OTF Aquarium Farm (formerly known as Ong's Tropical Fish Aquarium & Fresh Flowers) (a firm) v Lian Shing Construction Co Pte Ltd (Liberty Insurance Pte Ltd, Third Party) [2007] SGHC 122

Case Number : Suit 614/2005

Decision Date : 31 July 2007

Tribunal/Court : High Court

Coram : Belinda Ang Saw Ean J

Counsel Name(s) : Prabhakaran N Nair (Ong Tan & Nair) for the plaintiff; Leonard Loo Peng Chee (Leonard Loo & Co) for the defendant

Parties : OTF Aquarium Farm (formerly known as Ong's Tropical Fish Aquarium & Fresh Flowers) (a firm) — Lian Shing Construction Co Pte Ltd — Liberty Insurance Pte Ltd

31 July 2007 Judgment Reserved.

Belinda Ang Saw Ean J

1 In this action, OTF Aquarium Farm ("OTF") as plaintiff is claiming damages for the consequences of flooding to its fish breeding farm located at L7 (MK 29), Pasir Ris Drive 12 ("L7" or "the farm"). The flooding was allegedly consequential upon the defendant, Lian Shing Construction Co Pte Ltd ("Lian Shing") carrying out drainage works on neighbouring land. The loss that OTF allegedly sustained consisted of 42 dead arowanas and consequential loss of profits. Other losses include clean up and reinstatement costs in respect of two of its ponds. OTF asserts that the floods were substantially caused by Lian Shing's negligence or that its works constitute a nuisance to OTF's farm.

Pre-litigation events

2 OTF is owned by Ong Chin Soon ("Ong"). Ong, who trades under the name and style of OTF, has been in the tropical fish breeding business since 1973. His fish breeding business operates from a plot of land leased from the Singapore Land Authority. L7 is one of several properties in the Pasir Ris area that is gazetted as farmland, and the farms there come under the management of the Agri-Food and Veterinary Authority of Singapore ("AVA"). In 2000, OTF started to breed and harvest arowana, or dragon fish, a popular ornamental fish due to its auspicious association with good fortune, especially among businessmen. OTF is licensed by the AVA to breed and export ornamental fish. OTF is also on the register of CITES, the acronym for The Convention on International Trade in Endangered Species of Wild Fauna and Flora. OTF as a CITES approved/registered farm is allowed to export or sell locally captive-bred arowana for commercial purposes. As only captive-bred dragon fish can be traded, each captive-bred dragon fish is inserted with a microchip tag as proof that it is captive bred. In contrast, trade of dragon fish from wild populations is banned. Between 2002 and 2003, there were 20 ponds on L7 and they were used for breeding mainly dragon fish and, on a smaller scale, guppies.

3 Bordering L7 is a large piece of land belonging to the Public Utilities Board (as it was then known) ("PUB"). The land is a catchment area and is designated on the land survey site plan of the vicinity as a drainage reserve ("DR"). Lian Shing was the subcontractor engaged to carry out drainage works at the DR. The main contractor was Tong Shing Contractors Private Limited ("the main contractor"). Counsel for Lian Shing, Mr Leonard Loo, in his Opening Statement, explained that the original contract was for Lian Shing to construct one C7 drain in the middle of the DR to improve the

drainage at the location. The defendant's contract works included levelling the land at the vicinity of the proposed C7 drain. In clearing the vegetation at the DR, Lian Shing discovered a pond and earth drain located behind L7. To level the DR, both the pond and earth drain were backfilled by Lian Shing. The construction of a single concrete drain, *viz*, C7 drain, started at the end of February 2003. The original contract was later revised since a single C7 drain could not adequately cope with the volume of surface water run-off at the DR. Additional drains were constructed through the defendant to increase the capacity to cope with the volume of surface water run-off. According to Mr Loo, the entire project, which began in November 2002, ended in March 2003. However, the documents discovered indicated that the drainage works as revised were completed later in June/July 2006.[note: 1]

4 From time to time OTF called to the attention of the AVA the possible danger of flooding the defendant's activities at the DR posed to farms. In November 2002, Ong notified the AVA in writing that the drainage works had caused flooding to a nearby farm. Being apprehensive that L7 could well be affected by flooding in heavy rain, he asked that remedial action be taken. I understood him as suggesting that there be consultation of the drainage works to be done at the DR and to find a solution to prevent surface water run-off in a way that would adversely affect L7. The first occasion the farm experienced slight flooding was in December 2002. On a subsequent occasion in late December, following heavy rainfall on 26 December 2002, serious flooding occurred on the farm. One arowana was found dead the next day. By 29 January 2003, a total of four arowanas had died. Further flooding of the farm occurred on 31 January 2003 and 3 February 2003. On 6 February 2003, a total of 28 arowanas had died. The exact number of dead fishes is being disputed by the defendant. Although there was no rain in June 2003, another ten arowanas died; one on 5 June 2003 and nine on 6 June 2003. It was alleged that the dead arowanas were from the same breeding pond (hereafter referred to, for convenience, as "pond 1"). It is OTF's case that 42 arowanas had died between December 2002 and June 2003. Counsel for OTF, Mr Prabhakaran Nair, submitted that there was a direct link between the defendant's drainage works, flood waters entering pond 1, and the dead arowanas bred in pond 1. He maintained that it was the defendant's manner of carrying out the drainage works that created a risk of flooding and, in times of heavy rainfall, flooding occurred at L7. Having not encountered any flooding in the past nine years until after the defendant commenced drainage works, Mr Nair confidently submits that the "irresistible conclusion" is that the defendant's negligent acts in the DR caused the flooding, and subsequent contamination of the pond water by flood water which resulted in the death of the arowanas.

5 The present proceedings were instituted on 31 August 2005. Initially, the plaintiff sued the main contractor. The main contractor brought in Lian Shing as a third party. The main contractor also sued its public liability insurers, Liberty Insurance Pte Ltd. This action subsequently proceeded against Lian Shing alone after it was accepted by all concerned that Lian Shing in actual fact carried out the drainage works. Lian Shing was duly substituted as defendant in place of the main contractor. Lian Shing also took over and continued with the third party proceedings against Liberty Insurance Pte Ltd (see Order of Court dated 14 February 2006). The third party action was eventually settled and the trial of the main action started on 17 October 2006. Pursuant to Order of Court dated 9 October 2006, the ten days allotted for the trial was on the issue of liability alone.

The Arguments

6 OTF seeks to establish liability on the part of Lian Shing for the dead arowanas and other related flood damage. As stated, OTF's case is based on both nuisance and negligence.

7 Actions to recover damage resulting from flooding have been principally brought in nuisance. Examples of such cases may be found in *Sedleigh-Denfield v O'Callaghan and Others* [1940] AC 880

and *Pemberton v Bright and Another* [1960] 1 WLR 436. Mr Nair relied on *Seong Fatt Sawmills Sdn Bhd v Dunlop Malaysia Industries Sdn Bhd* [1984] 1 MLJ 286 to illustrate the existence of a viable and sustainable claim where the facts of that Malaysian case bear some resemblance to those of the present case. In the Malaysian case, the respondent's factory was flooded following heavy rainfall. As a result of the flooding, the factory and goods stored in the factory were damaged. The respondent sued the appellant, Seong Fatt Sawmills Sdn Bhd, in nuisance and negligence. The respondent claimed that the appellant had carried out earthworks on its land, which was adjacent to the respondent's land, and had created a dangerous situation. Furthermore, the negligent acts of the appellant had caused rainwater to overflow into the respondent's land causing damage to the land, roads, buildings and goods stored therein.

