SUPREME COURT OF QUEENSLAND

CITATION:	*Hamcor Pty Ltd & Anor v State of Qld & Ors* [2014] QSC 224
PARTIES:	**HAMCOR PTY LTD (ACN 010 141 429)** (first plaintiff) and **DONALD CHARLES HAYWARD and JAMES PETER COLLINS, as executors of the Estate of TERRENCE ARTHUR ARMSTRONG (deceased)** (second plaintiff) **v** **THE STATE OF QUEENSLAND** (first defendant) and **MARSH PTY LTD (ABN 86 004 651 512)** (second defendant) and **OTAGO PTY LTD (ABN 90 010 161 501)** (third defendant)
FILE NO/S:	5764 of 2011
DIVISION:	Trial
PROCEEDING:	Trial
ORIGINATING COURT:	Supreme Court of Queensland
DELIVERED ON:	1 October 2014
DELIVERED AT:	Brisbane
HEARING DATE:	14 October-30 October 2013; 6 November-8 November 2013; 21 May 2014; last written submission received 19 June 2014
JUDGE:	Dalton J
ORDER:	**Judgment for the first, second and third defendants against the first and second plaintiffs**
CATCHWORDS:	*Australian Securities and Investments Commission Act* 2001 (Cth), s12ED(1)(a) *Civil Liability Act* 2003 (Qld), s9(2)(d), s36 *Corporations Act* 2001 (Cth), s 912A(1)(a) *Environmental Protection Act* 1994 (Qld), s391 *Fire and Rescue Service Act* 1990 (Qld), s8B, s53, s129 *Associated Provincial Picture Houses Limited v Wednesbury Corporation* [1948] 1 KB 223 *Board of Fire Commissioners (NSW) v Ardouin* (1961) 109 CLR 105 *BP plc v AON Ltd* [2006] 1 All ER (Comm) 789

Brodie v Singleton Shire Council (2001) 206 CLR 512
Burnett v Grampian Fire and Rescue Service [2007] S.L.T. 61
Caltex Oil (Australia) Pty Ltd v The Dredge "Willemstad" (1975-1976) 136 CLR 529
Capital and Counties PLC v Hampshire County Council [1997] QB 1004
Colbran v State of Queensland [2007] 2 Qd R 235
Graham Barclay Oysters Pty Ltd v Ryan (2002) 211 CLR 540
Perre v Apand (1999) 198 CLR 180
Punjab National Bank v de Boinville [1992] 3 All ER 104
Pyrenees Shire Council v Day (1998) 192 CLR 330
Roads and Traffic Authority (NSW) v Dederer (2007) 234 CLR 330
Roads and Traffic Authority of New South Wales v Refrigerated Roadways Pty Ltd (2009) 77 NSWLR 360
Stovin v Wise [1996] AC 923
Stuart v Kirkland-Veenstra (2009) 237 CLR 215
Sullivan v Moody (2001) 207 CLR 562
Sutherland Shire Council v Heyman (1985) 157 CLR 424
Sydney Water Corporation v Turano (2009) 239 CLR 51
Williams v Hutt Valley and Bays Fire Board [1967] NZLR 123
Wyong Shire Council v Shirt (1980) 146 CLR 40

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DUTY OF CARE – IN GENERAL – – where the first defendant operates a fire brigade – where the brigade owed duties to the public at large – where the brigade may owe duties to other persons – whether a fire brigade owes a duty to take care in fighting a fire – whether the potential for conflicting duties affects the brigade's duty of care to the plaintiffs – whether a duty of care would be inconsistent with the brigade's statutory functions

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – WHERE ECONOMIC OR FINANCIAL LOSS – where the plaintiffs suffered economic loss as a result of contamination of land – whether the plaintiffs' claim is for pure economic loss

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DUTY OF CARE – REASONABLE FORESEEABILITY OF DAMAGE – PARTICULAR CASES – AFFECTING PUBLIC AUTHORITIES – where *Environmental Protection Act* 1994 (Qld) requires remediation of contaminated land – whether it is necessary for the first defendant to have foreseen precisely the application of *Environmental Protection Act* 1994 (Qld)

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DUTY OF CARE – RELATIONSHIP OF PROXIMITY – where the first

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TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – STANDARD OF CARE – EMERGENCIES – where the fire brigade applied water to a chemical fire – where the fire brigade understood that this posed an environmental hazard – whether the fire brigade breached its duty of care

STATUTES – ACTS OF PARLIAMENT – INTERPRETATION – REFERENCE TO FRAMEWORK OF ACT – HEADINGS – where *Acts Interpretation Act* 1954 (Qld), s 14(2) provides that a heading to a section is part of an Act – where *Civil Liability Act* 2003 (Qld), s 36 reduces the rights of persons to a remedy – whether *Civil Liability Act* 2003 (Qld), s 36 applies to modify the standard of care owed or as a defence – two stage approach considered and rejected

STATUTES – ACTS OF PARLIAMENT – INTERPRETATION – CONSIDERATION OF EXTRINSIC MATTERS – COMMISSION REPORTS – where *Civil Liability Act* 2003 (Qld), s 36 uses words from *Associated Provincial Picture Houses Limited v Wednesbury Corporation* – whether the first defendant's actions would amount to a breach of standard of care set by *Civil Liability Act* 2003 (Qld), s 36

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INSURANCE – INSURANCE AGENTS AND BROKERS – DUTY TO ENSURE EFFECTIVE INSURANCE COVER – whether broker acting pursuant to a contract owed a duty of care to third parties

TORTS – NEGLIGENCE – ESSENTIALS OF ACTION FOR NEGLIGENCE – DAMAGE – CAUSATION – GENERALLY – whether the plaintiffs would have acted in accordance with any advice brokers might hypothetically have given – whether insurance would have been available to plaintiffs

INSURANCE – THE POLICY – PRINCIPLES OF CONSTRUCTION – whether contamination of soil and ground-water is 'debris' – whether 'debris' must be remains of property which was insured property – construction of proviso – situation of proviso in policy – substance of proviso determines its application

COUNSEL: PJ Dunning QC, with PW Telford, for the plaintiffs
M Hinson QC, with D O'Brien, for the first defendant
ID Faulkner SC for the second and third defendants

SOLICITORS: Everingham Lawyers for the plaintiffs
Crown Solicitor for the first defendant
Thynne & Macartney for the second and third defendant

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[1] On 25 August 2005, the Queensland Fire and Rescue Service (QFRS) was called to a fire in the plaintiffs' chemical factory on an industrial estate at Narangba. The factory and warehouse buildings were destroyed. The brigade's response to the fire was considerable in terms of men and machines. Massive quantities of water were applied on and around the fire.

[2] Much of this water combined with chemicals from the factory to produce a very large quantity of contaminated fluid, or fire-water, as the witnesses called it. Much of the fire-water ran onto nearby bushland or into stormwater drains and thence a

local creek. This case concerns the effects of the fluid which remained on the plaintiffs' land. It soaked into the soil and large concrete building slabs. Some of it found its way into storage dams at the back of the plaintiffs' land (not overly much as curiously these "overflow" dams were located at the highest point of the land). As a result, the land was classified as Contaminated Land pursuant to Chapter 7 of the *Environmental Protection Act* 1994 (Qld) (*EP Act*). The plaintiffs came under a statutory obligation to remediate it – s 391 of the *EP Act*. The cost of remediation was accepted to be more than $9 million, many times the value of the land before the fire. Until it is remediated, the use of the land is lost to the plaintiffs.

Fire Case

[3] The plaintiffs sue the State of Queensland, as the proper defendant in respect of the acts and omissions of the QFRS.[1] The claim is a common law negligence action. The basis for the claim can be shortly, and probably not simplistically, stated as being that it was negligent to attempt to extinguish this fire with water: chemical fires cannot be extinguished with water. It was said by the plaintiffs that the proper approach to the fire on this site was to simply let it burn itself out whilst being vigilant to extinguish any spread of the fire outside the site. It is pleaded, that without the vast quantities of water applied in an attempt to extinguish the fire, the cost of remediation of the land would have been far less than it is. So it can be seen that the case involves significant points as to causation of loss, as well as breach, and the existence of a duty on the part of the QFRS. Before turning to points of law I spend some time outlining the facts of the matter. At the part of my judgment where I consider the facts I make some decisions as to the reasonableness of some actions and decisions of the QFRS. In doing so, I assume the existence of a duty of care in terms of my later finding, and apply the law as to breach, as I state it later in my judgment.

Insurance Case

[4] After the fire the plaintiffs' property insurers effectively paid the plaintiffs the full amount for which they were insured ($3 million) – t 11.27, t 12.8 and exhibit 38. The same insurance company refused to pay on a liability policy in the name of Binary Industries Pty Ltd as insured under a clause which promised to indemnify the insured "against their liability to pay compensation for and/or arising out of injury or damage".

[5] The plaintiffs sued the insurance brokers who had arranged liability insurance for Binary Industries. Binary Industries, controlled by the same human beings as the plaintiffs, ran the business of the chemical factory.[2] It was said that the brokers knew, or ought to have made sufficient enquiries to discover, that the plaintiffs owned the land and had them named as insureds, or interested parties, on Binary Industries' liability policy. It was also pleaded that the brokers should have obtained an Industrial Special Risks (ISR) Policy for the plaintiffs. The terms of

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1 The QFRS is not a corporation and is declared by Gazette dated 14 June 2002 to be a government entity which is part of the Department of Emergency Services; see s 8(1) of the *Crown Proceedings Act* 1980 (Qld).

2 The plaintiffs and those associated with them subscribed to the well-worn theory that it was best to separate assets from liabilities.

such an ISR policy were pleaded to provide cover against disposal of debris and the costs of reinstatement of damaged property.

[6] Issues arose as to whether the brokers owed a duty to the plaintiffs when their retainer was a limited one on behalf of Binary Industries; whether the plaintiffs would have purchased any additional insurance had it been recommended to them, and whether the policies pleaded would have been of advantage to the plaintiffs.

The Site of the Fire

[7] There were two main buildings on the plaintiffs' land, one to the North and one to the South. Both were made of material which was predominantly not flammable. Both were rectangular in shape and their shorter sides ran parallel to the street frontage – Magnesium Street. The Northern building was used as a factory and the Southern building as a warehouse. There were considerable quantities of flammable chemicals in both buildings. The area between these two buildings was concreted over, and awnings had been built extending from both buildings over the central space between the two buildings. It is apparent from the photographs that there was a large number of drums of chemical on pallets stored under the awnings, and to the front of the awnings, at the time of the fire.[3]

[8] Along the Southern side of the Northern building, at the Magnesium Street end, was a large metal tank. It was marked as containing flammable solvent and its capacity was either 24,000 or 32,000 litres – t 5.3. Some metres forward of both the Northern and Southern buildings (ie., towards Magnesium Street), and in about the centre of the open space between them, were an LPG cylinder of 450 kilograms capacity and two or three smaller gas cylinders.

[9] Well forward of the Northern building, and separate to it, was a small brick laboratory building. At the Magnesium Street end of the Southern building, as part of that building, but shielded from the main warehouse by a firewall, was a section used as an office. The whole site was surrounded by a high chain-wire fence. There were large entrance gates on a driveway from Magnesium Street. The driveway led between the Northern and Southern buildings, closer to the Southern building. On the fence immediately adjacent to the gates was a HAZCHEM sign, which gave the code "3XE". As well, about seven metres inside the gates on the Southern side of the driveway was a HAZMAT box which contained some information as to what chemicals were stored on the site and a plan of the site.

[10] Toward the beginning of the case the Court visited the site on a view.

The Fire

[11] The fire was the biggest, or one of the biggest, chemical fires that most of the witnesses had ever seen.[4] By 10.35 or 10.40 pm the blaze was very fierce. It continued to be so for several hours. Flames extended tens of metres from the

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[3] There was some dispute as to whether or not these drums were in situ at the time of the fire or moved at some time after the fire and before the photographs. It seems to me clear that the remains of the wooden pallets supporting the drums can be seen in photographs such as exhibit 29 and I find that the drums in the photographs are shown in the position they were in during the fire, see also photographs 1 and 28 and tt 7.75-6.

[4] Area Director James, t 2.32; Officer Duncan, t 6.3; Mr Manser, t 3.19.

buildings. As well, the fire was unpredictable: large (44 gallon) drums of chemicals inside the factory caused fireballs and explosions within the main fire. Not only that, some drums with sufficient flammable vapour inside them in effect became rockets and flew out of the fire, some landing considerable distances away. If when they landed they still contained flammable chemical, they would begin burning at the place they landed. It was not until 5.00 am on 26 August that the fire was declared to be "under control" – t 7.25.[5]

[12] The plaintiffs' land remained in the control of the QFRS throughout the course of the fire and for some days after it, to the exclusion of the plaintiffs – t 8.8.

The Witnesses (Fire)

[13] The fire began in the Northern building, which was the factory. The call to the QFRS was just after 10.00 pm on 25 August 2005 and the response was very prompt. First on site were officers from the Deception Bay station. These officers were in four-wheel drive vehicles, rather than fire trucks. At 10.14 pm the first fire truck arrived. It was from the Petrie station and in charge of it was Station Officer Duncan. The scheme under which QFRS manages fires is that the senior officer present at any given time becomes what is known as the Incident Controller. So, when Officer Duncan arrived, he became the Incident Controller for the fire. He remained so until Area Director James arrived. Area Director James arrived on site at 22:40 hours, attended to some formalities and became Incident Controller at about 23:00 hours – see t 6.58 and t 7.32. Area Director James remained Incident Controller until 7.38 the next morning when Officer Devitt arrived – t 7.83. Officer Devitt remained Incident Controller until about 8.00 pm on the night of 26 August 2005.[6]

[14] The first defendant called three lay witnesses: the successive Incident Controllers – Duncan, James and Devitt.

[15] Officer Duncan had over 20 years experience at the time of the fire, and over 30 years experience by the time he gave evidence. He seemed to me to be a dependable and rational person who acted competently at the time of the fire and gave reliable evidence.

[16] Area Director James was a senior and experienced fire officer at the time of the fire. He had considerable practical and theoretical experience and training. His handling of the fire was controversial at the time of the fire: there was both public criticism and criticism from within some sections of the QFRS.[7] It was criticism of Area Director James' conduct which formed the basis of the plaintiffs' case. It is hardly surprising in these circumstances that he was at times defensive in giving his evidence. By experience and training he was qualified to give expert views about

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5 The experts agreed that this meant a stage when the person in control of the fire "feels that he or she has all the resources they need to combat the incident and that the fire has been contained within the allotment and all exposures have been protected." – paragraph 70 joint report.

6 Both Area Director James and Officer Devitt have been promoted in rank since the fire but I will refer to them by their rank at the time of the fire, as this is consistent with the contemporary documents.

7 I did not receive evidence as to the detail of this criticism and do not express any opinion as to the merits of it. Nonetheless, the fact of it bears upon my assessment of Area Director James, as I explain.

matters relevant to this case, but he was not in my view able to be impartial. Area Director James prepared an internal report as to the conduct of the QFRS in combating the fire – Major Incident Report 28 October 2005. That report was written well before this proceeding was instituted. However, wider controversy, including criticism of environmental damage, had begun before it was written. I find the report to be somewhat defensive in its tone and content.

[17] Officer Devitt was a little removed from the main focus of enquiry in the case. He steadfastly refused to be drawn into commenting on Area Director James' decisions and actions, notwithstanding he was, I suspect, qualified to do so.

[18] The QFRS has a communication system called Firecoms. This is a system where a central agency receives calls from officers involved in a fire and sends messages to those fighting the fire. A record of all the messages is kept. A printed version was an exhibit. This record made it possible for witnesses to be quite precise as to the times of certain events, notwithstanding the passage of time between the fire and the trial.

