

# VICTORIAN CIVIL AND ADMINISTRATIVE TRIBUNAL

## CIVIL DIVISION

### BUILDING AND PROPERTY LIST

VCAT REFERENCE NO. BP377/2017

### CATCHWORDS

Domestic building -construction of swimming pool – foundation heave – evidence as to cause – whether movement within tolerance – evidence.

<b>APPLICANT</b>	Mr Nasim Sawan
<b>RESPONDENT</b>	Freedom Pools & Spas Victoria Pty Ltd (ACN: 101 657 167) t/as Horizon Pools
<b>WHERE HELD</b>	Melbourne
<b>BEFORE</b>	Senior Member R. Walker
<b>HEARING TYPE</b>	Hearing
<b>DATE OF HEARING</b>	15 February 2018
<b>DATE OF ORDER</b>	27 March 2018
<b>CITATION</b>	Sawan v Freedom Pools and Spas Victoria Pty Ltd (Building and Property) [2018] VCAT 475

### ORDERS

1. Within 30 days of the date of this order the Respondent must carry out the following scope of works on the Applicant's Property at 10 Coliban Gardens, Caroline Springs 3023:
  - (a) expose the standpipe which has been tiled over;
  - (b) complete the water feature;
  - (c) repair the two chips and the scratch in the pool;
  - (d) round off the edge of the coping tiles that project into the pool on the internal corners;
  - (e) supply and install the pool blanket required by the Contract.
2. The said work is to be done in a proper and workmanlike manner using good and sufficient materials and at mutually convenient times. Access to the premises must be provided by the Applicant to enable the work to be carried out.

3. Order the Applicant to pay to the Respondent the sum of \$3,550.00. Stay of 35 days.
4. No order as to costs.
5. Liberty to apply.

**SENIOR MEMBER R. WALKER**

**APPEARANCES:**

For the Applicant

In person

For the Respondent

Mr D. Cutugno, Director

## REASONS FOR DECISION

### Background

- 1 The Applicant (“the Owner”) is the Owner of a dwelling house and land at Caroline Springs (“the Property”). The Respondent (“the Builder”) carries on business constructing and installing domestic swimming pools. Its director is a Mr Cutugno, who is a registered builder.
- 2 By a written agreement, in the form published by the Swimming Pool and Spa Association of Australia (“SPASA”), dated 15 August 2013 (“the Contract”), the Builder agreed to install and commission a fibreglass swimming pool in the backyard of the Property for a total price of \$35,500.00, payable by the progress payments set out in Clause 2 of the Contract.
- 3 The site for the pool was excavated in October 2013 and the swimming pool was then installed. All payments due under the Contract were made by the Owner except for the last two payments, totalling \$3,550.00. At that stage there was some minor disagreement concerning a water feature and the materials from which it had been constructed and so payment was withheld.
- 4 On 27 June 2016 the Owner complained to the Builder that an area of the pool was lifting. The Owner made a complaint to SPASA and then to Consumer Affairs. No resolution was achieved because there was a stand-off. The Builder would not consider the Owner’s complaints until the balance claimed to be due under the Contract was paid and the Owner would not pay the balance until the defects that he alleged were attended to.

### This proceeding

- 5 This proceeding was brought by the Owner on 20 March 2017 seeking orders from this tribunal for the removal of the swimming pool, compensation for the incorrect installation of the pool and the costs said to have been incurred by the Owner in pursuing the Builder, “including but not limited to, \$2,258.60”.
- 6 On 16 May 2017 the Builder filed a counterclaim with the tribunal, seeking payment of the balance of monies due under the Contract plus accrued interest.

### The hearing

- 7 The matter came before me for hearing on 15 February 2018. The Owner appeared in person and Mr Cutugno appeared on behalf of the Builder. Experts’ reports were tendered and at the conclusion of the evidence I went out to the Property to have a look at the swimming pool.
- 8 Following the inspection I informed the parties that I would provide a written decision.