8 In that case, there was a stream that widened at two places where two pools had formed on the appellant's land. That particular topography had the effect of slowing down the rainwater, thereby averting flooding during the rainy season. In April-May 1973, the appellant cut the side of the hill on its land and filled the land. The ponds were filled up and the stream was diverted. The Federal Court agreeing with the trial judge at 292 said:

> ...[T]he appellants did substantially interfere with the natural state of their land when they filled the ponds, diverted the course of the stream and raised the level of their land. Under the circumstances, the respondents, as the owners of the lower ground, were no longer obliged to receive water from the higher ground; indeed if damage should result on account of the water that was no longer flowing naturally from the higher ground the owner of the higher ground should be liable.
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> Conceivably the depletion of the ponds increased the overflow. Previously the flow of surface water would have gone into the ponds serving as flood-controlled reservoir. The overflow was invariably reduced and this helped to alleviate flood. As for the diversion of the stream there was no doubt that it constituted an interference of the natural waterway then in existence affecting thereby the natural flow of water. Furthermore the cutting of the cliff created further nuisance as when it rained chunks of earth collapsed and silted up the drains. In our judgment the learned Judge was right in concluding that the flooding of the respondents' land and the consequential damage was directly and effectively caused by the negligent acts of the appellants. Such acts conceivably had created nuisance.

9 OTF's pleaded claim in nuisance by flooding alleges that the defendant raised the level of the ground at the DR during excavation works. By this, OTF asserts that the levelling of the DR (in particular, backfilling of the pond and earth drain) as part of the drainage works caused the surrounding area to be higher than the land at the rear of L7 resulting in surface run-off from rainwater onto L7. To elaborate, the levelling of the land in the DR as part of the drainage works hindered and obstructed normal avenues of water run-off that existed prior to the defendant commencing its drainage works. After backfilling the pond and earth drain in the DR behind L7, the defendant failed and/or omitted to provide an alternative channel or provided one that was inadequate to drain surface water which then overflowed onto L7 thereby resulting in nuisance by flooding. Flood was not a normal occurrence in the farm and it was only after the defendant had commenced drainage works at the DR that flooding occurred. The drainage works caused an overflow of rainwater, thereby resulting in nuisance by flooding.

10 OTF's claim in negligence centres on the defendant's failure to use reasonable skill and care in the carrying out, and in the completion of, the drainage works. OTF filed the following set of particulars of negligence:

PARTICULARS OF NEGLIGENCE

(a) The Defendants by [their] servants and agents were careless and unskilful in carrying out their earth excavation operations and failed to take reasonable steps to allow rainwater to drain effectively so that the neighbouring premises would not be flooded.

(b) The Defendants by [their] servants and agents ought reasonably to have foreseen the danger and risk that flooding posed to the Plaintiff's Farm when they carried out the excavation works.

(c) The Defendants by [their] servants and or agents failed to take any steps to alleviate and or render harmless the dangerous effects of flooding caused by the excavations.

(d) Failing to take any or sufficient steps to clear a drain clogged by rubbish on their property after being informed of it.

(e) The Plaintiffs will rely on the letters sent to the PUB and the AVA as evidence of the Defendant's knowledge of the flooding, and their subsequent failure to remedy the situation as evidence of the Defendant's negligence.

11 The defendant denies any negligence on its part or that its works constitute a nuisance to OTF's farm. The defendant contends that there is no evidence of flooding and denies that the loss and damage in question was caused by its drainage works. Mr Loo contends that OTF has not discharged the burden of proving the necessary casual link to pin liability on the defendant for all the dead arowanas. The defendant averred that it had erected an earth embankment near the fencing of the farm. The other lines of defence pleaded in the alternative include allegation of OTF's failure to mitigate its losses and the defence of *force majeure*.

Discussion and decision

12 Both sides raised many contentions. I have examined the material factors relied upon by the parties in support of their respective contentions. I note upon reviewing the testimonies of the ten witnesses that a fair amount of the evidence is unhelpful. Consequently, I need only state in this judgment the more salient considerations which lead to my conclusions. I should mention in passing that the two authorities on nuisance cited by Mr Loo, namely *Home Brewery plc v William Davis & Co (Loughborough) Ltd* [1987] 1 All ER 637 and *West Cumberland Iron and Steel Company v Kenyon* (1879) LR 11 ChD 782 were distinguished by Mr Nair. The authorities are irrelevant as the present case is about nuisance by flooding and the focus is on whether the source of the nuisance existed in the DR because the defendant had either created it, or allowed it to continue with knowledge that it was present, and with ample time and opportunity to put the matter right. The principal question is whether the facts impose any legal liability on the defendant. In the claim in negligence, OTF must prove, on a balance of probabilities, that there was negligence in the defendant's manner of carrying out the drainage works. The discussions here will traverse common questions of fact and law arising in this action based on nuisance and negligence.

Foreseeability of damage as a factor relevant to liability in nuisance and negligence

13 I begin with the non-controversial question of foreseeability of damage given the defendant's final stance on the matter. By way of explanation, the defendant in its defence averred that it was not reasonably foreseeable that the defendant's work at the DR would cause flooding in OTF's farm. This defence was not pursued or pressed at trial. Neither was it challenged or argued in the

defendant's Closing Submissions. The defendant's singular approach was to challenge the fact of flooding in the farm. Needless to say, flooding is a necessary premise of foreseeability of damage. I shall come to the occurrence of flooding shortly. A point to note is that where damage is foreseeable, the court's consideration shifts to whether reasonable steps were taken to prevent the damage. This aspect of the case is discussed in [31] below.

(i) Flooding as a fact

14 Before I embark on an analysis of the evidence on foreseeability of damage, it is appropriate that the merits of Mr Loo's main contention, *viz*, the fact of flooding be considered. Substantial time at the trial was occupied in challenging the fact of flooding at L7. There was lengthy cross-examination by Mr Loo on the issue of the flooding; where the flood waters came from and went to were examined. The defendant continuously denied that flooding had occurred on OTF's farm as alleged.

15 OTF relies principally on Ong's evidence to establish that flooding in the farm did in fact occur. Ong produced photographs on the flow of muddy rainwater over to the grounds of L7. A great deal of time at the trial was spent examining the photographs taken by Ong. He was cross-examined and re-examined at length on some photographs.[note: 2] Ong nevertheless managed to clearly and consistently identify the date and the various locations at which they were taken, the various components that constituted each respective photograph, and explained how the flood water in the photographs had entered into the farm and the exact flow of the water through the farm into pond 1. This corresponded with a sketch of the layout of the farm which he was asked to make during cross-examination.[note: 3] He was able to describe and correlate those photographs to the sketch. Ong had seen and was able to describe the plume of muddy water visibly entering the farm and flowing into pond 1.