Expert Witnesses (Fire)

[19] There were three expert witnesses: Mr Manser and Dr McCracken on behalf of the plaintiffs and Mr Glover on behalf of the first defendant. All delivered written reports: Manser, 16 April 2012; McCracken, 7 January 2013, and Glover, 18 January 2013 and 23 August 2013. In September 2013, ie., quite shortly before trial, the experts met for two days and as a result of that discussion produced a joint report (30 September 2013) which considerably narrowed the areas of dispute between them, very much in the plaintiffs' favour.

[20] Mr Manser was by far the most qualified to express views on the issues which mattered in the case. He was an impressive witness. He had around 40 years practical experience as a fire-fighter, including in senior command positions. As well, he had quite an interest in the theoretical approach to fire-fighting and had undergone a considerable amount of training and what I might call academic involvement as to this – see the CV at pp 6-12 of his report. He struck me as a very pragmatic, very capable person. He gave responsive and rational evidence which was in my view reliable, considered and realistic. He was attacked by the first defendant as giving a hindsight view. At times I think that criticism was correct, but as to the main point in issue – the strategy which ought to have been adopted on the night of 25 August 2005, my view is that his evidence is not to be discounted on this basis.

[21] Mr Glover, to be perfectly plain, was no match for Mr Manser: he had a Bachelor of Science degree; nine years experience with the Victorian Fire Services as a scientific officer, and other experience, say as a TAFE lecturer. He had experience as a scientific officer as part of an incident management team. His experience was much less than; much less relevant than, and in positions of significantly less responsibility than Mr Manser.

[22] Dr McCracken was an engineer and a rather academic gentleman whose real expertise was confined to specific issues in the case: the likely airborne toxins in the smoke plume and the likely size and nature of other specific dangers, such as the LPG cylinder. He readily conceded he would not expect a fire-fighter to know the

things he did – t 4.6. On the other hand, Dr McCracken had no operational fire-fighting expertise – t 4-64. Indeed he has never attended a fire, other than as an observer, not even in the role of a scientific advisor. I formed the view that he offered opinions on matters which lay outside his real expertise without any real substantial knowledge to support him – eg., t 5.7 and t 5.12. Consistently with this, he was rather brittle in giving his evidence, cavilling with semantic issues and showing an unwillingness to engage on matters of substance.

[23] I will mention that after the fire there was a report which was prepared by a Mr Brabrook. It was not in evidence. Both Mr Manser and Dr McCracken made reference to it. To that extent their evidence had no foundation in fact, and I disregard anything based on the contents of the Brabrook report.

[24] Before dealing with the main issue – the use of water at the site – I will deal with three matters which, as it turns out, are of little significance to my decision – the HAZCHEM sign, the HAZMAT box and the idea that foam could have been used in fighting the fire.

The HAZCHEM Sign

[25] This was a sign, in familiar enough form, affixed to the front fence of the site which read, "3XE". In fact it ought to have read "3WE", but for the purpose of this litigation that does not matter – Manser, t 3.27. The idea of such a sign is that it provides brief initial information as a guide for first responders to a fire or a chemical spill. The information is obviously limited and it is meant to assist only until more detailed information is at hand – Manser, t 3.27, and report p 4. The joint expert report stated: "… the HAZCHEM Code is generic information until more comprehensive information systems become available. In our opinion, to base a whole incident hazard mitigation strategy on the HAZCHEM Code would be a misinterpretation of its intent."

[26] The numeral 3 in the code indicates that the appropriate response to a fire at the subject premises is foam, not water. The X is really intended for situations where there is a chemical spill, not a fire – Manser, t 3.27. Once it became evident that contaminated fire-water was being created, I accept that information was relevant here, conceptually, if not in strict terms.[8] The letter X means that containment of a spill – ie., prevention of chemical run-off into drains or water catchments – is what should be achieved if possible.[9] The letter E in the code gives the information that protective clothing ought to be worn.

[27] In this matter it was uncontroversial that full protective clothing could not be worn whilst dealing with this fire – see the joint expert report, paragraph 45. It is also uncontroversial that from the time the first Incident Controller – Officer Duncan – arrived on the site he knew he was dealing with a chemical fire of massive proportion. He understood from his training that this would require foam if it were to be extinguished.

[28] It was only after Area Director James arrived on the site that water was applied to the site in any quantity – joint expert report, paragraph 27 – and it is clear that from

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8 See Glover, t 5.71.

9 McCracken report, p 16.

the beginning of his command that Area Director James was alert to the potential contamination caused by fire-water, not from the sign, but from his training and experience.

[29] In short, the information on the sign added nothing helpful to the knowledge of Officer Duncan or anyone who came to the site after him. In fact, almost from the beginning, and certainly from the time Area Director James assumed control, the QFRS had considerably more information about the emergency than was contained on the sign.

[30] The plaintiffs plead a case that by reason of the code on the HAZCHEM sign, "it had been predetermined that the only medium of fire extinguishment appropriate was the application of foam", and "it had been predetermined that in the event of a fire it was necessary to contain spillage, including fire water runoff". The plea that the first defendant breached its duty to the plaintiffs by not locating, or by failing to comply with, the HAZCHEM sign must fail. It rests on a misunderstanding of the purpose and significance of the sign. As explained, the sign was no measure of reasonable response to this fire. The sign did not prescribe what ought to be done at any time, let alone during the course of this long and complicated event.

HAZMAT Box

[31] The HAZMAT box was designed to contain more detailed information than was available from the HAZCHEM sign to assist those responding to an emergency on site. The HAZMAT box on the plaintiffs' land contained a manifest showing detailed information about what chemicals were stored in the two large buildings. It was on its face 14 months out of date.[10] It contained a diagrammatic representation of the buildings on site. This diagram was out of date: it did not show the awnings between the Northern and Southern buildings, nor did it show that chemicals were stored in the space between the Northern and Southern buildings, and forward from that space towards Magnesium Street. The experts were critical of some of the information omitted from the manifest – joint report paragraph 75. The manifest gave contact details for the second plaintiff as the relevant person to assist emergency services with information.

[32] On the pleadings it appeared that the QFRS did not access the material in the HAZMAT box until after the fire was under control. The plaintiffs criticised this, and all the experts said that the HAZMAT box was accessible at all times during the course of the fire – Manser, t 3.35 and the joint expert report, paragraph 17.

[33] Mr Manser thought that the HAZMAT box was sufficiently remote from the fire to be safe to access. He pointed to the fact that those first on site, ie., before 10.35 pm, went well beyond the HAZMAT box, ie., closer to the fire in the Northern building, in their initial attempts to understand the likely dangers and exposures, particularly those associated with the solvent tank. He also thought that the vehicles parked in front of the driveway to the site involved fire crew being at least as close to the fire in the Northern building as was the HAZMAT box – exhibits 11 and 12 and t 4.50

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[10] It was never definitively proved that the information as to the types and locations of chemicals in the manifest was not accurate. It seems most unlikely that information which was 14 months old would have been accurate given the exigencies of a business which was actively making chemicals and selling them. The chemicals listed on the manifest were many and various. In the end I do not think this issue as to the currency of the information matters.

and report pp 30-31. While Dr McCracken and Mr Glover also expressed the view that the HAZMAT box was accessible, I am inclined to discount their opinions substantially as neither has any real fire-fighting experience.

[34] At about 10.35 pm Officer Duncan made a decision to pull officers back from the site (and thus away from the HAZMAT box) – t 2.29. His evidence was that he did not recall seeing the HAZMAT box – t 2.28, but that had he seen it, he would not have approached it, as he did not consider it safe to do so – t 6.32. It is true that officers had walked further into the site than was necessary to access the box at one stage prior to this decision to pull back at 10.35 pm. They had done so to see the solvent tank, which they regarded as something potentially very dangerous. The fire was growing in size between 10.00 pm and 10.35 pm, so that the risk of entering the site was increasing. By 10.35 pm there were fireballs and projectiles coming from the Northern building. By then it was very unlikely that the fire would be contained to the Northern building. In those circumstances I find that it was dangerous for somebody to approach the HAZMAT box. I think Officer Duncan's decision to move back was reasonable. He acted at a preliminary stage of the fire – he had few resources available to him and he was faced with the task of immediately responding to a large growing fire.

[35] As to accessing the HAZMAT box at a later point than 10.35 pm, any decision to send an officer into a situation which involves danger must necessarily involve an assessment of whether the objective of the exercise is justified by the risk. Here, by 10.35 pm, the general layout of the buildings on the site was evident to those present. It was also evident that there was a well-established fire of flammable chemicals. At 10.28 pm there is a message recorded that the Queensland Ambulance Services had asked Firecoms for data on glycophosphate – Manser, report p 31. At 10.33 pm environmental advisors had information from the "manager", presumably the manager of the factory, the second plaintiff, that glycophosphate and 2.4 D ester were stored in the buildings – Manser, report p 32. Somewhere between 10.45 and 11.00 pm the second plaintiff was on site, and Area Director James said that he was co-operative – t 6.70, and that he was able to speak to him early – t 7.38. The second plaintiff was an industrial chemist, so I assume he was of assistance.[11] It seems likely from the information which the QAS had at 10.28 pm and the environmental advisors had at 10.33 pm, that the second plaintiff had been contacted some time shortly after 10.00 pm and had provided that information and thereafter made his way to site. There was a scientific officer on site from 10.33 pm.

[36] No doubt the information contained in a HAZMAT box can, in some circumstances, be useful. Perhaps had this case concerned other aspects of this fire and this fire-fighting operation, the material in the box may have been significant. However, dealing with the issues relevant to this case, I find that the information from that box would have been of little, if any, value to those fighting the fire, in any way which could be relevant to the plaintiffs' case. There was no water in any quantity applied to this fire until after Area Director James became Incident Controller. By that time the QFRS had information about the buildings, solvent tank, LPG cylinder and the main chemicals involved and quantities of those chemicals – t 7.21 and t 7.38, cf Mr Glover at tt 5.69-5.70 and 5.71-72. Certainly no witness, expert or lay,

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[11] The second plaintiff did not give evidence at the trial. There was no evidence that he was unable to do so.

suggested that things would have been done differently had material in the HAZMAT box been accessed during the course of the fire.[12]

[37] When Area Director James was asked about the HAZMAT box in evidence-in-chief he said the following:

> "Do you recall if there was a Hazmat box on site on the night?--- On the night I do not. Initially because of it was dark. It's a small box and it was on a driveway not immediately where the major exposures were for the LPG cylinder [indistinct] didn't have any large [indistinct].
>
> Did you think about or make any attempt to retrieve or obtain the contents of the Hazmat box?--- No, I didn't.
>
> Why not?--- In my opinion it was far too dangerous to life to go onto the site to attempt to access a Hazmat box. Part of the reason for that was I was aware, prior to my arrival, one firefighter attempted to go onto the site and was injured. And I was not prepared, with the injury that had already occurred and with the intensity of the fire to put other people's lives at risk to go and attempt to access any part of the site including the Hazmat box." – tt 2.41-42. (Shaded area changed to correct obvious transcript inaccuracies.)

[38] One of the appendices to the Major Incident Report (prepared by Area Director James in October 2005) was from a scientific officer who assisted the QFRS on the night of the fire. The appendix refers to a manifest. In cross-examination Area Director James said, whilst indicating his evidence was hearsay, that the HAZMAT box was accessed on the night of the fire, and early in the night – tt 7.26-7.27, t 7.55. This was contrary to the first defendant's pleaded case, and the gist of Area Director James' evidence-in-chief. Under further cross-examination Area Director James said he was the person who gave the lawyers instructions that the HAZMAT box had not been accessed and was inaccessible because it was too dangerous for a fire-fighter to go far enough into the plaintiffs' land to get to the box. Then he changed that position again, saying:

> "... If I've understood you correctly, you now come to know, from reading the report that it was obtained on the night?--- Can I just qualify, I believe a manifest was obtained. I'm not exactly sure where the manifest was obtained from, whether it was a Hazmat box or the owner.
>
> All right. So you're not – all right. So you're not saying that it necessarily was accessed on the night now?--- I can't – I'm saying the manifest was obtained and I – as I qualified earlier, I'm not – unsure whether it came out of the Hazmat box, which is an assumption, or whether it was handed over by the owner.
>
> All right. And that assumption is from what you read in paragraph 2.2, I take it, in the second paragraph where it reads, 'Collection of data commenced during the incident and consisted of physical evidence such as manifests of dangerous goods'?--- Correct.

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[12] See here Mr Manser's evidence, eg., at tt 3.32-34.

> So in the preparation for hearing, that caused you to think that the Hazmat box must have been accessed?--- Yes, and during the incident was over a number of days. It wasn't necessarily on the night in question." – tt 7.56-57. (Shaded area changed to correct obvious transcript inaccuracy.)

[39] I am unable to determine whether or not the HAZMAT box was accessed on the night. I am also unable to determine whether Area Director James turned his mind to accessing the box during his time as Incident Controller. Had he done so, and decided it was too dangerous to send an officer to access the box, my finding would have been that was a reasonable decision in the circumstances. The area was certainly dangerous. Though it was not immediately proximate to anything on fire, there were drums and drum lids flying through the air and hitting the chain-wire fence in the vicinity of the driveway off Magnesium Street. Dr McCracken's report described how they posed "the very real potential … for human injury or fatality …" – p 26. To access the HAZMAT box would have involved sending an officer quite close to the LPG cylinders. Even if the risk of their becoming suddenly involved in the fire was very small, the consequence for the officer trying to access the HAZMAT box would likely have been fatal. Area Director James walked down Magnesium Street towards the vicinity of the HAZMAT box as one of the first tasks he performed. He turned back after reaching the chain-wire fence because his assessment was that it was too dangerous to enter the site – t 2.40.

[40] The facts called in aid by Mr Manser: (1) that officers were in areas close to the Northern building attending to the appliances spraying water on the LPG cylinders and the solvent tank and (2) that, early on, officers went into the site to look at the solvent tank more closely, do not determine the reasonableness or otherwise of sending someone to access the HAZMAT box. It may well be considered that the duties of attending to the monitors on the tank and cylinders, and the inspection of the solvent tank were more profitable in terms of outcome than a trip to the HAZMAT box would have been. The trip to inspect the solvent tank was undertaken almost immediately after officers arrived on site when the fire was smaller. Officers attending to the monitors on the LPG cylinders and tank were to some extent protected from any dangers, such as flying projectiles, by the fire trucks parked in Magnesium Street. Even leaving all these distinctions aside, the fact that some officers performed dangerous duties does not mean it was reasonable to ask an officer or officers to perform another dangerous duty.

[41] As I have endeavoured to explain, by the time Area Director James was Incident Controller, I do not think it could rationally have been expected by the QFRS that the information in the HAZMAT box would materially add to the knowledge which it then had, or needed, to deal with the fire. That is, when the risks to human life were weighed against the benefit to be gained from the exercise of sending an officer to the box, I would regard a decision not to send an officer as reasonable.

[42] What I do see in Area Director James' evidence as to accessing the HAZMAT box is a preparedness to defend his own actions and justify them, after the fact. His initial evidence as to the dangers of accessing the HAZMAT box, extracted at [37] above, gives me concern in this regard. It seems that the real answer to the question "Why not?" in the extract above, was that Area Director James did not consider the matter, or at least could not recall considering it. But he answered as though he had considered the matter and had made a reasoned and justifiable decision about it.

This is perhaps the clearest example of after-the-fact rationalisation and defensive justification in Area Director James' evidence. However, I have similar concerns about some of the evidence he gave as to the objectives of directing water at fire and property on the site, which I discuss below.

Foam

[43] Officer Duncan called into Firecoms to request foam. Mr Manser's view was that there was a small window of opportunity which ended around 10.35 pm where, had sufficient foam been available, it may have been an effective strategy to apply it in an attempt to extinguish the fire. However, his view was that there was no point in attempting to extinguish the fire with foam after 10.35 or 10.40 pm – report p 5 and p 35.

