.

39. Surprisingly, Mr Giampa said in his witness statement that the cut to the south-west corner was not 200 mm but 300 mm. Then, in apparent contradiction, at 4.7 of the witness statement he says:

> "Joe Ciantar's statement that there is no fill is inconsistent with the step-up where the garage starts [south east corner] and the council crossing and our driveway being level, as depicted in photographs and video footage."

40. Mr Lawrence said under cross-examination that the site slopes from north to south and to a lesser degree from east to west.

41. The experts agree that the southern edge beam was founded on fill, but there is no agreement about when the fill was placed on the site. Dr Haberfield said at page 12 of his report of 21 June 2005 that:

"i.) The southern end of the garage waffle slab was constructed on fill. The extent, depth and level of compaction of fill under other areas of the residence is not known;
ii.) The depth of this fill is 0.6m at the western end of the wall and probably about 0.9m at the eastern end of the wall."

42. Mr Gibney, an expert called by the HGFL, expressed the view that the fill was placed by the Builder when the north eastern end of the building footprint was cut and the southern part was filled. The Builder said in evidence that he did not fill any part of the site and although Mr and Mrs Giampa did not give direct evidence that fill had been placed, they did note the apparent differences in levels between their photograph of the bare site, which was photograph 1 of Respondent's document 93, and the site today.

43. Photograph 1 of Respondent's document 93 shows the site after purchase by the Owners and before work commenced. The land appears to follow the level of the road, which rises from south to north, and there is no difference in the level of the road and the land to its immediate west, that is, the land along the south wall of the garage.

44. The Builder said on site that the 'step up' from road level to the garage floor level is explained by the waffle pod slab sitting on top of the site cut. This is a partial explanation, but it is noted that the alleged underpinning extends to at least 100 mm above natural ground level before the base of the edge beam is reached.

45. In his report of August 2005, the Owners' expert, Mr Gibney said on page 5:

"The owners' video [taken at about lock up] shows local fill at the southern end of the garage and that the ground's surface from the roadway back to the garage has been filled to ramp up into the garage. Hence the slab has been constructed on fill at the southern end of the garage."

46. My viewing of the video confirms Mr Gibney's assessment.

47. Part of the evidence about whether the Builder had used fill turned on the removal of excess soil from site. The Builder said at paragraph 18 of his witness statement:

> "When the site was dug out the spoil was placed at the Western end of the site in a pile located past the rumpus room. The spoil was later taken away by loading into trucks with a Bob-Cat type machine."

48. Both the Owners said in their witness statements that they did not arrange or pay for removal of excess soil, although item 6.2 of the specification placed responsibility for removal of excess soil on the Owners. Applicant's document 317 is an invoice from AJ's Bobcat & Tipper Hire. It appears to support the view that 11 cubic meters were removed from the site and that some of the material removed was "tree stump and rubbish". The Builder confirmed under cross-examination that this invoice indicated that 11 m^3 of soil were removed, and he confirmed that there was no other soil removed from site. Mr Gibney did a rough calculation of the amount of spoil to be removed if the whole site was cut and none was filled. The result was 350 m^3, which supports the view that the cut was shallower and therefore some of the site was filled to form a level bench for the slab. This evidence supports the view that the Builder filled the area beneath the southern section of the garage.

49. If the Builder did not discover the fill on site and the source of the fill was local to the site, just looking at a scraped site would not necessarily indicate that it was filled. Mr Lawrence said "You'd like to think building professionals could pick up fill, but I can't comment on that." Dr Haberfield said that fill can be detected by careful examination of the layers of soil. It follows that it could therefore have been visible when the trench for the edge beam was dug.

50. Unfortunately, neither the Builder nor the building inspector acted in a way consistent with having noticed the fill in this position before the slab was laid. On the Occupancy Permit Mr Wally Mellis, the Building Surveyor, certified that the pre-slab inspection was approved on 5 October 1999 and the final slab inspection was approved on 6 October 1999.

51. I was not addressed in detail on the question of where risk falls if there is fill on site but a builder is neither aware of it, nor has reason to be aware of it. In answer to my question, Mr Forrest replied that failure to take fill into account would be negligent. Mr Forrest cross-examined Dr Haberfield about the frequency builders have a geo-technical engineer conduct a post-cut inspection, but did not ask if it is the practice of a reasonably competent builder to do so. It is accepted that re-inspection is the exception rather than the rule. It is not accepted that a builder's failure to find fill on site is automatically negligent.

52. On the balance of probabilities it is found that some fill beneath the south east corner of the garage wall was placed there after the photograph (photograph 1 of Respondent's document 93) was taken, and was therefore placed by the Builder or should have been immediately obvious to the Builder. The Builder should therefore have taken the presence of fill into account in the construction of the edge beam, including seeking a revised design.