16 The contemporaneous correspondence written by Ong to the AVA and PUB as well as the e-mail exchanges between the AVA and the PUB lend compelling support for Ong's version of events and of the flooding he complained of. Of the series of letters, the first significant letter was on 27 December 2002 complaining to the AVA that "rain water mixed with a large quantity of contaminated water" had flowed into pond 1. This was also the day on which the first fish allegedly died and the letter made reference to this. A subsequent letter dated 8 January 2003 was directed to the PUB, again relaying Ong's concern that water run-off from the DR would flow onto the farm and into the fish pond. The PUB replied to Ong on 20 January 2003. Finally, the last letter from Ong in this series of correspondence dated 8 February 2003 identified two major flooding incidents on 31 January 2003 and 3 February 2003.

17 Seah Swee Hong ("Seah"), a director of Lian Shing, denies that flooding had occurred in OTF's farm as alleged. His testimony has no evidential value as he was not personally involved in the drainage works. I find his claim that he did not know until very much later that OTF was a breeder of arowana to be far-fetched, especially when Seah, at the material time, was a shareholder of Lian Shing Fishery Impext Pte, a farm at L11 and in the same business as OTF. I have no difficulty rejecting his disclaimers. Turning to the defendant's site foreman, Oh Kok Hua ("Oh"), I am convinced that he knew more than what he wanted this court to believe. He maintained that there was no flooding since he had not seen the farm flooded. That is a specious contention when judged in the light of his testimony of the precautionary measure Chng Yong Joo ("Chng"), the technical officer from Drainage Department of the PUB, had told him to attend to. Besides, the defendant was the contractor on site, and it seems to me that it was those episodes of flood water ingress, and the scale of them that necessitated an amended drainage system which the defendant built.

18 There is nothing in the defendant's contention that the drainage network of U-shaped drains in L7 would have prevented any flood water from flowing into pond 1. Mr Loo argued that without producing photographic evidence that the farm's manholes and sedimentation pond were also flooded on the relevant dates, the court could not conclude that flood water in the U-shaped drains had overflowed into pond 1. The defendant's theory was that if the manholes and the sedimentation pond were not filled to their maximum capacity, then the flood water would be able to drain off from the U-shaped drain running along the edge of pond 1. This theory is misconceived and runs counter to the available evidence.

19 First, there is evidence showing muddy water from the DR gushing into the U-shaped drains and overflowing from these drains which were submerged under flood water. Second, the theory is premised on the assumption that the volume of water in the various components of the farm's drainage system is the key factor (indeed the sole factor) in determining whether or not there can be flooding in the farm. This assumption is made without first rebutting Ong's testimony on the absence of any correlation between the U-shaped drains, and manholes and sedimentation pond. Furthermore, Mr Loo's postulation, which is unsupported by any objective evidence, is incomplete as it does not take into consideration the rate of flow of water from the U-shaped drains into the manholes, and subsequently the sedimentation pond.

20 After Ong's letter of 6 February 2003, AVA's Farm Inspection Section visited L7 and conducted a farm inspection on 10 February 2003. A layout of the farm was appended to the inspection report and the inspector had indicated on the layout of the farm the direction of the flow of water which was towards the rear and side of L7.[note: 4] Wee Soon Bock ("Wee"), the Head of Park Facility Management of the AVA, said that the investigators from AVA also noted signs of flooding, for instance, from the mud left behind by the flood water on the walls of farm buildings.

21 For completeness, I need to highlight two other points. First, Ong did not complain of flooding after the drainage works were completed. Second, Ong's testimony that prior to the defendant's drainage works, L7 had never experienced flooding was uncontroverted. So I have before me, evidence as to what happened before and after the drainage works in question were carried out. Put simply, I am satisfied, on the balance of probabilities, that there was flooding in the farm and ingress of flood waters into pond 1. I find that the defendant's activities at the DR were the likely source of the flooding because of the close proximity of the DR and L7. There are no other likely sources of flooding. Even discounting, for the sake of argument, Ong's eye witness account, there is enough objective evidence to draw a reasonable inference from the primary finding of facts that pond 1 was contaminated by ingress of flood waters, and that was likely to endanger the dragon fish in pond 1. The only argument put up by the defendant to counter any ingress of flood waters into pond 1 was that no water sample was taken by OTF. I do not think that the absence of any sample was necessarily fatal to OTF's case. It is not disputed that arowanas bred in captivity depend for their well-being on water in the pond that is not contaminated.

(ii) The issues of principle arising in this action

22 I now return to my discussion on foreseeability of damage which is a factor relevant to liability in nuisance and negligence. The type of damage suffered must be foreseeable to the defendant at the time the nuisance or negligence was committed. OTF has to establish that surface run-off from rainwater flowing over to the farm was a foreseeable consequence of the defendant's acts or omissions. As regards the claim in negligence, given the stance of the defendant on foreseeability of damage, proximity of relationship between the parties is easily established. The standard of care required is that of a reasonable competent man in the position of the defendant who would have appreciated a risk of flooding from the drainage works in question and the consequent flood damage

by reason of flood waters from the DR entering the ponds in the farm. The pre-litigation events briefly outlined in [4] above are relevant to the question of foreseeability of damage. Of relevance factually is the defendant's state of knowledge at the time of the acts and omissions complained of. That knowledge in turn will have a bearing on the reasonable means taken to avert the dangers that were to be anticipated.

23 For the purpose of this case, actionable nuisance may be characterised as the causing or permitting of a state of affairs in one man's property from which damage to his neighbour's property is likely to arise (see *Hygeian Medical Supplies Pte Ltd v Tri-Star Rotary Screen Engraving Works Pte Ltd* [1993] 3 SLR 309 at 315). It is clearly not a reasonable use of land to create or to continue a hazard which the owner or occupier knows or should know carries a foreseeable risk of damage to one's neighbour. I pause to note that the status of Lian Shing as the occupier in fact and in law of the DR for the duration of the drainage works was not disputed. Of importance to the issue of liability in private nuisance and negligence is the question whether the damage done was reasonably foreseeable. In *Overseas Tankship (UK) Ltd v The Miller Steamship Co Pty and Another* [1967] 1 AC 617, Lord Reid, approaching the case under the rubrics of both nuisance and negligence at p 644 said:

> If it is clear that the reasonable man would have realised or foreseen and prevented the risk, then it must follow that the appellant is liable in damages.

24 This led Lord Cooke of Thorndon in Delaware Mansions Ltd v Westminster City Council [2002] 1 AC 321 to observe:

> [29] … I think that the answer to the issue falls to be found by applying the concepts of reasonableness between neighbours (real or figurative) and reasonable foreseeability which underlie much modern tort law and, more particularly, the law of nuisance. The great cases in nuisance decided in our time have these concepts at their heart.
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> …
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> [31] In both the second *Wagon Mound* case and *Goldman v Hargrave* [[1967] 1 AC 645] the judgments … are directed to what a reasonable person in the shoes of the defendant would have done. The label nuisance or negligence is treated as of no real significance. In this field, I think, the concern of the common law lies in working out the fair and just content and incidents of a neighbour's duty rather than affixing a label and inferring the extent of the duty from it.