[44] I am satisfied that the need for foam was recognised by Officer Duncan as early as it reasonably could have been. Further, I find that there was no chance of transporting a sufficient quantity of foam to the site in time to use it in this window of opportunity. No one said to the contrary of either of these propositions. Further, I am satisfied that Mr Manser is correct in saying that there was no point in trying to extinguish the fire with foam after about 10.35 or 10.40 pm. By this time the Northern building was well alight, the blaze was of such a size that it was most unlikely that enough foam could have been obtained to use it effectively. As well, it was impossible by that stage to use foam. For foam to be effective in extinguishing a fire, it must be applied to the seat of the fire, and it was not safe to go close enough to this fire to do so.

[45] Officer Devitt explained that even on 26 August 2005, foam could not have been effectively applied to extinguish the remaining small areas of smouldering fire – hot-spots – t 7.88. This evidence was not challenged in cross-examination and I accept it. I note that the joint expert report says, *en passant*, at paragraph 28 that foam "is an alternative for extinguishing hotspots". The experts do not say it was appropriate here, and do not consider the factual circumstances which were explained by Officer Devitt. There is also some like comment in Dr McCracken's report. If there is a conflict in the evidence I prefer that of Officer Devitt – he was there and explained the pragmatic difficulties in applying foam. Mr Glover recounted similar practical difficulties regarding the use of foam to damp down hot-spots in the decay phase of a chemical fire he had been involved in – t 5-42. There fire-fighters tried to use foam but reverted to water because as a matter of practicality foam could not be applied. Foam needs to be applied by someone who is close to the fire and needs to be applied so as to smother the source of the fire. Looking at the photos showing the considerable metal debris in the remains of the factory and warehouse here, I can readily see that it would have been too difficult for fire-fighters to get in close to the source of fire to apply foam to hot-spots. Further, that it would have been too difficult to apply foam in a way which would smother the fire through the metal debris. That is just as Officer Devitt described.

[46] Thus I find that at no point in fighting this fire was the application of foam an option available to the QFRS.

Use of Water by QFRS

Water on Solvent Tank and LPG Cylinder

[47] This is an issue discrete to the use of water generally. Water can be used against a fire for purposes other than extinguishing it. It can be used to cool items which are not alight so as to prevent their catching alight.

[48] Officer Duncan considered that both the LPG cylinder and the solvent tank were hazards which, if not protected, could dramatically increase the scale of the fire. Flammable liquid in the solvent tank was hazardous because, if fire caused the tank to rupture, the flammable fluid inside would create what the witnesses called a running fire. It takes little imagination to see that this would be very dangerous to fire-fighters and also a very rapid and effective means of spreading fire. As well, both the solvent tank and the LPG cylinder were at risk of causing a BLEVE. The acronym stands for boiling liquid expanding vapour explosion.[13] It would be necessary for fire to actually impinge upon the tanks to cause such a thing, but the result would be extremely dangerous, involving a blast wave, fire-ball, intense heat, possibly a second explosion, and the potential for parts of the metal cylinders to be propelled through the air. Had there been a BLEVE of the largest LPG cylinder, the fire-ball would have been around 36m in diameter and the risk of first degree burns would extend as far as 88m from the cylinder, according to Dr McCracken's estimates – report p 22.

[49] Officer Duncan decided to spray water onto both the LPG cylinder and the solvent tank. This kept the tanks cool. The sprays initially set up were from hand-held lines, but these were later replaced by automatic fixed spraying devices which remained in place for the duration of the fire. The sprays were continued until the morning of 26 August 2005.

[50] There was no contest that Officer Duncan's initial response to put a spray on both tanks was reasonable – see report Manser p 33 and tt 3.13-14, and the plaintiffs' counsel's concessions in cross-examination – t 6.15, t 6.31 and tt 6.67-8.

[51] Mr Manser expressed the view that had he been in charge of the fire he would have discontinued sprays to both the solvent tank and the LPG cylinder at some relatively early stage in the fire-fighting exercise. This was bound up with his idea that the best approach to this fire was to acknowledge that the buildings were lost and let the fire burn itself out within the boundaries of the site whilst protecting the buildings and land immediately surrounding the site – a let burn strategy. Mr Manser thought that the LPG cylinder was located far enough away from both the Northern and Southern buildings, and was sufficiently isolated from any other structure, that spray to it could have been discontinued on the basis that a BLEVE, or other incident involving the LPG cylinder catching alight, was "highly unlikely" – t 4.46, 3.35 and 3.13.

[52] While this was Mr Manser's view as to how he would have handled the LPG cylinder and the solvent tank, I think the effect of his evidence was that he did not criticise the QFRS for continuing a cooling spray on these two exposures during the course of the fire. It may not have been something he himself would have done, but

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13 See McCracken report, p 18, for a technical description.

he did not dispute that it was within the range of reasonable responses. The joint expert report contained the following paragraphs:

> "10. Reference 15 Glover Report:
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> Concern about the LPG cylinder and solvent tank becoming fully involved was such that the fire-fighters were withdrawn at 10.35 pm. (Fire fighting activities after 10.35 pm were in defensive mode). In prioritising the cooling of the LPG cylinder and solvent tank with water the QFRS acted prudently."

[53] In cross-examination Mr Manser was asked about paragraph 17 of Mr Glover's report. That paragraph read:

> "17. Based on the information supplied and personal experience, water was the only logical means to fight the fire. As stated previously, exposures such as the LPG cylinder, the solvent tank and other stocks of chemicals needed to be protected and the fire cooled/contained to:
>
> - Prevent the LPG cylinder and the solvent tank becoming fully involved.
> - Try to prevent the spread of the fire to other buildings and sites by rocketing drums.
> - Reduce the size of the fire and the consequent plume.
> - Try to prevent the spread of the fire to nearby bushland.
>
> In my opinion a constant supply of water to exposures was the best means to achieve the above."

[54] Mr Manser said that he disagreed with the statement that water was the only logical means to fight the fire, but he disavowed any dispute about the protection of the LPG cylinder and solvent tank – t 3.21. In addresses counsel for the plaintiff conceded that he made no criticism of QFRS continuing the spray for the whole seven hours – t 16.37.

[55] It was Area Director James' view that it was unwise to stop the cooling sprays to the tank and the cylinder – the significance of the risk was too great – t 7.10. In addition to the fire coming close enough to the LPG cylinder to cause it to BLEVE, Area Director James was concerned that there was a risk that a drum or drum lid projected from the fire might land on or near the LPG cylinder so as to cause it to explode – t 7.11. Dr McCracken's report is that such a thing is possible – see p 18. There were drums and drum lids flying into the chain-wire fence fronting Magnesium Street, and flying over the heads of fire-fighters stationed near that fence in Magnesium Street – t 7.18. That is, near enough to the LPG cylinder. Speaking of such a scenario as feared by Area Director James, Mr Manser acknowledged, "That's quite a possibility" – t 4-47.

[56] The catastrophic consequences of the LPG cylinder exploding are explained above.[14] The authors of the joint report accept that part of Mr Glover's statements which go to the unpredictability of modelling such events and the consequent justification of a conservative approach. Further unpredictability was introduced by

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[14] See also Glover report, paragraph 54 and the joint report, paragraph 50.

the lack of knowledge as to the contents, and volume of contents, and condition of the solvent tank: paragraph 52 joint report.

[57] Dr McCracken's view was that it was "highly unlikely" – report p 21 – that flames would have impinged on the LPG cylinder because it was so far from any building (and thus any potential fire). He accepts that water to the gas cylinder would have been effective to cool it, but opines that even without cooling water there was no credible[15] risk of BLEVE in relation to this cylinder – p 21 report. Dr McCracken detected paint blistering on the solvent tank as a result of the fire and concluded it was subject to high levels of heat radiation during the fire – p 22 report. He says he did not have sufficient information to understand why the tank did not rupture or BLEVE, paragraph H, p 23 of his report. However, he then concludes that there was not a credible risk of "a large BLEVE" of the solvent tank – p 23, paragraph I. Having regard to the preceding paragraph H, this must be speculative, and I find it quite unconvincing, given what he says at H regarding the cooling effect of water applied by the QFRS to the solvent tank. Further, I am suspicious of his use of the term "large BLEVE". His own report and evidence – tt 4.68-69 – do not allow me to understand that a small BLEVE is possible – the passage in his report at paragraph I seems to me to be temporising in favour of his client.

[58] Further, as can be readily detected by reading Dr McCracken's report, his analysis is technical, theoretical and often quite speculative. It is evidence which is very much a hindsight calculation of risk. He had no fire-fighting experience. In any event, he appeared to concede under cross-examination that while he thought these risks "non-credible" he allowed that others might hold different views and that cooling the tank and cylinder was a prudent thing to do – t 4.71.

[59] I find that the consequences of either the solvent tank or the LPG cylinder becoming involved in the fire were so serious that even if there was a small risk of them becoming involved, it was reasonable for the QFRS to take what precautions it safely could to prevent this. I find that there was a small, but not fanciful, risk in relation to the LPG cylinder. I find that the risk to the solvent tank was significant and serious: it was very close to the fire in the Northern building. In my view it was reasonable to continue a stream of water on both the cylinder and the solvent tank until the morning of 26 August 2005. As Mr Manser's evidence demonstrates, there may be alternative approaches, but it seems to me that the approach taken by the QFRS was within the range of what a reasonable fire-fighter would do in response to these risks and did not amount to a breach of a common law duty of care.

Water and Chemical Fires

[60] Water is effective to extinguish fire because it cools the material which is burning – Manser report p 37. There are two corollaries of this proposition relevant here. First, water is ineffective to extinguish a chemical fire because such a fire burns at too high a temperature for water to cool the chemical sufficiently that it will not burn.[16] Mr Manser's evidence was:

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15 Dr McCracken used the terms "credible" and "non-credible" to describe risks. By non-credible he apparently meant of low likelihood – t 5.5.

16 The evidence of both Dr McCracken and Mr Manser was that applying a jet of water can actually make a chemical fire spread and intensify – see pp 31 and 32 of Dr McCracken's report, and t 4.60. Mr Manser's evidence was that he thought he could see evidence of this where jets of water were applied to the fire on the video footage.

> "Now when this fire was going, no amount of water would have put that fire out. No amount of water whatsoever. It would have gone on just as the outcome was." – t 3.36.

And similarly in his report he said:

> "Fire fighting tactics using water towers was ineffective until the majority of fuel had been burned and the fire reached the decay phase with much lower heat release rates." – p 3.

[61] Secondly, to extinguish fire, water needs to be applied to the material which is burning, not to the flames. Here the fire was so big and so unpredictable, in terms of fireballs and projectiles, that it was not safe to be close enough to apply water to the material which was on fire. Mr Manser's view was that it was ineffective to have a stream of water initiated at any greater distance than 4.5 metres from the fire – report p 37.[17] It would have been unsafe to put or operate a water source at a distance of 4.5 metres or closer to the fire – t 2.29 per Duncan; tt 2-62-3, more generally, per James.

[62] It was the unanimous expert opinion that there was no point in applying water to extinguish the fire.

Water Application to the Fire by QFRS

[63] Apart from streams onto the solvent tank and LPG cylinder, no water was applied until Area Director James became the Incident Controller – t 7.35. I now examine the application of water other than to the solvent tank and LPG cylinder.

[64] Mr Manser said that it was impossible to know how much water was applied to the site during the course of operations by the QFRS – t 4.24. That is undoubtedly correct. Water was applied using aerial towers. It is impossible to know the times at which these devices were operating with any precision. It is possible to know their maximum delivery capacity, but it is not possible to know whether any of them were operating at maximum capacity. As well, when water is applied to a fire, a significant amount vaporises into the atmosphere and does not end up on the ground – t 3.10, t 3.12, t 4.24. It is also impossible to know how much water fell outside the boundary of the plaintiffs' land.

[65] Nonetheless, it is very clear that an enormous amount of water was applied to the site by the QFRS. In conference all the experts in the case estimated about 4-5 mega-litres – t 4.76. One of the first (22:30 hours) messages back from the site was to ask for more pumps – t 2.28. Photographs show streams of fire-water running off the site and into the stormwater drains. It is green as it is contaminated by the chemicals on site. There was insufficient water for the QFRS in Magnesium Street so relay pumping was set up to access water from the mains at Potassium Street – t 2.44. Mains water supply was considered inadequate and Area Director James charged Officer Duncan with looking for alternative supplies – t 2.30. Councils in the vicinity were asked to assist by "redirecting water to the incident" – t 7.64.

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[17] See also Duncan, t 6.35,

[66] The local creek was at first not flowing, then a trickle of water was noticed – t 4.19 – and by the morning of 26 August, Council workers were building a dam across the local creek some kilometres downstream from the site to contain what was by then a considerable amount of water running off the site and into the creek – t 4.18, t 4.21, and joint expert report paragraph 27.

[67] Mr Manser's analysis showed that the first aerial device on site was deployed to put an automatic water stream onto the LPG cylinder and solvent tank. A second aerial device arrived on site at 23:13 hours and was directed at the roof of the Southern building. Of this Mr Manser said:

> "… By this time the fire was beyond the capabilities of two aerial water streams and they were too far away from the burning material to be effective which would only increase the likelihood of some of this water increasing the levels contained in the on-site water retention facilities (bunds and drains)." – report p 37.

[68] As to the Northern building, Mr Manser said in his evidence that there was no point in directing water onto the Northern building after 10.25 pm – t 3.21.[18]

[69] Mr Manser said that at 00:55 hours there were three aerial water towers operating and a fourth was preparing to activate – report p 42. At 3.25 am there were three aerial water towers in action with a fourth being set up – p 42 of his report. At 5.24 am there were still three aerial towers in operation. At 6.22 am it is recorded that there was one aerial water tower in operation which was being used to dampen hot-spots in the fire which was by then well into its decay phase. Mr Manser notes that water was still being applied in some form or another well into 27 August.[19]

[70] Officer Duncan was critical of the QFRS aiming aerial water devices at the fire (rather than the material on fire) and the rooves and walls of the Northern and Southern buildings – t 6.35, t 6.40, t 6.41 and t 6.42. He was willing to agree that no competent fire-fighter should apply water in this way – t 6.44.

[71] Mr Glover initially expressed views in support of the application of water to this fire.[20] He was the only expert who did so. He retracted those views after the experts met.[21] Mr Glover's view in evidence was very similar to Mr Manser's: "But the parts of the fire that were fully involved – you weren't going to do any good putting water onto it." – t 5.49.

[72] The joint expert report contained the following passages:

> "**21. Reference 29 Glover Report:** In our opinion the extinction capacity of the QFRS, was dependent on the rate of heat absorption of their water attack. The heat release rate in the southern building was greater than the heat absorption of the aerial water attack whilst the fire was in the fully developed phase. In our opinion the defensive approach to be preferred, would have been to protect

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18 I wonder if Mr Manser meant 10.35 pm – see t 3-22 and t 3-26. 10.35 pm was the time when Officer Duncan removed fire-fighters from the immediate vicinity of the fire and put the operation into defensive mode in recognition of the fact that the building was effectively lost.