### **The expert evidence**

- 9 The expert evidence was provided in the form of reports tendered by each of the parties. The only expert that was available for cross-examination was the geotechnical engineer, Mr Wan.
- 10 The orientation of the pool is from the south-east to the north-west and it is constructed parallel and close to the north eastern boundary of the Property. However, for ease of discussion when dealing with the expert evidence, I will assume that the boundary against which the pool has been constructed is the northern boundary and that the pool lies in an East-West orientation.
- 11 On that basis, the eastern end of the pool is near the house and the Western end is near the western boundary of the Property. The northern side of the pool is adjacent to the northern boundary of the Property and the Southern side is separated by a paved area and a concrete pathway from the back lawn of the Property.

### **The Mladichek report**

- 12 The first report obtained by the Owner, dated 31 August 2016, was from a building consultant, Mr Mladichek, who visited the site and inspected the pool on 10 August 2016.
- 13 Mr Mladichek stated in his report that:
  - (a) the Southern side of the pool had heaved;
  - (b) the paving and surface drainage around the pool was in good condition;
  - (c) there was no visible evidence that surface drainage around the pool was the cause of the heave;
  - (d) he could not find a vertical pipe stack for monitoring groundwater;
  - (e) there was excessive overhang of the coping tiles around the pool and there were sharp corners that were unsafe for children; and
  - (f) the water feature was incomplete.
- 14 He concluded that:
  - (a) the pool had become damaged as a result of ground swell;
  - (b) the swell had occurred because groundwater in the excavation could not be monitored and pumped out as required;
  - (c) if groundwater was not being monitored and pumped out, any excessive moisture in the excavation would degrade the site and the pool design would become inadequate; and
  - (d) the only reasonable conclusion was that the pool had heaved because the foundation material had swelled due to the presence of unmonitored groundwater.
- 15 He recommended the demolition and replacement of the pool shell and the reconstruction of the paving, which he costed at \$80,891.00.

### **The Flowtec report**

- 16 The next report obtained by the Owner, dated 28 March 2017, was from Flowtec Leak Detection Services. According to the report, the pipelines to the pool, the solar heating and the spa were all pressure tested and no leaks were found. A small leak was found in the water feature but it is clear from my inspection that any water from this source would have drained into the pool.
- 17 The conclusion of the author of the report was that he did not believe that a water leak had been a contributing factor in the movement of the concrete surrounding the pool areas. He said that no atmospheric vent line was visible and either it had not been installed or it had been paved over. He said that if it had not been installed that would not meet the relevant standard. He said it was not clear if it was the pool or the surrounding area that suffered from movement and suggested that an engineer investigate the cause of the movement.

### **The Casamento report**

- 18 On 11 October 2017 the Property was inspected by Mr Casamento, a structural engineer engaged by the Builder.
- 19 Mr Casamento took levels and found what he described as a minor differential movement between the North and South sides of the pool.
- 20 He said that the southern side of the pool had heaved 21 mm at the pool edge. The annotated photograph in his report shows the lowest edge of the pool as being the eastern end. Relative to the eastern end of the pool, the northern side was 5 mm higher and the western end was 6 mm higher.
- 21 However the southern side of the pool was 26 mm higher and the paving some distance from the southern side of the pool was 42 mm higher. He identified that as the area of greatest heave and noted that it abutted a grassed and paved area outside the pool enclosure.
- 22 He said that the pool had moved “marginally” but he said that he did not consider the movement was excessive, considering the site had been classified as a Class H highly reactive clay site.
- 23 He said that the relevant standard (AS/NZS 1839:1994) stipulates that the level of the finished pool wall being considered shall be within 1/225 of the overall length of the wall, up to a maximum of 1/300 of the overall length of the pool. He said that this equated to 31 mm over the full length of the pool which was 7 metres. He said that the pool shell was measured to be out of level by 21 mm, which he said was well inside the allowable tolerance.
- 24 He noted that the concrete paving slab and the remaining paving tiles to the pool surround had been constructed by the Owner more than 12 months after the pool had been installed. He said that he considered that to be a long time and that this would have allowed water to penetrate in and around the pool shell.