25 In *Sedleigh-Denfield v O'Callagan and Others* (*supra*), the House of Lords considered the liability in private nuisance of a landowner or occupier for a nuisance created on the land by a trespasser. The principle to be derived from Lord Wright's speech at 904-907, which I have set out below, is that a defendant landowner or occupier is responsible for a nuisance which he knew or ought to have known (in the sense explained by Lord Wright, namely that the means of knowledge were available to him) would be the consequences of the activities carried on by him on his land. Lord Wright said:

> Though the rule has not been laid down by this House, it has I think been rightly established in the Court of Appeal that an occupier is not *prima facie* responsible for a nuisance created without his knowledge and consent. If he is to be liable a further condition is necessary, namely, that he had knowledge or means of knowledge, that he knew or should have known of the nuisance in time to correct it and obviate its mischievous effects. The liability for a nuisance is not, at least in modern law, a strict or absolute liability. If the defendant by himself or those for whom he is responsible has created what constitutes a nuisance and if it causes damage, the

difficulty now being considered does not arise. But he may have taken over the nuisance, ready made as it were, when he acquired the property, or the nuisance may be due to a latent defect or to the act of a trespasser, or stranger. Then he is not liable unless he continued or adopted the nuisance, or, more accurately, did not without undue delay remedy it when he became aware [of] it, or with ordinary and reasonable care should have become aware of it. This rule seems to be in accordance with good sense and convenience. The responsibility which attaches to the occupier because he has possession and control of the property cannot logically be limited to the mere creation of the nuisance. It should extend to his conduct if, with knowledge, he leaves the nuisance on his land. The same is true if the nuisance was such that with ordinary care in the management of his property he should have realised the risk of its existence. This principle was affirmed in *Barker v Herbert* [[1911] 2 KB 633]. That was the case of a public nuisance constituted by a defective railing dividing the area of the defendant's house from the highway. A boy, playing, fell and was injured, and claimed damages. Though the nuisance was a public nuisance, and though a public nuisance in many respects differs or may differ from a private nuisance, yet there is in my opinion no difference, in the respect here material, which is that if the defendant did not create the nuisance he must, if he is to be held responsible, have continued it, which I think means simply neglected to remedy it when he became or should have become aware of it.

26 In *Tesa Tape Asia Pacific Pte Ltd v Wing Seng Logistics Pte Ltd* [2006] 3 SLR 116, the question of the existing state of knowledge of the defendants at the time of the acts and omissions complained of was decidedly relevant. The greater the awareness of the potential for harm, the more likely is the criterion of reasonable foreseeability satisfied (see *Clerk & Lindsell on Torts,* (Sweet & Maxwell, 19th Ed, 2006) at para 8-16). In that case, the plaintiffs and the defendants occupied adjoining premises in an industrial area. The defendants operated a container storage depot where they repaired and stored 40-foot containers. The containers were stacked one on top of the other, in tiers up to seven containers high. Some of these containers were stacked near to the perimeter fence which separated the two properties. One night when there was a heavy thunderstorm, several containers fell across the fence, damaging the plaintiffs' property. The plaintiffs sued the defendants in negligence, nuisance and under the rule in *Rylands v Fletcher*. As regards the claim in negligence, it was found that the evidence, which included the results of an inspection by the Ministry of Manpower in response to a complaint that the containers were stacked too high, as well as the fact that there were known cases in other depots of containers falling due to sudden gusts of wind, established that the danger of the containers collapsing was foreseeable. It was also foreseeable that if they fell, they could damage the plaintiffs' property. On that basis, Choo Han Teck J held that the defendants owed the claimants a duty of care. Choo J also found that the same facts supported a finding of liability in nuisance. He held that the vital element – that of unreasonable use of land – could be established in that case; that is, while storing containers on land in an industrial zone was not in itself a nuisance, placing the containers in a manner which made them foreseeably unsafe rendered the use of land unreasonable.

27 In the present case, applying the principles as stated, the evidence before me bears out OTF's assertion that the defendant by its site foreman, Oh, was aware of and thus necessarily foresaw the damage complained of, namely the flooding of OTF's farm. The PUB and the defendant through Oh were alerted and made aware of the risk of flooding of L7. The risk and danger posed by surface run-off from rainwater as a result of the defendant's drainage works was reasonably foreseeable by the defendant to give rise to a duty of care. As regards the claim in nuisance, the defendant had knowledge by its site foreman, who was in charge of the drainage works, or had the means of knowledge that there was a foreseeable risk of flooding causing nuisance to L7. In my judgment, a finding of reasonable foreseeability of damage is firmly supported by the evidence. It is not necessary for OTF to show that the deaths of the arowanas were foreseeable. In a claim in negligence and

nuisance, the defendant will only be liable for flood damage being the type of damage that the defendant ought reasonably to have foreseen as being liable to flow from its conduct. The test of foreseability in the context of duty of care does not require OTF to prove that the defendant should have foreseen the precise mechanics that result in damage (see *Hughes v Lord Advocate* [1963] AC 837). I should also state that I am satisfied on the evidence, and I so find, that the defendant's drainage works created the problem of flooding and the defendant allowed the risk of flooding to continue. This finding is further discussed in [33] to [39] below.

(iii) Knowledge of the defendant bearing on foreseeability

28 I now examine in detail the salient features of the evidence on the state of knowledge of the defendant. Ong was the principal witness for OTF. After the defendant went on site, Ong soon became apprehensive of the danger of his farm being flooded and repeatedly expressed concern to the AVA and PUB. As stated, Ong wrote to the AVA in November 2002 expressing his concern that his farm could be flooded as a result the defendant's drainage works at the DR. This undated letter was received by Wee of the AVA on 1 November 2002 before a joint inspection at the site with the PUB on 6 November 2002 as recorded in an inter-division e-mail produced by Wee.[note: 5] The e-mail informed the Farm Inspection Section of AVA that officers from Wee's division had visited the site with Chng. Chng was the person in PUB who spoke to Oh. Chng also gave instructions to Oh. According to the PUB, Chng was not required under the contract to supervise the drainage works. Plainly, by 6 November 2002, the possibility of L7 being affected by flood had come to the attention of the PUB and certain rectification measures were agreed upon by the two agencies. The defendant too was made aware of the possibility of flooding and this fact was not denied by Oh and Chng. This was obliquely the defendant's pleaded position. Paragraph 4 of its Defence reads as follows:

> Further and/or in the alternative, after the Defendant received a complaint by the Plaintiff to the then Public Utilities Board, the Defendant erected an earth embankment near part of the fences of the Farm.