19 Page 43 of his report. Dr McCracken's view is at p 46 of his report and tt 4.58-59.

20 See paragraphs 13, 16, 17, 31, 86 of his second report and paragraphs 17, 18 and 26 of his first.

21 See joint expert report, paragraphs 7, 13, 23, and 80, and see tt 5.45-46, 5.49, 5-54, 5.55-5.56.

> exposures beyond the allotment and allow the fire to burn out. Mr Glover expressed the wish to highlight his experience of large fires where water application was beneficial for cooling drums of flammable/combustible liquids preventing them from becoming involved in the fire and from becoming projectile drums. …
>
> …
>
> **23. Reference 30 and 31 Glover Report:** In our opinion for the reasons described in paragraphs 123 through to 129 of Mr Manser's report, when fighting chemical fires, an evaluation of relative risks to human health and to the biophysical environment of letting the fire burn or fighting the fire with water should be made. In general it appears to be better to let the fire burn where there is no risk of the fire spreading to other allotments. In our opinion a let burn strategy would have been the appropriate strategy because the aerial attack was ineffective and as the fire in the northern building started to reduce in intensity so would the southern building within a few hours. …"

[73] As to Mr Glover's separate view expressed at paragraph 21 of the joint expert report just extracted, Mr Glover gave evidence of one chemical fire where he had some involvement – Tri-tech. He said that water was used there to protect exposures which were not on fire. It was also applied by way of a very fine spray to particular parts of the fire with the aim of cooling them sufficiently to allow fire-fighters to go into areas otherwise inaccessible and apply foam to extinguish parts of the fire – t 5.43 and t 5.77-78. I do not see that this use of water is analogous to, or relevant to, the use of water by the QFRS in fighting this fire. There was no such specific aim or objective here, other than a general, and I find misplaced, view that water applied in high volume to buildings which were well alight would somehow cool and limit the fire.

[74] Fire-fighters talk in terms of offensive and defensive operations. Offensive operations aim to directly attack and extinguish fires, while the aims of defensive operations are more limited. Area Director James described his strategy as defensive – acknowledging he did not aim to extinguish the fire with water (t 6.84) – but with the aim of preventing catastrophe (due to involvement of the tank or cylinder); saving as much property on the plaintiffs' site as possible; preventing involvement of uninvolved flammable items, and minimising environmental impact – t 7.5.

[75] As to property which could be protected, Area Director James identified the brick laboratory in front of the Northern building, but could not say, and indeed doubted, that water was applied to it – t 7.24.

[76] He identified a small shed in front of the Southern building, which seems relatively insignificant. There is no evidence that water was applied to it.

[77] He identified the drums of chemicals sitting between the Northern and Southern buildings as saved from igniting. Area Director James did say that water was applied with the aim of preventing these drums becoming involved in the fire – t 7.5-7. I have some scepticism as to this evidence because I think this part of his evidence is very much hindsight justification. What is more, he only just gave the

evidence: he was agreeing with leading questions and more disposed to talk about other things in his answer than to convincingly say water was applied this way in fact pursuant to a strategy – see for example the very top of t 7.7. At other times in his evidence he said that where water was applied was up to the Operations Controller, not him – t 7.23-24 – and that he did not remember where it was applied.

[78] In the end I find that water probably was applied to the drums in front of, and under, the awning. Supporting this conclusion is Area Director James' evidence, albeit with its problems; the fact that these areas were visible and accessible and obviously sensible targets for water, and the fact that these two areas did survive the fire.

[79] There were a considerable number of drums which did not burn and add to the conflagration, or (potentially) rocket – t 7.17 and t 7.18. The joint expert report acknowledged Mr Glover's view as to this, which was that it was useful to apply water to these drums – see paragraph 21 and Mr Glover at t 5.79. Dr McCracken said in his evidence that use of water by the QFRS in this way was logical – tt 4-58-59.

[80] Area Director James said that applying water to the front (office end) of the Southern building would assist in maintaining the protection afforded by the firewall, which otherwise might have failed because of the duration of the fire. Again Area Director James did not distinctly say that water was applied to the firewall – see eg., t 7.46. As it transpired, the firewall held and the office did not burn. Mr Glover thought it was not unreasonable for an Incident Controller to try to save the front of the Southern building, by applying water to the firewall – t 5.46. His experience was that while businesses can replace stock and equipment lost to fire, often records, contained in the offices are not able to be replaced. His view in this regard took account of the fact that the fire in the Southern building started in the South-West corner, remotely from the office section protected by the firewall. This seems a rational view on all the evidence.

[81] Area Director James said he thought that the front part of the Northern building was less damaged than it might have been because of the application of water – t 7.8. There was no other opinion to this effect and I am not persuaded that it is correct having regard to the unanimous views of the experts that water applied to the Northern building was not going to extinguish the fire.

[82] I have already given my view that Area Director James had a tendency to rationalise, and justify defensively, after the event, the actions of the QFRS. I think his evidence as to property which might have been saved by the application of water involved a hindsight justification of water application. My conclusions as to this evidence are that, looking at the matter now, useful purposes can be discerned for the application of water to the firewall in the Southern building and the drums of chemicals under and in front of the awnings. I find water was applied to those two areas. It may have been useful to apply water to the laboratory and small shed but there is no evidence that water was so applied.

[83] In fact there was no evidence that the QFRS did apply water to any particular part of the site because it had made the decision that these specific applications would be useful, in circumstances where there was no hope of water extinguishing the fire. Area Director James had remarkably little knowledge of where water was in fact applied – see tt 7.23-24 – his response was that this was up to the person designated

as Operations Officer, who was not called. When pushed on the point, Area Director James said he could not remember as the fire was eight years before the trial. In circumstances where the fighting of the fire was almost immediately contentious, and one of the criticisms was as to the fire-water run-off, I find this remarkable. Still, he could give not evidence that there was any specific plan or purpose in applying water. Nor could he say that he issued directives or otherwise caused water only to be applied to the few things he can now say were logical targets of water application. In fact, when regard is had to the whole of the evidence, it is clear that there were no such specific strategies. The evidence is to the contrary: Area Director James said so, and the photographs and video-clips show this. I now examine this evidence.

[84] There were photographs taken during the course of the fire. There were also five pieces of video footage of the fire contained in news broadcasts. There are limitations on the use of the footage: it is fragmented – edited highlights. It is not known at what precise times the footage was filmed. The sum total of footage is a matter of minutes in the context of a fire which burned for many hours. Filming took place from a safe distance, so that it is difficult in any given case to say where, for example, a stream of water from an aerial appliance is being directed – t 3.10, t 3.11, t 3.15 and t 3.18. The same sort of limitations exist in relation to the photographs.

[85] Nonetheless I accept that from the photographs and the footage, it can be seen that streams of water are being directed from aerial appliances to the fire itself (rather than what is on fire) and to buildings which are well alight, and from well over 4.5 metres away. It can be discerned that at various points in the footage that what is going on is an attacking operation, rather than a containing operation – tt 3.10-15, t 4.48.

[86] Mr Glover said in cross-examination that from what he could see, the video footage generally did not show water being used to protect exposures, eg., the firewall, t 5.46, but showed water directed at the fire and at what was on fire, at a time when the apparent targets of the water were fully involved in the fire – tt 5.48, 5.49, 5.50 and 5.57. The significance of this last point – water directed at structures which were fully involved – was that Mr Glover, like the other experts, could see no useful purpose in applying water to fire in the buildings which were fully involved – t 5.49.

[87] I find that Area Director James viewed it as sensible to apply water to property which was fully involved in the fire as a means of limiting or cooling that fire – he said so: t 7.25, t 7.38, t 7.41, t 7.45, t 7.l46, t 7.l47, t 7.48, t 7.49, t 7.50, t 7-66. This is also evident in his use of the term "brought under control" in the Major Incident Report. One of the things the conference of experts agreed upon was that the fire reached a point of control, but it was not (as Mr Glover had originally opined) brought under control.

[88] The QFRS attempted to set up an aerial water tower in the vacant land to the North of the plaintiffs' land but found it unworkable due to the direction of the smoke – t 2-65, t 2-69. Area Director James said the point of the aborted attempt was to "… access the fire obviously …" – t 6-49 and "we were going to commence operations there, once again with the aim of property protection and extinguishing the fire as best we could." – t 7.28. The position of the attempt, relative to the fire in the

Northern building can be seen in photographs 3 and 4. This shows that the QFRS were thinking there was some point in training water on the Northern building, from well over 4.5 m away at a time when the unanimous expert view is that the building was lost and water application could serve no purpose.

[89] On the evidence, I find that water was not applied to protect exposures not on fire or any other particular parts of buildings as part of a deliberate strategy. Water was applied to the drums under the awning and the firewall in the Southern building, but the application of water was certainly not limited to this. It was applied in great quantities to parts of the buildings which were fully involved, and to the fire itself. There was no useful purpose to be served by application of water to parts of the buildings which were fully involved and to the fire itself.

[90] I record that there was argument and evidence about the method of water application by the QFRS. Questions arose as to whether or not water had been applied in jet streams, sprays, or hollow core streams which, at least to some observers, might appear like jet streams but act in a way more analogous to a spray. Whether water was applied in any of these modes, the relevant question was whether or not the application was directly to fire and objects which were fully involved in the fire, which on the evidence could not have been useful, or whether it was directed at objects which were not on fire in an attempt to prevent their catching alight, which was potentially useful. It does not matter whether the application was by jet or spray.

Alternative Strategy: Let Burn

[91] Mr Manser said that had he been in charge of this incident he would have adopted a let burn strategy. Essentially this was to remove fire crew and equipment to a safe distance from the fire and allow the fire to burn itself out. All efforts would have been directed to containing the fire within the allotment boundaries – report p 37 and t 4.27. This strategy would have been adopted by Mr Manser in recognition of the futility of attempting to combat the fire with water.

[92] Mr Manser's view was that the site was isolated enough to allow a let burn strategy to be safely adopted. I find that this is correct. On the Southern side, and to the West, there was grassland and then some scrubby bushland. To the immediate East of the site was quite a wide roadway and footpaths. To the North was an area of cleared land and then a timber yard. I think that eventually Area Director James' conceded this point – t 2.51 – although he did express concern about the timber yard – t 2.57 and t 6.59. It was some distance away, and the ground between the plaintiffs' land and the timber yard was bare of vegetation – t 6.4; tt 6.59-65. I prefer Mr Manser's view that the timber yard was an unlikely risk and that adequate resources were available to put out any fire if a drum did rocket that far.

[93] I find that weather conditions were favourable to a let burn strategy in that there was low wind, low temperature and high humidity – Manser – t 3.12, James t 6-64.

[94] There was no doubt a risk that the fire might spread. Primarily this risk was due to the drums of chemicals rocketing from the fire. There is evidence that some flew into the bushland to the South and West of the site. The spot fires they created were extinguished, I infer without much difficulty, judging by the small areas of burnt

grassland resulting.[22] The QFRS had small four-wheel drive vehicles available. One drum flew right across Magnesium Street and into the front of the metal building opposite. It did not ignite or cause a fire where it landed. Officer Duncan regarded the risk that a fire would spread from a rocketing drum one which was "controllable" because there were fire officers standing by waiting to extinguish any spot fires – tt 6.6-7. Area Director James thought the QFRS was in "a very good" position to extinguish the early stages of such a spot fire – t 6.60.

[95] All experts accepted – joint report page 19 – that a let burn strategy would, if anything, have reduced the air pollution hazard because the chemical on site would have burned at a higher temperature; risen higher in the air as a consequence, and thus dispersed further and ultimately descended in less concentrated form. All experts accepted that a let burn strategy would have reduced the water pollution hazard from the fire-water run-off from the site – joint report page 19.

[96] It was put to Mr Manser that his let burn strategy was the result of a hindsight view. He denied that. He said that had he been Incident Controller on the night he would have adopted the let burn strategy – t 3.37 and tt 4.31-33. Mr Manser had very considerable practical experience, including as an Incident Controller. I thought he was realistic and steadfast under cross-examination on this point. I accept his evidence as to this.

[97] I accept that a let burn strategy as described by Mr Manser was an appropriate response to this fire. That does not mean that it was the only reasonable response. As already explained I think it was reasonable for water to be applied to the solvent tank and LPG cylinder.

[98] Area Director James accepted that had the QFRS limited its actions to keeping streams on the tank and cylinder it would have been safe to monitor and deal with any spot fires – t 7.16. However, at no point in his evidence would Area Director James countenance a let burn strategy with cooling streams on the tank and cylinder, tt 7.15-16. He could not articulate why not in any clear way, and his view seemed based on the idea that the application of water did substantially limit this fire – eg., t 7.22 and 7.25.

[99] As I have detailed, there was no evidence that there was any deliberate strategy to target water at the firewall or at the drums in front of the awning for the specific purpose of stopping those drums and the office becoming involved in the fire. Had there been such a strategy I would have considered it reasonable.

Decision-making About Response to the Fire

[100] When viewing the video footage for the first time, one cannot help be stunned by the size and ferocity of the fire. Of course, those in charge of the fire-fighting operation were not lay people. They had been trained both theoretically and by practical experience to deal with such events. While the fire itself was very fierce, weather conditions were favourable and the site was relatively isolated. No civilian lives were in danger. There were concerns as to the toxicity of the smoke plume. Attention was given appropriately to obtain scientific advice as to this. Area

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[22] See tt 6.61-63 and the photographs. There were four-wheel drive vehicles on site which could access all relevant areas of the surrounding land.

Director James was concerned to ensure that the men under his command remained as safe as they could be.

[101] It was evident, and evident from early on in the fire-fighting operation, that both the Northern building and that part of the Southern building West of the firewall were lost to the fire – they could not be saved. Officer Duncan thought this was so – t 6.39. Area Director James agreed that both these buildings were "highly likely" to be lost from the time each caught alight – t 6.78 and t 7.23. In this context Mr Manser said at t 4.14, "There was no – the buildings were lost. There was no urgency." His view was that once it was realised that operations could only be defensive – that is there was no point in attacking the fire with a view to extinguish it – there ought to have been a discussion involving all the senior fire-fighters on site as to the best strategies available to them. He said, "That re-evaluation might have brought up, we've got water run-off problems, well what about the run-off problems; do we need to continue to apply water?" – t 4.14.

[102] Despite the large number of senior fire-fighters on site, there was no evidence that any serious consideration was given to why water was being applied and whether that application should be reduced or stopped.

[103] All emergency services in Australia are trained in something known by the acronym AIIMS – Australasian Inter-service Incident Management Scheme. Many of the witnesses gave evidence in relation to their understanding of what this scheme, or similar schemes, or sub-schemes provide. There were aspects of nearly all these witnesses' evidence which struck me as a bureaucratic response: overly focussed on formal requirements in disregard of practicalities and commonsense.[23] Some of Mr Manser's analysis of how a strategy ought to have been considered and adopted is made in terms of the AIIMS framework. Whilst eschewing an unthinking application of the AIIMS rules, it seems to me that in several respects, matters which Mr Manser identifies as breaches of AIIMS rules are very much matters of substance.

[104] Under an AIIMS framework all senior officers are allocated a particular position as they arrive on site. At the top of the hierarchy is the Incident Controller, but there will be an Operations Manager and Sector Managers, etc.

[105] Mr Manser criticised the lack of a written Incident Action Plan during the life of the fire – report p 28.[24] AIIMS requires such a plan, and that it be discussed between nominated holders of AIIMS positions and revised during the course of the incident. To some extent the criticism that there was no written plan seems a little bureaucratic and unfortunately received an answer which also seemed a little

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23 One example is the criticism made by several witnesses, including Mr Manser, of the fact that while Area Director James was designated as the Incident Controller, a more senior officer – Assistant Commissioner McKenzie – was in attendance. He arrived about an hour-and-a-half after Area Director James – t 6.50. Under AIIMS rules, the most senior officer present ought to be the Incident Controller or designated as an observer only. Assistant Commissioner McKenzie broke these formal requirements of AIIMS by telling people to wear breathing apparatus and rubber boots and speaking to the media – t 4-11. He also liaised with other Government authorities and the Caboolture Shire Council – t 6.5. That is, he did not act only as an observer. This was said to be significant and likely to produce confusion. No incident of confusion was cited and I cannot see how this could possibly have created confusion, or be significant otherwise.

24 Officer Duncan was also critical of this – t 6.23.

bureaucratic – that there was a written plan – it was written on a whiteboard,[25] – the implication was there could be no basis for criticism – the guidelines had been complied with, there was a written plan.