- 25 He concluded that the pool had heaved due to changes in the soil moisture content of the surrounding clay soil. He said that:
- (a) the pool had moved insignificantly and within accepted tolerances in accordance with the standard;
  - (b) the minor movement had been caused by water ingress in and around the pool from the grassed area adjacent to the south side;
  - (c) the fact that the glass pool fence, which is located 2 metres away from the pool shell on the south side, has experienced the same reflected movement as the shell, was evidence that the movement was caused by drainage issues rather than pool installation issues.
- 26 He noted however that the overhang of coping tiles was a safety concern and should be removed and that two standpipes need to be installed. He listed the following works as being required to be done by the Builder:
- (a) install two 90 mm standpipes to allow hydrostatic water build-up to be monitored by the Owner;
  - (b) complete the water feature in accordance with the Contract scope of works;
  - (c) remove the sharp edged coping tiles on the external edges and replace them with rounded corners.

### **The rock solid report**

- 27 The final report in evidence was by Mr Wan, a geotechnical engineer, who also gave oral evidence.
- 28 He inspected the site on 6 December 2017 and took two boreholes using a hand auger. He reviewed the Casamento report, the design drawings for the pool and the original geotechnical report which was done before the house was constructed. He also had regard to aerial photographs taken of the site from 2005 to 2013. He said that, based on the soil profile, the typical soil movement in the area has been assessed as extremely variable and that the site is classified as a “Class P problem site” or a highly reactive “Class H 2” clay site.
- 29 He said that abnormal moisture conditions are likely to result in exaggerated soil movement as a site adjusts to the regime. These adverse conditions can cause a number of problems, such as foundation instability,
- 30 He observed that the paving around the pool perimeter was in good condition but that the seal around the pool coping tiles appeared to have moved, cracked and separated. He also noted that the glass fence had experienced some movement and the pool water was observed to be out of level in relation to the pool walls.
- 31 He took levels of the pool which confirm that the area of greatest heave was centred under the paving outside the pool area on the southern side. According to his levels, this extends to the southern side of the pool shell

itself. The levels that he took confirm the general direction of movement observed by Mr Casamento.

- 32 He also noted the apparent absence of a standpipe and said that he measured the bond beam, which was shown on the drawings to be 200 mm, at 150 mm at the place where he took the measurement. He did not say that the difference had any structural significance, saying that that was a question for a structural engineer.
- 33 He included in his report some photographs that were taken by the Owner during the excavation for the pool. He said that, from what he could see in the photographs, together with the boreholes that he took, the ground under the western eastern end of the pool contained basalt rock floaters, whereas the ground to the west was clay, without floaters.
- 34 He said that, from the photographs it appeared that, as a result of rock breaking at the eastern end of the excavation it is likely that the area has been over excavated and blinding concrete was poured into the design founding level. Indeed, blinding concrete is visible at the eastern half of the excavation shown in photographs in his report.
- 35 He concluded that the pool was constructed on both clay and basalt rock as founding material. He said that structures must be founded on the same material to minimise differential movement. In this case, he said that the eastern end of the pool was founded on basalt rock, showing little or negligible movement, whereas the western end of the pool was founded on highly reactive basaltic clay with large movement over seasonal cycles. He said the clay under the western end of the pool was also susceptible to the effects of trees and vegetation on the adjacent Property. He said that it was much safer to go down to rock in order to found the pool.
- 36 The bore log that he took closest to the area of greatest heave shows rock encountered at a depth of one metre, although it is not known whether that was a floater or solid rock. The other borehole was 1500mm deep and encountered no rock. The photograph referred to of the excavation shows floaters in clay at the eastern end of the pool.
- 37 Mr Wan's criticism of the Builder was that he did not get a site-specific soil report done. I do not understand this criticism because there was a site-specific soil report carried out by the original builder of the house and the natural soil on the site would not have changed in the meantime.
- 38 There is little difference in the levels between the eastern and western ends of the pool which Mr Wan thought might be founded on different materials. The major difference is between the northern and the southern sides. This seems inconsistent with the notion that differential founding of the two ends was a factor in the heave of the pool itself.

### **Mr Sawan**

- 39 Mr Sawan gave evidence of the construction of the pool and the complaints that he made. Apart from the heave, he complained of three chips in the

pool which, on inspection site turned out to be two small chips and a scratch. He acknowledged that the paved and tiled the area around the pool said that it was only left exposed for about two months.