29 Oh agreed that Chng had informed him that the PUB had received a complaint of flooding in L7 and that a fish had died on 27 December 2002. The complainant was Ong. Oh did not give this complaint prominence as neither he nor Chng had personally witnessed the flooding, sighted the dead fish or seen any photographs of the dead fish. Oh also confirmed that on 23 January 2003, an officer of AVA instructed him to stop drainage works and, on the following day, he lodged a police report about the incident. Ong's constant complaints were followed up by Wee who had site meetings with Chng on 6 November 2002, 3 January 2003, 20 January 2003 and 23 January 2003. The last site meeting on 29 January 2003 was attended by Chng's superior, Lim Chun Seng ("Lim"). During site meetings, there were discussions on preventive measures as well as decisions made on their implementation. The PUB was well aware of the possibility of flooding and the preventive measures that were discussed with Wee such as "[cutting] the ground at the rear end and side portion beside lot 7 to a lower level or at par and [providing] a channel 2m away and along this part of the farm's perimeter fencing to drain off the surface run-off".[note: 6] Although there was eventually some dispute on this issue of preventive measures, more importantly, Oh confirmed that Chng had informed him of the need to "cut the ground" at the rear end and side portion of the DR.[note: 7]

30 Indeed some precautions were clearly acknowledged as necessary by the defendant. It was not in dispute that the defendant constructed an earth embankment or bund.Oh agreed that the bund was built to prevent surface run-off from rainwater. He admitted to being aware, before the bund was built, that rainwater from DR could flow into the grounds of L7 and flood the ponds in L7. It is clear that the bund was built before the floods on 31 January 2003 and 3 February 2003; but as to when it was actually built, the evidence is not conclusive. According to Oh's affidavit of evidence-in-chief,

the bund was built in early January 2003. In the witness box, Oh said that the bund was built in late November 2002 or early December 2002. The defendant adduced some photographs taken in mid-December 2002 by Oh to provethat the bund was built before the flooding on 31 January 2003. Chng was unable to recall when the bund was built. Lim said he saw the bund when he visited the site on 29 January 2003. Lim was subpoenaed by the defendant and he agreed with Mr Nair that the drainage works at the DR posed a risk of flooding to L7 and that there was a need for prompt remedial action as stated in his e-mail of 30 January 2003 to Wee. No immediate remedial action was taken because of the intervening Lunar New Year holidays. By this time, Lim had on 28 January 2003 approved the first revision of the original contract for a single C7 drain. [note: 8] Subsequently, the drainage plan was further revised or amended to provide for a more extensive drainage system to cope with the volume of surface water run-off at the DR.[note: 9] All these matters collectively demonstrate that Ong's complaints and apprehension were not idiosyncratic or fanciful, and they also corroborate Wee's testimony that the AVA found Ong's complaints to be valid. The AVA investigated Ong's complaints and took up his cause with the PUB. Wee's evidence was clear and uncoloured. Wee was examined by Mr Nair and his evidence was tested in cross-examination by Mr Loo. There was no reason to doubt Wee's overall testimony which was borne out by his contemporaneous e-mail exchanges with the PUB. His evidence is clearly worthy of weight.

(iv) Precautions and their sufficiency

31 Having concluded that damage was foreseeable, I have to ask whether reasonable steps were taken to abate or guard against the risk of flooding. Related to the issue of foreeability of flood damage is the question of what was involved in giving the defendant a reasonable opportunity to put the matter right. It is evident from my analysis of the evidence that the defendant was given notice of the risk of flooding, and there was ample opportunity for the defendant to do something to abate or guard against the risk of flooding. The precautionary measure taken before 30 January 2003 was inadequate. The defendant built an earth embankment or bund to prevent surface run-off from rainwater onto the grounds of L7. Instead of preventing rainwater from running over, the embankment was built with slopes on both sides making it easier for rainwater to flow down the sides over to L7. In the result, the bund did not impound the water to a significant extent. In addition, Wee's proposal to build a channel for surface water run-off to flow into was not adopted. There was nothing much to the ditch Oh said the defendant dug to connect with the pipe leading to the main road. Prior to the drainage works, the DR being a catchment area was the receptacle for rainwater. The precautions taken had no impact upon the foreeseable risk. In other words, the defendant did not take sufficient or adequate steps to prevent flooding of the farm. This line of defence would have failed had it been necessary to rely upon it.

Causation

32 By far, causation is the most important defence. The claims in this action turned on causation. It is for OTF to prove that the cause of the damage, which Ong complained of, was the result of flooding. The issues before this court are as follows:

(i) Whether the floods were substantially caused by drainage works carried out by the defendant at the DR; and

(ii) If so, whether the result of the floods caused the death of the arowanas.

(i) Whether the floods were substantially caused by works carried out by the defendant at the DR.

33 This question concerns the construction of the drainage works and when broken down, the question involves four parts. The first concerns what were the ground levels on the relevant properties prior to the work being done. The second is what work was actually done. The third is whether this work caused any material change in water flow so as to damage L7. The fourth is whether this amounted to a nuisance and/or neglect on the part of the defendant.

34 OTF claims that the earthworks at the DR raised the ground level of the DR at the rear of L7 and made it higher than L7. That enabled the rainwater to run over thereby causing flooding in L7. Each party respectively sought to show that the DR level was either higher (the defendant) or at the same level (the plaintiff) as L7 before the works began. The defendant takes the position that the DR level was already higher than that of L7 even before the drainage works commenced. Unfortunately, the evidence of its witnesses does not bear this out. The surveyor who allegedly carried out a survey before drainage works started was not called as a witness. It is doubtful that such a survey was done. There was no survey report and the invoice discovered was for a different matter. The defendant called Chia Aik Kok, a surveyor who was instructed in 2006. His testimony is not useful as his survey in 2006 was well after the DR had been levelled and the new drainage system constructed. Mr Nair submits that as there is no conclusive evidence that the ground level of the DR was already higher than the plaintiff's farm at the outset, and in the light of the evidence before the court that the rear of L7 was lower that the DR, the difference in level must have been caused by the defendant for it only "materialised" after the works were carried out. It was generally accepted by the witnesses who noticed that on site, the front part of the farm was higher than the rear. Chng and Lim acknowledged that the site condition was different from what was stated on the actual land survey site plan. Oh testified that the ground level of the DR was higher than L7 before the "cutting" (referring to the cutting of the land, *i.e.* levelling).[note: 10] Wee's testimony was to the same effect. He said:[note: 11]

> We actually highlighted the concern of this higher gradient on the terrain next to L7 to Mr Chng and … highlighted to him the danger of flooding if there is a heavy downpour. We also informed him that actually… reminded, informed that Mr Ong Chin Soon has actually given two feedbacks to AVA … already on the flooding problem and are making claims that, … suffering fish losses. In this regard, we asked for assistance from Mr Chng to actually provide, … flood preventive measures to the farm. And as agreed, PUB would cut the ground at the rear end and the side portion is at Lot L7 to a lower level or at par and to provide a channel, 2 metres away and along the farm's perimeter fencing to help drain off the surface run-off.

35 The defendant's theory was that OTF had lowered the rear end of the farm deliberately in order to collect water for the farm. This theory was entirely baseless; there was not a shred of evidence adduced by the defendant to back it up. While it may be true that OTF had been drawing water out of a well and a pond at the DR outside the farm, there was no evidence that OTF had to lower L7 in order to do so. Indeed, it was an accepted fact that there was a water pump to draw the water in.

36 Even if the DR level was already higher to begin with or on par with L7, all that OTF needed to show was that there was lack of care which the defendant was bound to exercise towards OTF or that insufficient precaution was taken by the defendant in the course of its drainage works to prevent flood damage to L7. There is actionable negligence and nuisance on the part of the defendant if as a result of the drainage works, OTF's property was affected by the flow of rainwater over to L7.