[106] The point from my perspective is whether or not there was proper consideration of the objectives which the QFRS had in fighting the fire and consideration of whether the means employed would in fact achieve those objectives. Whether this is in writing or not seems to me a little beside the point. Nonetheless, the requirement that there be a written plan can be seen to have the advantage that it requires those in charge to think through and articulate in an organised and formal way what their objectives are, and how to advance them.

[107] The evidence is that what was written on the whiteboard was not something which would encourage a thoughtful consideration of the objectives of the QFRS in combating the fire and means apt to achieve them. Area Director James' description of what was on the whiteboard was a diagram of the site showing where the "appliances and resources are located" – t 6.52 and "information relative to the Incident Action Plan" – t 6.52. The whiteboard was said to record all the officers in attendance at the fire who had "a command control function", as well as, "the actions being taken and any other relevant information to the incident" – t 6.53. This was substantially short of what Area Director James describes was the function of an Incident Action Plan – to describe what the objectives were and how they were to be prosecuted – tt 6.76-77.

[108] After Officer Devitt took control on the morning of 26 August 2005 he wrote up an Incident Action Plan on the whiteboard on site. His evidence as to that – t 85 – is the first evidence that there were any aims and objectives recorded as part of the Incident Action Plan. Even then the plan was in very general terms, such as: to dampen down what was left of the fire, protect the environment, engage with the community, monitor the tanks and protect fire-fighters.

[109] In the Major Incident Report, Area Director James said this about the Incident Action Plan:

> "Incident Action Plan
>
> The incident did not result in a formalised Incident Action Plan in accordance with 'SMEACS'. The resources available (Emergency Tender and Command & Control Unit) were not conductive to producing an IAP in written format. The only appliance that has the necessary computer support capable of producing such a plan can only hold two staff and these work stations were taken up by communications, one being fireground and the other by the Communications Officer for reporting to Firecom.
>
> However, the following objectives and strategies were applied:
>
> Objectives:
>
> 1. Safety of firefighters & other emergency services' staff
> 2. Safety of public (exclusion zones, evacuations)
> 3. Contain to incident & attempt to save property

[25] Devitt, t 7.83; James, t 7.62.

4. Environmental impact

Strategies:

Adopt defensive firefighting actions using only aerial appliances for firefighting.

Tactics:

All staff entering immediate area of fire to wear chemical boots and breathing apparatus

Unless needed in immediate are[a] for firefighting, all staff from all agencies to operate remote from the fire

Use water from ground hydrants in Magnesium Street and relay pump water from Potassium Street.

Combat fire or let burn

An option considered by the Incident Controller, but rejected, was to withdraw and let the fire burn itself out. This was rejected due to the number of variables involved. These included:

- the exposure risks (eg LPG cylinder and solvent tank) and the impact if they became involved
- possible spread of fire to other buildings on other sites from exploding drums. The drums were travelling 100-150 metres (and reports indicate they were blown greater distances than this into vacant bushland at the rear of the site) and the adjacent buildings, including a timber treatment premises, were within this range.
- Impact of a greater sized plume and fallout into the community from a fire of higher intensity
- Risk of a large bushfire, as there was already spread into the surrounding bushland.

Due to these considerations, firefighting actions were initiated. This did place aerial crews in dangerous situations until the fire was brought under control. At the de-briefing aerial operators reported drums on fire being blown well over their locations and debris hitting fences close by."

[110] In cross-examination Area Director James agreed with the proposition that in formulating his Incident Action Plan on the night it was necessary for him to consider the environmental consequences of the QFRS response both on and off the site of the fire – t 6.83.

[111] The Major Incident Report is dated in October 2005. By then there was criticism of the way Area Director James and the QFRS had dealt with the fire and with the fire-water. My view is that the report has a flavour of hindsight defence about it, particularly the statement that the author, and incident controller, Area Director James, had "considered" a let burn strategy. Even accepting that Area Director James did have the thoughts recorded, it is clear that no real consideration was given to (1) whether the application of water to buildings which were well involved and to the fire itself could achieve anything; and (2) whether water should only be applied to targets where there was some useful purpose to be served, or a weighing

of the harm that massive water application might cause, as against benefit. Further, it is clear that, despite the number of senior fire-fighters on site, there was not the discussion between them of the Incident Action Plan which AIIMS required. I accept Mr Manser's view that, despite the size and ferocity of the fire, there were not circumstances of urgency which would have prevented such a discussion taking place, indeed several such discussions taking place during the course of the seven or so hours during which the QFRS applied water to the site as aggressively as it could.

[112] Before turning to consider the legal questions raised in this proceeding I will consider three further discrete factual matters raised by the evidence: the smoke plume; bunding on the plaintiffs' land, and inspections of the plaintiffs' land prior to the fire.

Plume

[113] The smoke plume from the fire contained toxins from the chemicals in the factory. From the time the QFRS engaged with the fire it undertook air monitoring to assess dangers from this plume. This aspect of the QFRS's response was not in issue before me.

[114] The issue of the smoke plume did however take on somewhat of a life of its own within the trial. It was one of the reasons which Area Director James gave for the application of water – he thought that if he applied water to the fire he would cool it or contain it and, "the smaller the fire, the smaller the smoke plume" – t 7.15. The potential danger from the plume was one reason Area Director James put forward for not opting for a let burn strategy. In fact, all the experts agree that the scientific position is to the contrary. The hotter a fire burns, the higher in the air will rise the products of combustion. This increases the likelihood that toxins will be dispersed at a high level in the atmosphere and that when they descend they will be better diluted.[26] The joint expert report was that the let burn strategy would not have had any detrimental effect in terms of people suffering from potentially toxic products of combustion in the smoke plume – p 19. Cooling the fire, or reducing its size slightly, would not have decreased any hazard from the smoke plume. And in any event, I find that the vast majority of the water applied to this fire did not cool or contain it, and could not reasonably have been expected to do so.

[115] Area Director James did not ask for scientific advice from his scientific officers about the effects of a let burn strategy on a plume – t 7.14. He did not cavil with the expert evidence in relation to this matter – t 7.14. I find that there was no reason related to the plume or the risk of air pollution to apply water to this fire.

Bunding

[116] The plaintiffs pleaded that the QFRS could reasonably foresee that if it used water to fight this fire then, "to the extent that such water could not be contained" the water would become contaminated by chemicals stored on the premises, overflow the bunds and storage dams, and consequently contaminate their land.

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[26] See for example pp 11 and 30 of Dr McCracken's report and paragraphs 24 and 26 of the joint expert report.

[117] The plaintiffs did not seek to prove the extent of any bunding on their land. Dr McCracken was questioned fairly closely about what he assumed to be the bunding arrangements – he assumed that the warehouse had a sump area, in its floor, or above its floor – it was hard to tell – tt 4-78-80 – but it is clear that he was relying upon his general knowledge of how warehouses are set up; he did not know about this particular warehouse. Further, his calculations as to this assumed capacity did not allow for the fact that large quantities of drums and metal debris would occupy much of the sump– t 4-80.

[118] After I questioned Dr McCracken about bunds on site, t 5.15, he came back, unbidden, to the topic, claiming to see another bund in a photograph – t 5.16. There was no evidence given by any witness as to the existence of this bund. Dr McCracken did not know of a bund, he was interpreting the photographs. In my view the photographs do not show a bund, rather that there is unevenness in concrete pavement. I find there was no such bund as Dr McCracken claimed. I thought him opportunistic and advocating in this.

[119] The only other evidence of bunding was that, from the photographs, there was a clearly inadequate bund around the solvent tank. That bunding was too small to contain the contents of the tank and it leaked: it was not full, in the photographs taken the day after the fire, when water had been continuously trained on the solvent tank throughout the fire.

[120] The containment dams were located at the highest point of the property and from the photographs taken the day after the fire it was clear that they had significant unused capacity – t 3.24 and exhibit 1, photos 10 and 11. As soon as the fire was reported, electricity to the premises was cut so there was no pumping facility or other means for water applied to the site to run uphill to the containment dams.

[121] The joint report contained the comment that adequate bunding for the plaintiffs' land would have been in the order of four to five mega-litres (which is the amount of water the experts estimated was applied by the QFRS to the site during the course of the fire).[27] Mr Manser's evidence was that the bunds on site were inadequate in size and location and that all experts agreed with this view – see t 3-23.

[122] The plaintiffs made no attempt to prove what bunding there was on their land; the volume of fire-water run-off which might have been contained in bunding actually on site; the effect which having contaminated fire-water contained in bunded or dammed areas might have had on the classification of the land under the *EP Act*, and, assuming that contaminated fire-water contained in the bunded areas would have created some type of environmental hazard, the cost of remedying that environmental hazard.

Inspection by QFRS Prior to Fire

[123] On 11 August 2004 and, strangely, on the very day of the fire, 25 August 2005, Officer Ruig from the Deception Bay Fire Station attended at the plaintiffs' premises to complete a maintenance inspection report. There was very little evidence as to what Officer Ruig did and observed, or what he ought to have done and observed.

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[27] See [65].

[124] No doubt it is sensible for organisations like the QFRS to visit sites which might be particularly hazardous in the event of an emergency. Mr Manser criticised the failure of the QFRS to do what he called pre-planning exercises in relation to this site, but that was never part of the plaintiffs' case against the first defendant. There was no evidence led as to what planning exercises ought to have been done, and what information they would have yielded, let alone any evidence that, had there been pre-planning exercises, things would have been done differently when the premises caught fire.

[125] On the state of the evidence before me it does not seem that information gathered by Officer Ruig was accessible to anyone on the night of 25 August 2005, but it is hard to see that the issue matters, and there was little emphasis placed on it at trial. The plaintiffs' pleading is that as a result of the earlier inspections, the QFRS ought to have known, effectively from the time the fire was reported: the location and layout of the buildings on the land; the buildings and other environs located around the plaintiffs' land; that the premises were used for manufacturing chemicals; the general topography of the land, and that nearby water-courses were likely to be contaminated by fire-water run-off. By the time water was applied other than as a cooling spray to the tank and cylinder the QFRS knew all of these things. I cannot see how it knowing them earlier could be relevant on the plaintiffs' case.

[126] The remaining allegation is that as a result of the earlier visits to site, the QFRS ought to have known the location and capacity of the bunds, sumps and storage dams at the plaintiffs' land. No evidence was led to support that allegation. But even if it is assumed to be correct, it does not avail the plaintiffs because, as I explain under the heading, "Bunding", no attempt was made to prove what bunding there was on the plaintiffs' land or what the damage to the plaintiffs' land would have been, had water been used only to the extent that it could have been contained within that bunding.

Duty of Care

[127] The first defendant denied that it owed the plaintiffs a common law duty of care. The question is not an easy one, there is little authority, and none of it binding on me. For the reasons which follow I find that the first defendant owed a duty to the plaintiffs to take reasonable care not to damage their property when acting to combat a fire and hazardous materials emergency on the plaintiffs' land.

Statutory Provisions

[128] This proceeding is based on the common law; it is not an action for breach of statutory duty. Nonetheless, the statutory provisions establishing the QFRS and giving it powers are an obvious starting point for my consideration. Section 8 of the *Fire and Rescue Service Act* 1990 (Qld) (*FRS Act*) establishes the QFRS. Section 8B provides that one of its functions is "to protect persons, property and the environment from fire and hazardous materials emergencies". Section 53 of the *FRS Act* provides:

"**53 Powers of authorised officer in dangerous situations**

(1) An authorised fire officer may take any reasonable measure—

(a) to protect persons, property or the environment from danger or potential danger caused by a fire or a hazardous materials emergency; or

(b) to protect persons trapped in any premises or otherwise endangered.

(2) Without limiting the measures that may be taken for a purpose described in subsection (1), an authorised fire officer may for that purpose do any of the following—

(a) enter any premises;

(b) open any receptacle, using such force as is reasonably necessary;

(c) bring any apparatus or equipment onto premises;

(d) destroy, damage, remove or otherwise deal with any vegetation or any other material or substance, flammable or not flammable;

(e) destroy (wholly or in part) or damage any premises or receptacle;

…

(g) close any road or access, whether public or private;

…

(j) require any person who, in the opinion of the authorised fire officer, is—

(i) the occupier of premises, being the site of or near to the site of the danger; or

(ii) in charge of anything that is the source of the danger or likely (in the opinion of the officer) to increase the danger;

to take any reasonable measure for the purpose of assisting the officer to deal with the danger or answer any question or provide any information for that purpose;

(k) require any person not to enter or remain within a specified area around the site of the danger;

(l) remove from any place a person who fails to comply with an order given pursuant to paragraph (k) and use such force as is reasonably necessary for that purpose;

…"[28]

[129] Section 147 of the *FRS Act* creates various criminal offences:

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[28] There are other significant powers in relation to fighting fire and hazards at eg., ss 56, 58A, 58B and 58C of the *FRS Act*.

> "A person commits an offence against this Act if the person does or, as the case may be, fails to do any of the following acts:
>
> (a) abuses or threatens or wilfully obstructs a person in the exercise of a power or the discharge of a function under this Act;
>
> (b) fails to comply with any requisition made or any notification or notice given pursuant to this Act;
>
> (c) when required pursuant to this Act to answer any question or provide any information, fails to give an answer or provide information or gives an answer or provides information knowing it to be false or misleading;
>
> …"

[130] I find that the contaminated fire-water from the fire-fighting efforts was hazardous material as defined in the *FRS Act*, and that its release during the events of 25 August 2005 and in the subsequent days was a hazardous materials emergency as defined in the *FRS Act.*

The Factual Basis for Duty in this Case

[131] In this case the QFRS entered into the business of fighting the fire, and dealing with the hazardous materials emergency, so that questions which sometimes arise as to (1) discretions or powers (rather than duties) to act;[29] (2) the distinction between acts and omissions where a statutory authority is concerned,[30] and (3) the policy and operational fields of a statutory authority's activities[31] are not relevant to whether or not there is a duty in this case. Further, this is not a case where there are questions of a public authority's allocation of resources (scarce or otherwise) between competing priorities.

[132] In *Roads and Traffic Authority (NSW) v Dederer*,[32] the High Court reminded that, "First, duties of care are not owed in the abstract. Rather, they are obligations of a particular scope, and that scope may be more or less expansive depending on the relationship in question." Duties must be owed to a particular person or class of person. Here the question is whether a fire brigade which has attended the scene of a fire and hazardous material emergency and has begun using its statutory powers to deal with those events owes a duty to the owners of the land where the fire is and the hazardous materials are. The duty was pleaded to include an obligation to exercise reasonable skill and care in: (1) making decisions as to how to fight the fire; (2) deciding whether or not to fight the fire with water to the extent that the water used could not be contained within bunding; and (3) fighting the fire so as not to create unreasonable risk to the property of the plaintiffs or expose the plaintiffs to an unreasonable risk of liability, loss or damage.

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29 Eg., *Pyrenees Shire Council v Day* (1998) 192 CLR 330, pp 358, 359, 362, 376-7; *Graham Barclay Oysters Pty Ltd v Ryan* (2002) 211 CLR 540; *Stuart v Kirkland-Veenstra* (2009) 237 CLR 215, 254 [112]-[113].

30 Eg., *Brodie v Singleton Shire Council* (2001) 206 CLR 512, 531 [84] ff.

31 Eg., *Graham Barclay Oysters Pty Ltd v Ryan* (above).

32 (2007) 234 CLR 330, 345 [43], cited in *Sydney Water Corp v Turano* (2009) 239 CLR 51, 71 [47].