- **Behaviour of fill**

53. In his first report, Dr Haberfield quoted the report of FMG Consulting of 14 April 2004 and noted in part the finding of Foundation Exploration of 15 June 2004 that the slab fell 56 mm from north to south. He also stated that the fill has fallen away from the edge beam, and that "at about mid-length of the garage wall, there is clear gap of 50 mm to 100 mm between the edge beam and the ground". He said the fill was approximately 900 mm deep at

the eastern end of the edge beam. While it is not clear where this figure came from, it is noted that the diagram provided by Mr Lawrence (Respondent's document 149A) shows fill as 700 mm deep.

54. Under cross examination Dr Haberfield said he did not believe 900 mm of fill can consolidate 100 mm under its own weight. He also noted that this is the only point in the house where there is any sign of distress, which is inconsistent with there being fill on site.

55. Mr Lawrence's evidence about the behaviour of fill was not entirely satisfactory and to some degree circular. He said under cross-examination that the observed pattern of distress and the timing of the distress indicates compaction of the fill, and the presence of the fill predicts that it will compact to some degree. He was unable to say to what degree he would expect the fill to compact, and relied on experience rather than an objective standard to attribute the distress to fill settlement.

- **When the footing failure occurred**

56. The Builder says that approximately three months after the Owners moved into the house he returned to rectify a bench top which the Owners had complained was scratched. Time was spent by both parties attempting to establish when the bench scratches were complained of. The outcome was inconclusive. The Builder says that he recalls that a site cut on the adjoining property adjacent to the garage wall, which he says is now apparent, was not there at the time of his visit. The Tribunal notes from the site inspection that there is a retaining wall a meter or so from the southern side of the Owners' garage, but that this is not necessarily consistent with a site cut on the neighbouring property. In particular, it is noted that the neighbours' land is level with the road built by the developer and the retained soil is higher. Mr Lawrence also expressed the view that the neighbour's land had not been cut.

57. The Owners say they noticed hairline cracks in the garage before the house was complete and drew them to the attention of the Builder. Mr Giama said that he was assured by the Builder that the cracks would not increase in size. The Occupancy Permit was issued on 26 April 2000. The Builder denied that the Owners had drawn cracks to his attention before handover and asserted that there was no mention of them until well after the job was completed. As hairline shrinkage cracks in concrete, particularly in garages, are not uncommon, the Owners' evidence is accepted but it does not prove that the foundations of the edge beam had already started to sink.

- **The cause of foundation failure**

58. The single most important piece of expert evidence was given by Dr Haberfield who impressed me, in the main, as a careful witness who was aware that his first responsibility was to the Tribunal. His reporting style was criticised by Mr Forrest for the HGFL who suggested that he had crossed the line and become an advocate for his client's cause. This was found not to be the case, although his reaction to the opinions of the experts engaged by the HGFL was, at times, intemperate and threw his independence into question. The one serious omission in Dr Haberfield's reports was the failure to mention that the Builder did not carry out the work in accordance with the soil report. Under cross-examination he admitted that if he had been asked to report for the HGFL it is likely that this is a matter that he would have included in his report.

59. Dr Haberfield's opinion was that the pattern of damage was consistent with collapse of the service trench. However he also agreed that it was highly probable that the edge beam was founded on fill, it is preferable that this not be done and if it is done, the edge beam must be constructed to engineered standards.

60. In answers to questions put in re-examination, Dr Haberfield confirmed that if the edge beam had been founded into natural material, there would have been no movement or minimal movement – the problem would have been overcome. It is noted that the whole depth of the trench was in fill, and if the edge beam had been founded in natural material it would have acted as a retaining wall to prevent possible trench collapse.

61. A question Dr Haberfield did not explore was whether there would have been a trench collapse if the material at ground level had been natural material and both the edge beam and the trench had been the same dimensions. In the absence of exploration of this point, it is assumed there would have been no collapse.

62. It follows that there is defective building work. At minimum, the defect is that the Builder failed to found the edge beam in natural material when he knew or should have known about the fill, which made the foundations vulnerable to the damage which might have occurred due to nearby trench works. It is also possible that the foundation failure was due to settlement of fill. In either case there is defective building work which has been the cause of damage.

63. The Tribunal finds that the First Respondent's decision was properly made at the time it was made, and no new information has come to light since which indicates that the decision should be changed.

64. The decision of the First Respondent is affirmed. The parties have leave to apply for costs, although, given the disproportion between the apparent cost of rectification of the defect and the five day hearing, their attention is drawn to the recent decision in *Sandman v Extension Factory Custom Designers and Builders* [2005] VCAT 2453.

SENIOR MEMBER M. LOTHIAN