37 The defendant accepted that levelling of the ground was part of its drainage works. The pond and earth drain were backfilled by 28 January 2003. Wee explained that with the existing earth drain beside L7 backfilled, the risk of flooding increased because there was no channel in the DR to drain

away rainwater. The two metre channel that Wee had earlier discussed with Chng and documented in his e-mail of 23 January 2003 was not built. On 29 January 2003, Wee e-mailed Lim in the following terms:

> Subject: Flooding at Lot L7, Pasir Ris Drive 12
>
> Dear Chun Seng,
>
> Pls refer to our joint site meeting this afternoon on the above subject.
>
> In the meetingwe've pointed out the areas surrounding the drain reserve that are prone to flooding caused by the raised ground level. As explained, particularly the ground at the drain reserve fronting the end and side perimeter of lot L7 where it is much higher and warrants prompt remedial action to avert flooding to the farm during heavy downpour. In this regard, we've highlighted to you that from the site plan of lot L7 and its adjacent lot, their ground level is even.
>
> We're glad that you acknowledge the potential danger of flood originates from the drain reserve and your assurance to initiate prompt remedial action to prevent flooding to the surrounding farms. With your assurance that the PUB would take up the matter to resolve the flooding issue, we're obliged and look forward to a satisfactory solution.
>
> Thank you.

38 Lim replied on 30 January 2003. He wrote:

> Dear Soon Bock and all
>
> Due to unforeseen problems, my staff Chng, have not handle the situation satisfactory.
>
> I will take up the points raised in the site meeting and ensure that the levelling of our DR will not cause inconvenience to the nearby lots.
>
> Since Chinese New Year is around the corner, the work will be suspended for a few days. We expected work to start later next week.
>
> Thank you for the patience and understanding.
>
> I wish you a Happy Chinese New Year

39 It seems to me that the defendant's drainage works at the DR brought about a consequent loss of the capacity of the ground to absorb a great deal of the rainfall in times of heavy rain. The works involved clearing vegetation and incidental earth works. Another factor was the defendant's eliminating a natural ponding area near the back of the farm by filling up or constructing earth works over it for the purpose of the project. The earth drain was also backfilled. The defendant admitted that on or by the eve of the Lunar New Year holidays, the earth drain near the perimeter fence of L7 was blocked off. Tan Jin Buck ("Tan"), a supervisor from the Climatology and Marine Meteorological Services Division, National Environment Agency, had confirmed the rainfall data for the particular time of the year. In my judgment, the levelling of the land as part of the drainage works hindered and obstructed normal avenues of rainwater run-off that existed prior to the defendant commencing its works. I have already concluded that having regard to the existing state of the defendant's knowledge at the time, the defendant knew of the risk of flooding and was aware of the reasonable means of averting the flooding which was foreseeable. Despite the defendant's knowledge of the risk

of flooding due to the drainage works, insufficient provision was made for rainwater run-off. The defendant has allowed a nuisance to continue at the DR. The flooding and the consequent damage together constitute the tort of nuisance. As regards the claim in negligence, I am equally satisfied that the defendant did not exercise reasonable care in carrying out its drainage works. In my judgment, the flooding could have been avoided by the exercise of reasonable care. The state of affairs brought about by the defendant's drainage works was the effective cause for the surface run-off from a heavy downpour flowing over to L7 which led to flooding and with that flood damage. I now elaborate on the extent of the flood damage.

(ii) Whether the result of the floods caused the death of the arowanas.

40 An important and related issue is the number of dead arowanas and the timing of the deaths. Mr Loo extrapolated certain data from the Agreed Bundle of Documents for the table below detailing the list of dead arowanas and other related information such as the date on which the fish died and the batch they were from. For convenience, the table is reproduced here in a substantially similar form:

Date	Batch	Dead	Tagging / Remarks
27 Dec 2002	GDFF 4.1	1	Nil
28 Dec 2002 to 28 Jan 2003	GDFF 4.1	2	Nil
29 Jan 2003	GDFF 4.1	1	Sent for autopsy
6 Feb 2003	GDFF 1.1	11	Tagged; microchips produced in court
6 Feb 2003	GDFF 4.1	5	Nil
6 Feb 2003	GDFF 4.4	12	Nil
5 June 2003	GDFF 1.1	1	Sent to AVA while moribund
6 June 2003	GDFF 1.1	9	Tagged; microchips produced in court

	TOTAL	42	

41 The strength of the evidence varies for each entry and it is necessary to consider the evidence separately. In so far as the tagged fishes are concerned, the microchips with their respective tag numbers tallied with all the certificates of identity (COI) issued by the AVA to OTF. The defendant suggested the possibility that the microchip could be extracted from a live fish, and there was thus no conclusive evidence that the tagged fish died. Removing the microchip from a live fish is an absurd prospect bearing in mind that arowana is an expensive ornamental fish and is desired for it beauty – the dragon fish is covered in glistening gold, silver or red scales. The weight of the evidence was against the defendant's contention. Dr Ling Kai Huat ("Dr Ling") was subpoenaed by the defendant. He heads the AVA's Aquaculture Services Centre as well as the Freshwater Aquaculture Branch. Dr Ling testified unequivocally that the microchips could not be removed without killing the fish. The defendant sought to rely on the evidence of Dr Susan Kueh ("Dr Kueh") who had merely testified that it was "possible" for a fish to live, although, this was very unlikely given that the removal of a microchip would cause considerable stress and/or scarring to the fish. In the light of the evidence before me, I find that 20 fishes, which had microchips tagged into them and whose microchips were produced in court, did die. In addition, it cannot be in dispute that the two fishes which were sent to the AVA for autopsy or tests on 29 January 2003 and 5 June 2003 respectively, had also died since the reports by the AVA provide documentary evidence of this.

42 As for the untagged fishes, going by the claim for these untagged fishes, there are three distinct sets of fishes to consider. The first set refers to the one fish that died on 27 December 2002. Although there were no photographs relating to the death of this fish, there was a contemporaneous letter written by Ong to the AVA on the same day reporting the death of this arowana. The meteorological report adduced by Tan also shows that there was heavy rainfall on 26 December 2002 – the heaviest for that month – lending support to OTF's claim of flooding. This was consistent with Ong's evidence during cross-examination, and the defendant also did not seriously challenge or undermine the contents of this letter.

43 As for the second set of fishes, i.e. the 17 fishes that allegedly died on 6 February 2003, there are apparent inconsistencies in the documentary evidence adduced to support this part of OTF's claim. The first is with regard to the exact number of fishes that died on that day. The second is in relation to the photographs of the dead fishes adduced by OTF to support its claim.