Case Law

[133] There has not been a case in the High Court or in an intermediate court in this country which has decided that there is a duty owed by a fire brigade to take care in fighting a fire. That having been said, there is no case which decides to the contrary, and there is substantial obiter consideration in the High Court in the 1964[33] case of *Board of Fire Commissioners (NSW) v Ardouin*[34] in favour of the existence of such a duty. There is also an English Court of Appeal case on point, *Capital and Counties PLC v Hampshire County Council*[35] and a detailed consideration by the Scottish Court of Sessions on a demurrer case, *Burnett v Grampian Fire and Rescue Service.*[36]

Ardouin

[134] *Ardouin* was a demurrer case. It concerned s 46 of the *Fire Brigades Act* 1905-1956 (NSW). Section 46 was to the effect that the brigade was not liable, "for any damage caused in the bona fide exercise" of powers conferred by that Act. The Act obliged the brigade "upon alarm being raised" to "proceed with all speed to the place where the fire is". In the course of so proceeding a brigade vehicle knocked down a motor cyclist who sued, alleging a common law duty of care. The issue was whether s 46 protected the brigade. It did not. The focus of the case is the interpretation of s 46, and indeed the defence did not traverse the plea of negligence – p 109 – so the existence of a duty was assumed, and observations on that topic are obiter. Nonetheless Kitto, and Taylor JJ made quite lengthy and considered observations which expressly, and by necessary implication, state that a fire brigade is under a common law duty to those whose interests it might harm when exercising its fire-fighting functions.

[135] Kitto J took the view that s 46 had been enacted as a response to the result in *Vaughan v Webb*[37] – see p 115. In that case the brigade exercised a statutory power to pull down a wall damaged by fire. It did so negligently, and was held liable to the owner of the neighbouring property. Kitto J commented that the decision in *Vaughan v Webb* was "plainly correct": "there was no discretion to pull down the wall otherwise than with due care for the property of neighbours …" – p 115.

[136] The assumption that a common law duty of care is owed in the exercise of statutory powers to fight fires is express in the statement Kitto J made at pp 115-6:

> "… granting, as I think it should be granted, that the operation of s 46 in the cases to which it applies is to extend every power conferred by the Act or the by-laws by removing the otherwise inherent limit of due care provided only that the exercise is really for the purpose for which the power exists … The consequences for the property, the health, the lives, of individuals affected by a negligent exercise of power under the Act may be of the most serious; yet the section takes away all remedy, if only good faith exist."

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33 This was a time when the concept of a duty of care seemed more simple than it seems today. And that must no doubt be borne in mind when considering the case. Still, the trend of authority since then is to be less restrictive, if that approach is principled and commands intellectual assent.

34 (1963-1964) 109 CLR 105.

35 [1997] QB 1004.

36 [2007] S.L.T. 61.

37 [1902] SR(NSW) 293.

[137] For this reason, i.e., the serious effect of s 46, Kitto J held that the section ought to be restrictively interpreted and apply only to "… damage resulting from an act which, if it had not been negligent, would have been the very thing …" authorised by the statute – p 117. It is central to this reasoning that, but for s 46, there would be common law liability in the brigade for negligent performance of activities at the heart of the fire-fighting function.

[138] Taylor J also interpreted s 46 as limited to acts done pursuant to the "extraordinary powers conferred upon the [brigade] in order that it may properly and effectively fulfil its functions" – p 124 – rather than powers the brigade enjoyed along with other citizens – driving on the roads, for example. Then, of those special fire-fighting functions, he said:

> "But in the case of such acts no question of liability could arise in the absence of negligence. If, therefore, the section is to have any operation in such cases it must be taken to extend to damage resulting from the negligent performance of such acts. It is true that the section does not expressly excuse the [brigade] from the consequences of negligence but on general principles it should be so understood. This conclusion is, I think, cogently supported by a consideration of the character of the powers with which the section is concerned. They are, in the main, special powers, designed to enable the [brigade] to deal with emergencies and it is inconceivable that, in those circumstances, s46 was not intended to confer protection in respect of their negligent exercise." – pp 124-125.

[139] The judgment of Windeyer J is consistent with his holding the same view. At pp 127-8 he cited Starke J in *Metropolitan Water Sewage & Drainage Board v O K Elliott Ltd*:[38] "Statutory powers must be exercised with reasonable regard to the rights of other people and if an act is done in excess of the statutory power, or carelessly or negligently, then the person injured can put in force the ordinary legal remedy by action in the courts of law." His view was that s 46 modified this position so as to take away a remedy when what is alleged is that a brigade acted "in a negligent manner" – p 128.

[140] Dixon CJ said least about the matter; but his remarks are consistent with those of Kitto and Taylor JJ. At p 109, the Chief Justice said that the brigade was "under a duty to exercise such due care for the safety of persons using the road … as would be reasonable for persons to exercise although performing that public service". Then he held that s 46 did not apply to use of the roads, for which no special statutory power was necessary, but applied "to the exercise of powers which of their nature will involve interferences with persons or property" – p 109. Implicit in this is the notion that but for s 46 there would be a common law action available to someone injured by the negligent use of those powers.

Burnett

[141] In this case fire broke out in a flat. The brigade attended and extinguished the immediate blaze. The plaintiff owned the flat immediately above. He was absent at the time of the fire. The fire brigade broke down the door to his flat, detected smoke damage in the flat, and carried out investigations to determine whether there

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38 (1934) 52 CLR 134, 144.

was any risk to his flat. They were satisfied there was not, wrongly as it turned out. The matter came before the Scottish Court of Sessions on the equivalent of a demurrer. The point was whether the brigade owed a duty of care at common law. The pleading was held to be good. The judgment of Lord Macphail is detailed and considered and his conclusion is strong:

> "However the matter may be put, it appears to me to be undeniable that, if the facts averred by the pursuer were to be established, a relationship of proximity would be held to have existed between the defenders' firefighters and the pursuer. … There may well be insufficient proximity between the fire brigade and the public at large to give rise to a duty to answer a call; but in my opinion there is proximity between the fire brigade, on the one hand, and the owner or occupier of burning property and other persons immediately and directly liable to be affected, on the other, once the call has been answered and the fire brigade has attended and is attempting to deal with the fire." – [58].

Hampshire

[142] Until 1997 the point had not been authoritatively determined in England. That year the Court of Appeal heard four appeals together. The legal question was the same in each. In three of the four cases it was held no duty was owed. Leave to appeal to the House of Lords was refused. The QFRS relied upon statements from this case in support of the argument that it owed no duty to the plaintiffs, particularly the conclusion that, on the facts of one of the cases dealt with in this judgment (the *London Fire Brigade* case), the Court of Appeal concluded that, "… a fire brigade does not enter into a sufficiently proximate relationship with the owner or occupier of premises to come under a duty of care merely by attending at the fire ground and fighting the fire; this is so, even though the senior officer actually assumes control of the fire-fighting operation." – p 1038.

[143] Before turning to the reasoning of the Court of Appeal, I briefly detail the facts of the four cases dealt with. The *Hampshire* case was in fact two actions, (by a lessee and a sub-lessee). A brigade attended a fire in one of several buildings on a site. It turned off the automatic sprinklers in all the buildings on the site before the seat of the fire had been found, and before it was in control of the fire. The fire spread and consumed several buildings. In the *London Fire Brigade* case, the brigade answered a call and arrived at land on which there had been a fire, only to find that the occupants had apparently extinguished it themselves. "The fire brigade's officers took steps to satisfy themselves that all fires had been extinguished and that there was no residual danger, and they left the scene … without inspecting the plaintiff's premises, which abutted" the land where the fire had been – p 1023. Later that night the plaintiffs' premises caught alight, from material smouldering undetected from the earlier fire. In the *West Yorkshire* case, a brigade attended a fire and commenced to fight it. Although there were seven hydrants nearby, four failed to work through neglect, and the remaining three were found very late because they were obscured by neglect, or not properly marked. The building was lost.

[144] The English Court of Appeal commenced its reasons by examining whether there was a duty on a brigade to answer calls to fires, or take reasonable care to do so.

This may seem an odd place to begin, given that in each case before the Court, the brigade had responded to the call, and attended at the site of the fire. But this starting point is central to the Court of Appeal's reasoning, and the Court's anterior conclusion – that there was no duty to answer a call – clearly informs the conclusion at the next stage of enquiry – that there is no duty owed merely because a brigade does attend at the site of a fire. In reaching both conclusions the influence of *East Suffolk Rivers Catchment Board v Kent*[39] is very much apparent –see pp 1032-1034. Very much associated with the idea that a brigade has no duty to answer a call is the idea that even when an authority does decide to act, its only duty is to avoid adding to the damage which the plaintiff would suffer if it had not acted. If the brigade could refrain from answering the call, how could it be liable if it attended but made the situation no worse than if it had stayed away? – see pp 1032-1034 in *Hampshire*.[40] Reasoning based on *East Suffolk* can be identified as crucial to the Court's finding that the brigade in *Hampshire* owed a duty while the brigades in the other cases did not. The brigade in *Hampshire* did not simply fail to prevent damage which would otherwise have occurred by fire: by turning off the sprinklers, it created the danger which caused the plaintiffs' injury – that is, it created danger additional to that which existed independently of its attendance – p 1031A and D, 1034D, and 1042F.

[145] Differences between English and Australian law render the reasoning in *Hampshire* of limited value in Australia.[41] The rule that there will never[42] be a duty to take reasonable care in deciding whether or not to exercise a statutory power is not the law in Australia.[43] In discussing this point, the *Hampshire* Court of Appeal expressly refused to adopt the concept of "general reliance" explored by Mason J in *Sutherland Shire Council v Heyman*[44] – p 1027. That concept has not flourished here either.[45] But the difference between the English position in *Stovin v Wise* (above) and the Australian position does not depend on the idea of general reliance. By the time of the decision in *Sutherland Shire Council v Heyman*, it was uncontroversial that "persons acting under statutory powers (as well as persons performing statutory duties) might at common law be under a duty of care towards persons likely to suffer damage as a result of their carelessness." – per Gibbs CJ, p 437, and at pp 458-9, per Mason J. The cases of *Pyrenees Shire Council v Day*,[46]

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39 [1941] AC 74.

40 Or, as Lord Macphail summarised the unsuccessful brigade's argument in *Burnett:* "If the defenders had done nothing, they would not be liable. Here, they had entered the flat and had not extinguished the fire. There was nothing to suggest that they should have greater liability than if they had not turned up at all" – [13].

41 Connolly J, in the case of *West v New South Wales* [2007] ACTSC 43, [26]-[27], rejected it in the context of an application to strike out. His decision was upheld on appeal at *New South Wales v West* (2008) 2 ACTLR 255.

42 Or hardly ever – see Lord Hoffman in *Stovin v Wise* [1996] AC 923, 952-3 extracted at *Hampshire* (above) pp 1026-1027, and see what Aronson calls his "partial recantation" in *Gorringe v Calderdale Metropolitan Borough Council* [2004] 2 All ER 326, 336-7, cited in Aronson, M, "Government Liability in Negligence" (2008) 32(1) *Melbourne University Law Review* 44, 65.

43 In this respect the Scottish law is more akin to Australian law than the English position – see *Burnett* (above) [40] ff. See the detailed analysis as to the difference between the English position articulated in *Stovin v Wise* (above) and the Australian position in *Roads and Traffic Authority of New South Wales v Refrigerated Roadways Pty Ltd* (2009) 77 NSWLR 360, 426-432 [320]-[350] per Campbell JA.

44 (1985) 157 CLR 424.

45 Eg., *Pyrenees Shire Council v Day* (above) 343-5 per Brennan CJ and 387-8 per Gummow J. Nor Scotland – see *Burnett* (above) at [57].

46 Above, pp 372-3 per McHugh J, pp 376-7 per Gummow J.

Brodie v Singleton Shire Council (above) and *Sydney Water Corporation v Turano* (above) show that this position remains the law of Australia. In *Brodie* the joint majority judgment contains the following statement:

> "Whatever may be the general significance today in tort law of the distinction between misfeasance and non-feasance, it has become more clearly understood that, on occasions, the powers vested by statute in a public authority may give it such a significant and special measure of control over the safety of the person or property of citizens as to impose upon the authority a duty of care. This may oblige the particular authority to exercise those powers to avert a danger to safety or to bring the danger to the knowledge of citizens otherwise at hazard from the danger. In this regard, the factor of control is of fundamental importance.
>
> It is often the case that statutory bodies which are alleged to have been negligent because they failed to exercise statutory powers have no control over the source of the risk of harm to those who suffer injury. Authorities having the control of highways are in a different position. They have physical control over the object or structure which is the source of the risk of harm. This places highway authorities in a category apart from other recipients of statutory powers." – [102]-[103].

[146] Even putting to one side the fact that the *Hampshire* Court of Appeal undertook its analysis as to the existence of a duty in a legal framework not applicable in Australia, there is an independent difficulty, in my view, with the idea that whether or not a brigade owes a duty depends upon the way in which it fights a fire, or more precisely depends upon the success or otherwise of the means adopted to fight the fire. The brigade in the *Hampshire* case acted in an unorthodox way in turning off the sprinklers before bringing the fire under control. It had a disastrous consequence. However, it is difficult to see why this does not bear on the question of breach of a duty of care, rather than on the existence of the duty itself. It seems wrong to judge whether or not a duty is owed by the outcome of the steps taken, or not taken, in the course of fighting a fire. Lord Macphail in *Burnett* said this of the reasoning in *Hampshire*:

> "I have repeatedly studied this judgment [*Hampshire*] with great respect and care, but I regret that I am unable to regard it as representing the law of Scotland.
>
> … In particular, I regret that I do not understand the role of proximity in [the *Hampshire* case]. The Court appears to say that while there is insufficient proximity for the creation of a general duty of care owed by the fire brigade to the property owner, there is nevertheless sufficient proximity between them to give rise to a duty not to make matters worse. Thus a fire brigade is not liable for negligently failing to prevent damage, but only for causing greater injury than would have occurred if the fire brigade had done nothing at all. It seems difficult to discern a sound foundation in principle for this distinction. The Court appears to have been influenced by the decision of the House of Lords in an English appeal, *East Suffolk* …" – [48]-[49].

[147] Although the Court of Appeal decision in *Hampshire* does not expressly rest on the difference between acts and omissions, when I try to understand the reasoning I, like Lord Macphail in the passage above, come back to an unstated distinction between acts and omissions. According to the English Court of Appeal, if a fire brigade attends and omits to do anything further, they owe no duty because they have not made an existing danger worse. It is only if they act, and act so unsuccessfully that they create an exacerbated or new danger, that they owe a duty. The distinction between acts and omissions has long been recognised as unsustainable in Australia.

[148] As well, the *Hampshire* reasoning is in the framework of the *Caparo Industries Plc v Dickman*[47] three step test (foreseeability, proximity, policy)[48] which has been rejected as a basis for analysis in Australia.[49] In the scheme of things, I regard this as of less substantive significance than the points discussed above.

[149] For the foregoing reasons I am not persuaded that I should adopt the reasoning in *Hampshire.* I note that even if I were to, the plaintiffs' pleaded case is within the limited scope of duty which was recognised in *Hampshire.* The plaintiffs' pleaded case is that the actions of the QFRS in applying water in an attempt to cool or extinguish the fire created a menace which would not have existed had it not attended the fire, or not negligently applied water in an attempt to cool or extinguish the fire: viz large quantities of contaminated fire-water. However, I prefer not to base my judgment on this distinction – as explained, I do not see that it is either logically valid or supported by Australian authority.

Conflicting Duties

[150] The QFRS relied particularly on statements made in *Hampshire* that there could be no sufficient proximity between the owner of property (alight or neighbouring) and a fire brigade because the brigade owed duties to the public at large and coming under a duty to one person, or class of persons, might involve conflict with the interests of various other persons – p 1036. In *Hampshire* aspects of the brigade's power to control the fire site and fire-fighting operations, and the reliance of a building owner on the skill of the brigade in exercising its powers were discussed but rejected as a basis for proximity giving rise to a duty of care – pp 1036-1038. It is difficult to discern a basis for the rejection other than the notion that conflicting duties might arise if any duty were recognised.[50]

[151] It was said on behalf of the QFRS that the *FRS Act* cast on it no obligation to act to protect the plaintiffs' interests, but obliged it to act generally to protect persons, property and the environment from fire and hazardous materials – see s 53(1) of the *FRS Act*. These functions were said to be conferred for the benefit of the public at large, not for the purpose of protecting the interests of individuals. No doubt the provisions of the statute enabling the QFRS to act, and prescribing the purposes for which it may act, are important in considering whether it owes a duty in any particular case. But it must be remembered that the duty asserted is one which arises at common law; this is not a proceeding for breach of a statutory duty: the

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47 [1990] 2 AC 605.