### **Mr Cutugno**

40 Mr Cutugno said that:

(a) he carried out the excavation himself, encountered rock floaters at the eastern end of the pool while doing so and poured blinding concrete to fill the consequent over-excavation.

(b) there is a stand pipe but it has been tiled over;

(c) the tiling of the edge of the pool was done at the request of the Owner who wanted to achieve “a square look”;

41 He said that the water feature had been clad in Villaboard and was to have been rendered but the Owner requested that it be tiled and so the Builder reconstructed it in blue-board. The tiling was then done by the Builder’s tiler who was directly engaged by the Owner to carry out the work.

42 Mr Cutugno acknowledged that the water feature had to be plumbed in and said that the job was not finished because the payments were not made. He said that the frame was made for treated pine and that although the water feature is incomplete it would cost only \$200.00 to finish.

43 He said that there was a blanket roller to be supplied and that the stand pipe needs to be exposed. He denied that the chips in the pool were there when it was installed but said that it would be a simple matter to remove them.

### **The inspection**

44 Although there was a slight difference in water level from one side of the pool to the other it was not obvious. Overall, it was not unsightly and it certainly did not have the appearance of a pool that requires demolition and replacement.

45 The timber frame of the water feature was examined and showed no signs of deterioration despite having been exposed to weather for a number of years. I therefore accept the evidence of Mr Cutugno that it was made from treated pine. However the feature does need to be completed as he acknowledged.

### **What to make of the expert evidence**

46 The ground in which the pool was installed was highly reactive and it was acknowledged that some movement is to be expected in highly reactive soil.

47 When the pool was excavated, some floaters were encountered at the eastern end of the pool and blinding concrete was used to fill in the consequent over-excavation. It is common ground between the experts that heaving of the soil is caused by increased water content in the clay under the area of the heave.



- 48 The water has not come from any of the pipes that were tested but might have come from the grassed area or from storm water pipes that do not appear to have been tested.
- 49 The heave is centred outside the pool area under the paving between the pool and the grassed area. The movement under the pool is much less which makes it unlikely that the cause of the problem is under the pool.
- 50 Consequently, I do not accept the evidence of Mr Mladichek that the heave has occurred because groundwater in the pool excavation could not be monitored and pumped out as required. I prefer the evidence of Mr Casamento that the source of the water is likely to be from the grassed area between the pool and the area of greatest heave.
- 51 It has not been demonstrated that the installation of the pool was defective from an engineering point of view. Although I accept Mr Wan's evidence that differential foundation material under structure is undesirable, I am not satisfied that his assumption that the eastern end of the pool has been founded over rock is justified. The only clear evidence of the ground in that area is that there were floaters that Mr Cutugno dug out, after which he filled the over excavation with blinding concrete. It was not suggested that this was not good building practice.
- 52 The bond beam around the pool was designed to be 200 mm deep whereas it was found to be only 150 mm deep in the place where a measurement was taken by Mr Mladichek. There is no expert evidence that this has any practical significance. Mr Cutugno said there was none and says that the depth on the drawing was indicative only.
- 53 The purpose of a standpipe is to allow the Owner to monitor the level of groundwater under the pool. No such pipe could be observed but Mr Cutugno said one had been installed and was tiled over. It is not demonstrated that the absence of such a pipe has caused the heave complained of.
- 54 The pool itself has moved but the degree of movement is within the tolerance referred to in Mr Casamento's report. Consequently, I find no defect in the installation of the pool.
- 55 However, as Mr Casamento pointed out in his report, there are things to be done by the Builder and these should be completed before payment by the Owner is made. They are:
- (a) the standpipe, which should not have been tiled over, needs to be exposed;
  - (b) the water feature needs to be finished;
  - (c) the chips in the pool should be repaired;
  - (d) the edge tiles that project into the pool on the internal corners need to be rounded.

## **Conclusion**

- 56 There will be an order that the Builder carry out the foregoing scope of works and that upon completion the Owner pay to the Builder the sum of \$3,550.00. There will be no order for the payment of interest by the Owner because the work was incomplete.
- 57 Since both parties have had some success in the proceeding there will be no order as to costs.
- 58 Liberty to apply will be reserved in case there is any dispute as to whether the order has been complied with.

**SENIOR MEMBER R. WALKER**