44 First, Ong made a police report on 7 February 2003 reporting the death of some of his fishes on 6 February 2003. In this report, he did not state the number of fishes that had died. According to Ong, he told the officer who was taking the report the number of dead fish but the officer informed him that it was not necessary to put such detail into this report as it was meant to be kept brief.[note: 12] In any event, Ong then wrote first to the PUB on 8 February 2003 and then to the AVA on 9 February 2003 reporting the deaths of his fish. In both these reports, Ong reported that a total of 27 fishes had died on 6 February. In particular, out of this 27 fishes, 16 were purportedly untagged. However, in a subsequent letter to the AVA on 24 July 2003 ("the July letter"), he reported that there were 17 untagged fishes which had died, thus making the total number 28 instead of 27. Comparing these two sets of correspondence, the difference was that an additional fish from batch GDFF 4.4 (the smaller of the two batches, GDFF 4.1 and GDFF 4.4) was reported in the July letter. When queried about this discrepancy, Ong maintained that the July letter, i.e. the figure of 17 untagged fishes, was the correct one and explained that the earlier letters were written with haste and based on recollection; he did not do an actual count. Mr Loo pointed out that this alleged state of affairs was highly unlikely in that the July letter was written only after about five months since the

deaths had occurred.

45 Second, even assuming that Ong's explanation is plausible and the correct number was indeed 17 untagged fishes, this was still inconsistent with the photographs taken on 6 February 2003 depicting the 17 dead fishes. Although the photographs show 17 dead fishes, they show 11 smaller fish and six bigger fish while the numbers given by Ong in the July letter were 12 and five. He reported that 12 were from the batch GDFF 4.4, and these are presumably the smaller ones, whereas the photograph clearly showed only 11. Counsel did not take issue with the witness on this inconsistency. Neither was it addressed in the submissions. Since OTF has relied on the photographs as evidencing the number of untagged fish that died on 6 February 2003 as well as the July letter, and although they contain discrepancies, I prefer the quality and hence the weight of the photographic evidence of the 17 untagged fishes that died. The discrepancy over the number of untagged fishes in the February 2003 correspondence is not surprising having regard to the confusion following the discovery of the fatalities and the distressing task of discarding the dead arowanas.

46 Finally, with respect to the two fishes that died between 28 December 2002 and 28 January 2003, there was no evidence to support OTF's claim other than Ong's bare assertion that this was so. Unlike the first two sets of fishes discussed above, there was no contemporaneous correspondence – the only time when this fact was mentioned is in the July letter, some six months after the earlier incident. There were also no photographs. There was no explanation at all as to why Ong made no mention of the two dead fishes in circumstances when one expects it as a most natural thing to do. In the letter of 8 January 2003 to the PUB, other than a general statement that rainwater had been flowing into the farm and fish pond, no specific reference to flooding or death of fishes was found there as well. The evidence of flooding is also weak – other than alluding to heavy rainfall during this period, OTF has not made specific reference to any dates where such flooding occurred in the farm.

47 Summarising, OTF has only managed to prove on the balance of probabilities that 40 fishes have died: 20 tagged, two sent for tests at the AVA, one fish on 27 December 2002 and 17 untagged fishes.

48 I now turn to consider whether OTF has established the necessary casual link, namely, whether the defendant's actions or omissions as a matter of law caused the death of the arowanas. Were the defendant's acts or omissions a proximate cause of the death of the fish? Or was the flooding solely caused by the unusually heavy rain on the two days in question? This latter query is also relevant to the *force majeure* defence.

49 Dr Kueh is a veterinarian and she is Head of Aquatic Animal Health Laboratory of the AVA. Her laboratory at the AVA carries out diagnosis of aquatic animal diseases. In her report of 11 February 2003, Dr Kueh explained how contamination from flooding could have occurred. She stated:

> Floodwaters are often associated with significant amounts of suspended solids and organic or bacteria loads, which may lead to gill damage, stressed fish and secondary bacteria infections.

Elaborating in the witness box, she said:[note: 13]

> ... when floodwaters go into a pond, it doesn't matter whether it's into a pond or lake or part of the sea where they farm usually when there's heavy rain or any kind of flooding then there is a lot of wash off in terms of mud and suspended solid, and suspended with these mud and suspended solid, there is a lot of organic matter and bacteria, so it does affect the fish because then they have to work very hard to breathe … when they breathe they pass the water through their gills and may cause damage to the gills…all these suspended solid and then also with the

> high bacteria count in the water, then they may get skin infection and secondary bacteria infection.

50 In drawing inferences as to whether or not one event is related to another, it may be highly material that the one event followed the other within a short time; particularly, in circumstance where that is what one would expect to have happened if the one event was caused by the other. It is fairly clear that in so far as the dead arowanas discovered on or before 6 February 2003 are concerned, on a balance of probabilities, the weight of the evidence does inferentially point to the floods being the substantial cause of the deaths. The autopsy report on the fish that died on 29 January 2003 and the evidence given by Dr Kueh showed that main cause of death was the inability of the fish to osmo-regulate. Dr Kueh explained that this would cause the accumulation of fluids in the fish, leading to organ failure and bacterial infection. Dr Kueh testified that these findings were of a recent origin, i.e. the abnormalities found in the fish could not have been present in the fish beyond the last couple of weeks from the time the autopsy was carried out. She also testified that the ingress of flood waters into the pond was the most likely reason for the fish to have died.[note: 14] In addition, Dr Ling testified that it is not common to hear of so many arowanas in the same pond dying on one day, and he attributed this phenomenon to the water quality in the pond. From the evidence before me, it seems that there would have had to be some precipitating factor that caused the deaths to occur, and I find that flooding was a precipitating factor. In my judgment, I find that the pond water would be affected by flood waters, there being no other known occurrence in play. I also note that there was no history of any other problems on the farm that could be attributed to this cause and, furthermore, no countervailing evidence was adduced by the defendant to contradict Dr Kueh's testimony. The activity on the DR made a material difference to drainage, and consequently the overflow of water to L7. I am satisfied that, on a balance of probabilities, the defendant's drainage works was a sufficiently proximate cause of the death of the 30 fishes on or before 6 February 2003.

51 I now turn to the ten fishes in total that died in June 2003, after a period of four months from the last flood. The evidence of Dr Kueh is not as compelling as it was for those 30 fishes considered above. The laboratory reports for the moribund fish submitted to the AVA on 5 June 2003 focuses on the existence of parasites and bacterial infection on the fish. Indeed, Dr Kueh testified that her recommendations to treat the water were only in relation to the treatment of the parasites. She went on to say that in her histological examination, she found that the fish had a long standing inflammation of the liver and kidney which seemed to suggest that there was some kind of toxic cause; and toxic causes in fish usually came from two main sources, either the pond water or the food which they ate. Dr Kueh in explaining her second report where inflammation of the liver and kidney was found said:[note: 15]

> Given that ..there's flooding, then you might suspect water, but then, … I always put water or food so that the farmer can then go back and investigate to rule out, you know, that it's not food in the first instance.

However, the pond water was gradually changed and it was not surprising that Dr Kueh could not comment on whether the water in the pond had contributed to the death of the fish based on the water sample report. Nonetheless, it was possible for the fish with chronic disease to die only six months after a flood from the effects of such a flood. Dr Kueh's concession that there could be a possible correlation between the flooding and inflammation of the liver and kidney found in June 2003 was, in my view, enough to link the moribund fish to the flooding. In considering this probability, it is in my view plausible that there were present in the flood water contaminants that could have accounted in some way for the affliction seen in the moribund fish. Dr Kueh was of the opinion that chemicals or other substance from the farm could have been washed into the pond by the flood

waters and the breakdown of such organic matter would take time. In this sense, the time lag between the flood occurring on 31 January 2003 and 3 February 2003 and the onset of the disease is explicable and plausible. Having considered the available evidence and highlighted the difficulties with the claimant's case in particular the timing of the onset of death, nevertheless putting the known factors together, I find that OTF has, on a balance of probabilities, proved that the substantial cause of the inflammation of the liver and kidney seen in the moribund fish came from the flood waters.