48 *Hampshire* (above) p 1030.

49 For example, *Sullivan v Moody* (2001) 207 CLR 562, 579 [49].

50 See the judgment of Lord Macphail in *Burnett* (above) – final sentences [22] and [55].

words of Gibbs CJ in *Sutherland Shire Council v Heyman* are apt, "… the statutory provisions to which reference has been made are … not as the source of the Council's obligations, but as the setting in which its acts and omissions have to be considered".[51] That is, it is not a matter of looking to see whether the statute creates a specific obligation to protect the plaintiffs' interests.

[152] It was said that in carrying out its functions in any given case it may be that the QFRS had to choose between conflicting obligations – to risk the safety of firefighters in attempting to rescue persons trapped in a fire; to pollute the land environment rather than the air; to sacrifice one property to a fire in order to save other property. This is undoubtedly right, examples need not be multiplied. This was said to tell against there being any duty owed to any particular individual. Choices may well need to be made in the course of fighting a fire, which prefer one individual's interests to another's, or prefer public interests to an individual's interests. Actions taken which adversely affect a particular person's interests may well be reasonable when other conflicting interests are considered. As a matter of logic I cannot see that this means a fire brigade does not owe a duty to a particular person, or a class of persons, but that, in any given case, the duty to take reasonable care may not be breached. It seems to me that the potential for conflicting duties is no reason to deny the existence of a duty to take reasonable care of the plaintiffs' property in this case.

[153] In *Burnett* the idea that the potential for conflicting duties to different people or classes of people could prevent a duty arising was rejected:

> "The Court of Appeal in [*Hampshire*] accepted a submission (at p 1036A-B) 'that the fire brigade's duty is owed to the public at large to prevent the spread of fire and that this may involve a conflict between the interests of various owners of premises. It may be necessary to enter and cause damage to A's premises in order to tackle a fire which has started in B's. During the Great Fire of London the Duke of York had to blow up a number of house not yet affected by fire, in order to make a fire break.' It seems arguable, however, that when a fire brigade is fighting a fire it owes a duty, not to the public at large, but to the limited class of those whose lives or property are endangered. In the present case, where the defenders' firefighters were engaged in containing and extinguishing a fire in a flat in a residential tenement which consisted of a single building, it does not appear to strain any reasonable concept of proximity to say that they owed a duty to the owner of the flat upstairs, especially once they had broken into that flat and observed smoke damage." – [52].

[154] The Scottish Court further touched on the matter at [63]:

> "The defenders' counsel also submitted that any duty of care imposed would be wide: it would not be fair, just and reasonable for a fire brigade to owe a duty to anyone whose property might be affected by a fire. As I have said above, however, I consider that the duty is owed only to the limited class of those whose lives or property are endangered. In any event, if a fire service may have to

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51 *Sutherland* (above) p 434.

> take into account risks to other property when fighting a fire, it is difficult to see why that must mean that they have no duty of care to the owner of the property the fire is consuming or threatening to fight the fire efficiently."

[155] Associated with this point was an argument on the part of the QFRS that its owing a duty of care to the plaintiffs was inconsistent with its statutory functions. It was said that it would be inconsistent with the proper discharge of the fire brigade's duty to perform its s 53 functions if it were under a duty to take care to protect the plaintiffs from the cost of "clearing up after the fire" or loss of income during the period of that clean-up. It was said that the powers given to the fire brigade by s 53 authorise what would otherwise be a tortious interference with property during the course of fighting a fire or a hazardous materials emergency so that it would be inconsistent with that public purpose to require them to be exercised for the purpose of protecting a private individual's interests. I reject these propositions. The statutory provisions extracted above are perfectly consistent with a duty being owed to the plaintiffs – their property was at risk from fire and the hazardous materials stored on it. The question of whether or not a fire brigade breaches such a duty is to be determined according to standards of reasonableness taking into account all the circumstances of the case, including whether actions were reasonably taken to protect public interests or interests other than the plaintiffs'.

Economic Loss

[156] The QFRS said that the duty alleged by the plaintiffs was a duty to avoid economic loss and that therefore more restrictive notions applied in determining whether there was a duty owed than would be the case if property damage were alleged. I reject the characterisation of the plaintiffs' claim as one for pure economic loss.

[157] In *Caltex Oil (Australia) Pty Ltd v The Dredge "Willemstad"*[52] pipelines carrying oil to the Caltex refinery were damaged. Oil in the pipelines at the time of damage was lost. Caltex did not own the pipeline. Gibbs J said this of Caltex's claim, "Although [the lost oil] was owned by Caltex, it was at the risk of A.O.R., which has been compensated for its loss. The loss in respect of which Caltex seeks to recover damages was entirely economic in nature, and did not flow from the loss of the product."[53] The loss was the extra expense to Caltex of bringing oil to its refinery. Gibbs J said this as to the questions of law involving recovery for economic loss:

> "In these circumstances it becomes necessary to consider whether a person is entitled to be compensated in damages for economic loss sustained by that person as a result of damage negligently caused to the property of a third party. The further question arises whether a person whose property has been physically damaged as the result of a negligent act may recover compensation for economic loss which was not a consequence of that physical damage but which happened to be caused by the negligent act that caused the physical damage.
>
> Of course it is clearly settled that where personal injury or physical damage to property has been caused by a negligent act, the damages

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52 (1975-1976) 136 CLR 529, 544.

53 *Caltex* (above) 543-544.

> which may be recovered include compensation for all pecuniary loss suffered as a result of the injury or damage."[54]

[158] At p 555 Gibbs J concluded that, "… it is still right to say that as a general rule damages are not recoverable for economic loss which is not consequential upon injury to the plaintiff's person or property. …" Of course, the case is authority for an exception to that general rule. Over time there have been more exceptions developed to the general rule,[55] but the general rule against recovery, is as it was articulated by Gibbs J in *Caltex.* It is a rule against recovery of "pure" economic loss,[56] that is, economic loss which does not result from injury to the plaintiff's person or property.

[159] Here the plaintiffs' claim is that, by the QFRS's use of water to fight the fire their land became inundated with contaminated fire-water. That is, the plaintiffs allege damage to their land. As a result of contamination the land became subject to the operation of Chapter 7 of the *EP Act* and as owners they became liable to remediate it. Secondly it is claimed that there was economic loss – loss of rent – as a result of the contamination of the land.

[160] There is unfortunately some ambiguity as to the scope of the first of these bases of claim in the statement of claim. That is caused by references to contamination of eg., "the environs" as well as the plaintiffs' land – see paragraphs 4(f) and (g), 22(a)(iii) and (b), 26(e), 28(a), (b)(ii), and 29(b). However that may be, it is clear that the loss claimed is the cost of remediating the plaintiffs' land by reason of it becoming listed in the Contaminated Land Register, and not loss caused by the plaintiffs being directed to undertake work outside their land, or having been forced to deal with contaminated material which other agencies placed on their land in the immediate aftermath of the fire – see paragraph 29 (c) – (h) and 30 of the statement of claim, and paragraphs 12, 149(a), 150(a), 156, and 158 of the plaintiffs' written submissions, and the point made orally at t16-11, "they undoubtedly damaged our land". There was no case advanced in written or oral submissions on the part of the plaintiffs that their case extended beyond the cost of remediating their own land. This was so notwithstanding that the defendants each raised points as to parts of the plaintiffs' evidence of loss being irrecoverable as not caused by the effect of fire-water on the plaintiffs' land but by the plaintiffs being directed to undertake work outside their land, or having been forced to deal with contaminated material which other agencies placed on their land in the immediate aftermath of the fire. I regard the references such as "the environs" in the pleading as extraneous and surplus to the plaintiffs' case, which I take as confined to one which alleged a duty to a landowner to avoid damage to that landowner's land and property.

[161] The plaintiffs' damages claim consisted of:

(a) legal costs incurred in proceedings in the Planning and Environment Court concerning the operation of the *EP Act* and the plaintiffs' land, $442,240;

(b) the cost of remediating the plaintiff's land, $9,069,000;

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54 *Caltex* (above) 544.

55 See *Bryan v Maloney* (1995) 182 CLR 609 and *Perre v Apand Pty Ltd* (1999) 198 CLR 180.

56 See *Perre* (above) at p 192 per Gleeson CJ, pp 208, 218 and 227 per McHugh J and p 240 per Gummow J; and *Woolcock Street Investments Pty Ltd v CDG Pty Ltd* (2004) 216 CLR 515 at p 529 in the joint majority judgment and p 536 per McHugh J.

(c) a claim for loss of rental income as a result of the land being unusable until it is fully remediated, $1,325,000, and

(d) a claim for the income which the plaintiffs would have made hiring equipment in the chemical factory to Binary Industries, $1,548,000.

[162] The parties were agreed as to the amounts of money recorded in the preceding paragraph, but there was no agreement that the amounts represented the amount of loss caused by any negligence. It is clear that that case is one of economic loss consequent on physical damage to land. The loss the plaintiffs claim is for the costs of remediating their own land and expenses and loss of income consequent on that physical damage to their land. The case is analogous in this respect to *Pyrenees Shire Council* (above). The fire in that case destroyed commercial premises and the plaintiff sued for loss of plant, equipment, stock and profits. It was held there that the loss was not pure economic loss because in each case the cause of the loss was the escape of the fire which caused physical destruction – p 338 per Brennan CJ and p 379 per Gummow J.

Foreseeability of Harm

[163] Central to the plaintiffs' claim is the classification of the plaintiffs' land as contaminated. On 20 October 2005 the plaintiffs' land was listed on the Contaminated Land Register and the plaintiffs were given a notice to remediate it. The plaintiffs gradually attended to this obligation, although they were tardy and non-compliant[57] such that proceedings were instituted against them in the Planning and Environment Court which have a history of their own over some years. The land is still not fully remediated and cannot be used for any commercial purpose.

[164] The obligation to remediate the land falls on the plaintiffs as the owners of the land, irrespective of whether they were at fault in causing the contamination. The *EP Act* therefore has potentially draconian consequences for land owners, and there was doubt expressed by counsel, and me, at the trial that these provisions and their consequences are widely known in the community.

[165] The plaintiffs plead that:

> "[22] The QFRS knew and could reasonably foresee that if it used water to fight the Fire, to the extent that such water could not be contained:
>
> (a) such water would be likely to:
>
> (i) become contaminated by the chemicals stored on the Premises;
>
> (ii) overflow the bunds and storage dams on the Premises; and
>
> (iii) contaminate the Premises and its environs;
>
> (b) the owner of the Premises may suffer loss and damage arising by reason of the contamination of the Premises and its environs."

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[57] In saying this I am not necessarily criticising the plaintiffs. I have not heard evidence as to the rights and wrongs of these matters. It is certainly apparent that the cost to remediate is very high, many times the value of the land itself, and many times more than any ordinary citizen could afford.

[166] The plaintiffs do not allege that the first defendant knew of the provisions of the *EP Act*, or ought to have foreseen their likely application. The first defendant did not submit that the plaintiff was obliged to plead or prove these matters. In *Chapman v Hearse,*[58] the High Court held that responsibility for loss did not depend upon "the capacity of a reasonable man to foresee damage of a precise and particular character or upon his capacity to foresee the precise events leading to the damage complained of". In *Sydney Water Corp v Turano* (above) the High Court said this at [45]:

> "Reasonable foreseeability of the class of injury is an essential condition of the existence of a legal obligation to take care for the benefit of another. The concept is relevant at each of the three, related, stages of the analysis of liability in negligence: the existence and scope of a duty of care, breach of the duty, and remoteness of damage. At the first stage, the inquiry has been said to involve the assessment of foreseeability conducted at 'a higher level of abstraction' than at the subsequent stages. However, to speak of a higher level of abstraction in dealing with that first stage does not support a formulation of duty in terms devoid of meaningful content. It remains, as Gleeson CJ observed in *Tame v New South Wales*, that the concept is to be understood and applied with due regard to the consideration that, in the context of the issue as to duty of care, it is bound up with the question of whether it is reasonable to require a person to have in contemplation the risk of injury that has eventuated."

[167] There is no doubt that the fire-fighters at the site knew from the time water was applied in any quantity that there was contaminated fire-water being generated in significant quantities. From the beginning of the operation the QFRS was alert to the potential problem of pollution caused by contaminated fire-water – t 7.60. At 22:41 hours there was a request from the fire brigade to the Environmental Protection Authority (EPA) to send officers to the site – Manser p 36 and t 4.18. This approach continued into the next day under the command of Officer Devitt who was very concerned to deal with the run-off water from the site, organising trenches and earthmoving works and the like.

[168] In my view, it was reasonable for the QFRS to foresee damage to the plaintiffs' land by reason of inundation with fire-water containing chemicals, and that there would be cost involved in addressing that contamination, and consequential loss of use of the land until that was done. I do not think that it was necessary for the QFRS to foresee any more precise cause of loss than this, in the context of a consideration of whether a duty is owed.

Proximity, Control, Vulnerability, Reliance

[169] While it is necessary that a loss be reasonably foreseeable before there can be a duty at common law, reasonable foreseeability is not sufficient in itself to establish a duty.[59] As the High Court remarked in *Sullivan v Moody* there is no comprehensive definition of the circumstances which will give rise to such a duty – [48]. And perhaps that is as it should be. The law develops incrementally and by analogy. Concepts of proximity, control, vulnerability and reliance give guidance as to

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58 (1961) 106 CLR 112, 121, cited in *Perre* (above) at p 249.

59 *Sullivan v Moody* (above) 576 [42].

whether the relationship between any two parties is sufficiently close and direct that a duty will be owed.

[170] Where the defendant alleged to owe a duty is a statutory authority, the duty contended for must be related to, and consistent with, the functions, powers and responsibilities of that authority.[60] It is relevant here that the QFRS was a specialised service having statutory functions to protect persons, property and the environment from both fire and hazardous materials emergencies and that it had entered into the task of protecting at least property and environment from the fire and hazardous materials emergency which arose on 25 and 26 August 2005, including by taking control of the plaintiffs' land and performing acts which, but for its statutory powers, would have amounted to trespass or other tortious conduct.

[171] The QFRS is a force of officers specially trained, practically and theoretically, to deal with such events as arose on 25 and 26 August 2005. The officers had skill and knowledge above and beyond that possessed by normal members of the community which they could be expected to exercise in carrying out their functions pursuant to the Act.

[172] The fire was not caused by the QFRS, and was an extraordinary and unpredictable event, so that in that sense it could not be said that the QFRS controlled the fire or hazardous materials emergency – cf the second paragraph extracted from *Brodie* at [145] above. However, relevantly, the QFRS had control over its means of response to the fire and hazardous materials emergency and indeed it exercised that control: it attended in great force; established an exclusion zone; applied water to the plaintiffs' property and, as it became possible and necessary, accessed the plaintiffs' property and other surrounding properties either to put out spot fires, damp down the last of the fire, or dig trenches, dams and perform other earthworks to attempt to contain the contaminated fire-water. All these things were the operational (rather than policy) functions of a public authority having a statutory function to combat the emergency. In that sense it seems to me that the QFRS was in a position of control which brought it into a close and direct relationship with the plaintiffs as owners of the land where the fire and the source of the hazardous materials emergency was. In that respect the position of the statutory authority in *Graham Barclay Oysters Pty Ltd v Ryan*[61] contrasts. The situation is more aptly described by the following passage from *Stuart v Kirkland-Veenstra* (above) per Crennan and Kiefel JJ:

> "A relationship might be seen to arise when an authority has commenced exercising its powers toward a class of individuals. In *Pyrenees Shire Council v Day* McHugh J referred to the Council's 'entry into the field of inspection' …
>
> Gummow J considered that the measure of control which the Council had with respect to the prevention of fire, and which included its knowledge of the risk to the plaintiff's property, was the touchstone of its liability.
>
> … The evident purpose of statutory provisions, which might be utilised to prevent or minimise harm, has been identified as relevant

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60 *Sullivan v Moody* (above) 581 [56].