52 However, the position is not established in so far as the other nine fishes are concerned. Arowanas are expensive and that would have been a plausible reason for OTF not to engage the AVA in June 2003 to test the other nine live fishes. But that reasoning did and must not detract from the fact that just because the autopsy showed one moribund fish as having liver and kidney problem, the other nine would invariably have been similarly afflicted. Dr Kueh was not prepared to go that far in her testimony. Mr Nair's analogy of patients suffering from AIDS and dying at different times misses the point for he wrongly assumes that the nine fishes also had liver and kidney problems and that aliment was inferentially from the same source. It follows that with the critical missing link in the evidence, I am unable to make a primary finding of fact that the other nine dead fishes shared the same medical condition as the moribund fish and without this primary finding, no secondary inference can be drawn.

53 There is a further point on timing. Whilst there may be a delay of four months before the onset of death, it would seem unusual for a batch of nine fishes to die on the same day in June 2003. If these fishes had been similarly sick all along for the intervening months between January and June 2003 (consistent with Dr Kueh's findings in respect of that particular fish), it would not be unlikely for some to have died during these months. In fact, one would have expected this to be so. Hence, OTF has not discharged the burden of proof that, on the balance of probabilities, the flooding was indeed the substantial cause of the death of these nine fishes.

54 To summarise, although OTF has managed to prove that 40 fishes did in fact die, it has only managed to prove that the defendant's drainage works caused the death of 31 fishes out of the 40 dead. For the reasons stated, the evidence that 31 dead fishes was due to flood water ingress is, albeit largely circumstantial, both ample and compelling.

Mitigation

55 The defendant alleged that OTF did not mitigate its losses. As for the moribund fish sent to the AVA in June 2003 and those that died earlier, in my judgment it would not have been reasonable to have transferred all the fishes out of the pond to another receptacle. Ong explained the importance of maintaining water composition and temperature in the ponds for breeding arowanas as they spawn well only in natural ponds. Dr Kueh agreed generally with Ong's averment and said that it took a long time to achieve the right ecological balance and that the acclimatisation to the water in the pond was crucial for fish to breed properly. Ong also stated that he was advised by Dr Kueh not to move the live ones but to keep replenishing (changing) the water of the affected pond so that the pond water could be cleansed of pollutants. As such, it would not have been reasonable to expect him to move all the fishes out of the pond at this stage. Dr Kueh agreed that it would be stressful on the fish to transfer them and the farmer would risk losing a few fishes by such a transfer. I do not think OTF is expected to take such a risk in mitigation. The measure which OTF opted for is not to be weighed in nice scales having been placed by the defendant's wrong to make a choice. The standard expected of OTF to act reasonably in the interests of both parties is not high since the defendant is a wrongdoer. Besides, Dr Ling explained that to rid the contaminant mixed with pond water is a slow process involving replacing the pond water in stages and over time. If anything, the AVA report was only completed on 11 February 2003; this was after the large number of fishes that died on 6

February. Thus, until 6 February, Ong could not be sure by all accounts what had caused the deaths and, therefore, OTF would not have been in a position to mitigate its losses.

56 The defendant submits that OTF had sufficient fish tanks on the farm, and the proper expertise (*i.e*. nutrients, water, filtration, etc) to be able to transfer the arowanas from pond 1 (the affected pond) into these external fish tanks, thereby preventing or minimising the death of its stock. The evidence at trial was that transferring the fish would usually cause some deaths since it caused stress to the fish. Importantly, there was no hint that more fish could die after the first batch. There is no evidence that nine other in the pond were clearly diseased so that it was abundantly clear that a farmer in such a position could not sit back and do nothing.

Whether the defence of *force majeure* is available

57 It is necessary to deal with the defence that the flood damage was caused by an act of God, so that even if the defendant were negligent, the negligence was not the cause of the injury to OTF. By this, the defendant is saying that the rain was so heavy and unusual that so much water fell in so short a time that no reasonable care would have guarded against it. Thus, even if the defendant had not been guilty of the acts and omissions complained of, OTF's farm would still have been flooded, and the same amount of damage done.

58 In the context of flooding, an Act of God may be defined as an escape caused directly by natural causes without human intervention in circumstances no human foresight can provide against and of which human prudence is not bound to recognise the possibility (see *Halsbury's Laws of England* vol 9(1) (Butterworths, 4th Ed Reissue, 1998) at para 907). There is no evidence to properly sustain a defence of *force majeure*. The defendant's evidence of the amount of rainfall over the area for the period from 2001 to 2003, did not go further to show that this rainfall was of such a magnitude that it was unexpected. Tan was not an expert. He could only give evidence on the amount of rain that was recorded for each day but could not interpret the rainfall data available. Furthermore, Mr Loo only sought to draw the attention of the court in respect of the rainfall on 6 February 2003 and no other days. Given the conclusion that rainfall was foreseeable for that time of the year, being the north-east monsoon season, and that there was no evidence of unusually heavy downpour, the defence of *force majeure* must fail. In any case, the defendant had prior warning of the possibility of flooding and the harm it might cause.

Title to sue

59 The defendant questions OTF's claim to ownership of the dead fishes. This line of defence has no merit. I accept Mr Nair's submissions that, on a balance of probabilities, the COI issued by AVA and production of microchips matching the COI are sufficient proof that the dead fishes covered by the COI and previously tagged were reared by OTF and no one else. The dead arowanas were from OTF's own pond. There is no evidence, nor was Ong asked by the defendant whether the dead arowanas came from somewhere else, or whether someone else has asserted a contrary claim.

Conclusion

60 For the reasons stated, in this case liability in negligence and nuisance is established on the facts for 31 dead arowanas, the details of which are found above. Consequently, I order interlocutory judgment in favour of the plaintiff with damages to be assessed by the Registrar for these 31 dead arowanas. The defendant is to pay the plaintiff the costs of the action.

[note: 1]Oh's affidavit of evidence-in-chief at p 20 and D11

[note: 2]PBD pp 122, 124 -125 & 128 for photographs nos. 4, 8, 9 & 15

[note: 3]D2

[note: 4]P1 at p 22

[note: 5]P1 at p5

[note: 6]P1 at p12 for e-mail from AVA to PUB dated 23 January 2003

[note: 7]Transcript of Evidence pp 360-361; p 379

[note: 8]D9

[note: 9]D11

[note: 10]Transcript of Evidence p 366

[note: 11]Transcript of Evidence p 239

[note: 12]Transcript if Evidence at pp 89 to 91

[note: 13]Transcript of Evidence p 189

[note: 14]Transcript of Evidence pp 190 and 201

[note: 15]Transcript of Evidence at p 196