61 Above, particularly p 596 [144]-[155].

> to the existence of a duty of care in cases in this Court. " – [135]-[139]

[173] On one view of things the plaintiffs were vulnerable to the acts and omissions of the QFRS because the QFRS had assumed control of the emergency. Vulnerability in the sense that concept is developed in *Perre v Apand* (above) is less obviously applicable to this case, where the plaintiffs were at risk of significant loss quite independently of any actions of the QFRS, which acted with the aim of mitigating that risk. Because of the skill, experience, equipment, capabilities and statutory role of the QFRS, it is easier to characterise the instant relation as one where the QFRS had control, responsibility and expertise, and the plaintiffs were reliant or dependent on that.

[174] In my view once the QFRS attended the plaintiffs' land and began exercising its statutory powers to protect against fire and hazardous materials emergency there was sufficient closeness and directness in the relationship between it and the plaintiffs, as owners of the property which was on fire and which was the source of, and vulnerable to, the hazardous materials in question, to establish a common law duty owed by the QFRS to the plaintiffs to take reasonable care to protect the plaintiffs' property in exercising its powers to combat the fire and emergency.

Breach

[175] Further to the short passage extracted from *Roads and Traffic Authority (NSW) v Dederer* cited at [132] above, the High Court went on to say:

> "Secondly, whatever its scope, a duty of care imposes an obligation to exercise reasonable care; it does not impose a duty to prevent potentially harmful conduct. Thirdly, the assessment of breach depends on the correct identification of the relevant risk of injury. Fourthly, breach must be assessed prospectively and not retrospectively. Fifthly, such an assessment of breach must be made in the manner described by Mason J in *Wyong Shire Council v Shirt*." – p 338.

[176] In *Dederer*, Gummow J cited the formula from *Blyth v Birmingham Waterworks*: "Negligence is the omission to do something which a reasonable man, guided upon those considerations which ordinarily regulate the conduct of human affairs, would do, or doing something which a prudent and reasonable man would not do." – [50].

[177] The first defendant relied upon what it called the "agony of the moment principle".[62] Where a person is forced to act in a sudden crisis or emergency, that person's actions must be judged against that background, not as though the person had the luxury of time for deliberation. The situation which confronted the QFRS was an emergency, and initially at least, was dynamic and unpredictable. No doubt this bears upon the standard of care, and that has been consistently recognised in the cases over time. For example, the judgment of Windeyer J in *Ardouin* contains the following:

> "Quite apart from any statute, a fire engine going to a fire may go at a speed and take risks in traffic that the driver of another vehicle

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62 *Leishman v Thomas* (1957) 75 WN (NSW) 173, 175.

> could not justify. The urgency of the errand can be taken into account in determining what speed is reasonable and what risks may be justified for its performance … But this does not mean that it is permissible to drive a fire engine, or any other fire brigade vehicle in a negligent manner. It means only that whether there was negligence is a question of fact to be determined having regard to the circumstances. To drive a fire engine without sounding the warning siren or bell when a warning was wanted would be negligent. To drive it without keeping a proper lookout would be negligent. In some circumstances it might be negligent to drive it through a red traffic light; when, as Lord Denning … put it, 'the risk is too great to warrant the incurring of the danger. It is always a question of balancing the risk against the end.'" – pp 125-126.

[178] Later in his judgment Windeyer J referred to this balancing exercise as, "The duty to use a degree of care appropriate to the task in hand" – p 126.

[179] Mason J said this as to breach in *Wyong Shire Council v Shirt*:[63]

> "… it is then for the tribunal of fact to determine what a reasonable man would do by way of response to the risk. The perception of the reasonable man's response calls for a consideration of the magnitude of the risk and the degree of the probability of its occurrence, along with the expense, difficulty and inconvenience of taking alleviating action and any other conflicting responsibilities which the defendant may have. It is only when these matters are balanced out that the tribunal of fact can confidently assert what is the standard of response to be ascribed to the reasonable man placed in the defendant's position." – pp 47-48.

[180] Discussing this test in *New South Wales v Fahy*[64] Gleeson CJ said, "What is involved is a judgment about reasonableness, and reasonableness is not amenable to exact calculation. The metaphor of balancing, or weighing competing considerations, is commonly and appropriately used to describe a process of judgment, but the things that are being weighed are not always commensurate. … there are cases in which an unduly mathematical approach to the exercise can lead to an unreasonable result." Justices Gummow and Hayne agreed at [57] and added, "*Shirt* requires a more elaborate inquiry that does not focus only upon how the particular injury happened. It requires looking forward to identify what a reasonable person *would* have done, not backward to identify what would have avoided the injury."

[181] Section 9(2)(d) of the *Civil Liability Act* 2003 (Qld) (*CLA*) requires me to consider the social utility, obviously high, of the actions of the fire brigade in dealing with the fire and chemical emergency in determining whether or not a reasonable person would have acted to take precautions against a risk of harm.

[182] In my view the QFRS breached its duty to the plaintiffs in applying large amounts of water to areas of the plaintiffs' land other than the LPG cylinders and solvent tank, and other than the firewall and drums under, and in front of, the awning.

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63 (1980) 146 CLR 40.

64 (2007) 232 CLR 486, 491.

[183] As explained I think it was reasonable to apply water to the LPG cylinders and solvent tank bearing in mind the devastating harm that might have resulted had either of them exploded or ruptured due to the fire. Applying water to these items kept them cool and thus reduced the risk of that harm.

[184] Further, I can see a logical reason to apply water to the firewall – to protect it and the office in circumstances where the office was not alight, and was located at the other end of the building from the source of the fire in the warehouse. That the owners had sought to protect the office area by using a firewall is consistent with what might be assumed to be the case – the office might reasonably be assumed to contain valuable information. Mr Glover's evidence went to this.

[185] I can likewise see a logical reason to apply water to the drums under and in front of the awning. They were not alight, and preventing them catching alight removed a significant amount of fuel which would have prolonged the fire, and removed a sizeable source of rocketing drums which might cause injuries and spot fires.

[186] It may be that other reasonable fire-fighters would not have applied water to the firewall and drums, Mr Manser would not have. With hindsight it almost certainly would have been better not to. However, I do not regard this application of water as being in breach of the duty owed by the QFRS to the plaintiffs. I think it was within the range of responses which a reasonable fire-fighter or fire-fighting organisation could take in all the circumstances of this emergency.

[187] Application of water to these four areas: LPG cylinders, solvent tank, awning drums and firewall, could only have been reasonable for the time during which they were at risk. There is no evidence as to what this period of time was. Nor is there evidence of the period for which water was applied.

[188] Apart from application to the LPG cylinders, solvent tank, awning drums and firewall, there was no evidence that water was applied otherwise except the mistaken belief that it would in some way cool or extinguish the fire. In fact it would not extinguish the fire. That fact ought to have been known to the QFRS at the time. I infer that it was – it is implicit in Area Director James' calling his operation a defensive one. Officer Duncan was well aware of it.

[189] It may be that the QFRS's applying water may have cooled parts of the fire, but there was no evidence that it was strategically applied to do so, nor that this was a reasonable fire-fighting objective. Not only was there no reason to apply water, except to the four identified areas (above), it was reasonably foreseeable that applying volumes of water to the plaintiffs' land would create commensurate volumes of contaminated fire-water. At all material times the QFRS understood that this fire-water posed an environmental hazard. There was a reasonable fire-fighting strategy available: to let the fire burn itself out while applying water to the four identified areas where that application could serve a logical purpose. There is no evidence that these relevant facts were considered as they ought to have been during the course of the fire. For these reasons it seems to me that it was not reasonable for the QFRS to apply water to the site other than to the four areas I have identified, and that it was only reasonable for it to apply water to them during the time at which they were at risk.

Section 36 of the Civil Liability Act

[190] The first defendant argued that s 36 of the *CLA* applied so as to modify the standard of care it owed. I reject that proposition. Section 36 provides:

> "**Proceedings against public or other authorities based on breach of statutory duty**
>
> (1) This section applies to a proceeding that is based on an alleged wrongful exercise of or failure to exercise a function of a public or other authority.
>
> (2) For the purposes of the proceeding, an act or omission of the authority does not constitute a wrongful exercise or failure unless the act or omission was in the circumstances so unreasonable that no public or other authority having the functions of the authority in question could properly consider the act or omission to be a reasonable exercise of its functions."

[191] There is no doubt from the second reading speech[65] and from the explanatory notes to the *Civil Liability Bill* 2003 that the overall aim of the *CLA* was to protect defendants. Other than that, there is little useful to be gained from the extrinsic materials relating to the *CLA.* The explanatory notes to the Bill read:

> "*Clause 36* provides that the mere fact that a public or other authority undertakes a certain activity under a statutory power, or does not undertake a certain activity despite holding a statutory power to do so, of itself does not mean the authority must act in the same way in each circumstance. However, if the actions of the public authority are manifestly unreasonable in the circumstances, those actions may constitute a wrongful act or a failure to act. The standard by which the actions of the public authority are to be considered is that of a reasonable public authority."

It might be thought that the explanation is plainly incorrect, having regard to the words used in s 36 of the *CLA.*

Applicability of s 36 Civil Liability Act to this Case

[192] It was conceded that the first defendant was a "public or other authority" as defined. The plaintiffs' submission was that s 36 of the *CLA* did not apply to this case because this was not an action for breach of statutory duty and the section was limited to that. The plaintiffs relied on the heading to s 36. Since 1991 a heading to a section is part of an Act – s 14(2) *Acts Interpretation Act* 1954 (Qld), so that regard is to be had to the heading in construing s 36. Even apart from s 14 of the *Acts Interpretation Act*, where a statute uses general terms, "reference may be had to the heading to a section in order to determine the scope of an expression used in the section: *Concrete Constructions (NSW) Pty Ltd v Nelson*".[66] I think this principle applies here as the language of the section is general.

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65 11 March 2003.

66 (1990) 169 CLR 594, 602 and 618 cited at *Chief Executive, Department of Natural Resources and Mines v Kent Street Pty Ltd & Ors* [2011] 2 Qd R 417, 419 [11].

[193] I think the plaintiffs are correct in interpreting s 36 as applying only to actions for breach of statutory duty. Reading the whole section including the heading that seems to be the most natural meaning of the words used.

[194] Throughout the *CLA* the expression "breach of duty" is used to refer to a breach of a tortious duty of care – see ss 9, 10 and 11, for example. The word "duty" is defined at Schedule 2 of the Act as meaning:

> "(a) a duty of care in tort; or
>
> (b) a duty of care under contract that is concurrent and co-extensive with a duty of care in tort; or
>
> (c) another duty under statute or otherwise that is concurrent with a duty of care mentioned in paragraph (a) or (b)."

And the phrase "duty of care" is also defined in that schedule to mean, "a duty to take reasonable care or to exercise reasonable skill (or both duties)" ie, to refer to a tortious duty.

[195] There are only three operative sections in Chapter 2 Part 3 of the *CLA*, the division which deals with "Public or other authorities". Section 35 is concerned with principles which apply in a proceeding to decide whether a public authority "has a duty or has breached a duty". The words of that section and indeed the substance of the sub-paragraphs are consistent with it including a tortious duty at common law, consistently with the Schedule 2 definition. Section 37 of the *CLA* does not use the word duty, but places a restriction on the liability of road authorities – they are "not liable in any legal proceeding". I think that section is wide enough to include a legal proceeding based on a common law tortious duty. Section 36 is the only section of the three which speaks in terms of "breach of statutory duty" and it is hard to conclude that this was not deliberate. After using that phrase in the heading, the section does not use the words "duty" or "breach of duty" again. Again this seems a deliberate choice not to use the words which are defined to include tortious duties.

[196] Section 36 is a provision which in my view (see below) drastically reduces the rights of persons to a remedy by very significantly lowering the standard of care owed by public or other authorities. It thus attracts the principle described by Kitto J in *Ardouin:*

> "Section 46 operates, then, to derogate, in a manner potentially most serious, from the rights of individuals; and a presumption therefore arises that the Legislature, in enacting it, has chosen its words with complete precision, not intending that such an immunity, granted in the general interest but at the cost of individuals, should be carried further than a jealous interpretation will allow." – p 116.

[197] For these reasons I find that s 36 of the *CLA* has no application to this proceeding. If it did apply, my view would be that it would defeat the plaintiffs and, as the matter was fully argued by both sides, I will explain why.

How s 36 would Apply, were it Applicable

Two Stage Test?

[198] The *CLA* was part of a general move to reform the law of tort on the part of several State Governments in response to what was known at the time as the insurance crisis. Much of the reform had its origins in the "Review of the Law of Negligence: Final Report" (2002), commonly referred to as the Ipp Report. In New South Wales s 43 of the *Civil Liability Act* 2002 was enacted. It is analogous to s 36 of the *CLA.* Section 43 provides:

> "**Proceedings against public or other authorities based on breach of statutory duty**
>
> (1) This section applies to proceedings for civil liability to which this Part applies to the extent that the liability is based on a breach of a statutory duty by a public or other authority in connection with the exercise of or a failure to exercise a function of the authority.
>
> (2) For the purposes of any such proceedings, an act or omission of the authority does not constitute a breach of statutory duty unless the act or omission was in the circumstances so unreasonable that no authority having the functions of the authority in question could properly consider the act or omission to be a reasonable exercise of its functions.
>
> (3) In the case of a function of a public or other authority to prohibit or regulate an activity, this section applies in addition to section 44."

[199] After first instance decision in *Presland v Hunter Area Health Service*[67] the New South Wales Parliament introduced a s 43A to the New South Wales Act which, to a limited extent, extended the lower standard of care to include actions at common law. That section provided:

> "**43A Proceedings against public or other authorities for the exercise of special statutory powers**
>
> (1) This section applies to proceedings for civil liability to which this Part applies to the extent that the liability is based on a public or other authority's exercise of, or failure to exercise, a special statutory power conferred on the authority.
>
> (2) A **'special statutory power'** is a power:
>
> (a) that is conferred by or under a statute, and
>
> (b) that is of a kind that persons generally are not authorised to exercise without specific statutory authority.
>
> (3) For the purposes of any such proceedings, any act or omission involving an exercise of, or failure to exercise, a special statutory power does not give rise to civil liability unless the act or omission was in the circumstances so unreasonable

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67 [2003] NSWSC 754.

> that no authority having the special statutory power in question could properly consider the act or omission to be a reasonable exercise of, or failure to exercise, its power.
>
> ..."

[200] There is no case law consideration of s 36 of the *CLA*, or of s 43 of the New South Wales Act. There are several cases dealing with s 43A. There has been some debate as to whether or not s 43A affects the existence or scope of the duty of care, or whether it acts as a statutory immunity[68] or, as it has been styled in other cases, a defence[69] to be considered only once it has been determined that there would be liability at common law. This latter idea has given rise to what has been termed a two stage approach.[70]

[201] This problem does not seem to me to arise in respect of s 36 of the *CLA* because the words of the section seem clearly enough to focus on breach of duty, lowering the standard of care owed to a plaintiff, rather than establishing either an immunity or a defence. There is no warrant to use a two stage test, first determining liability apart from this section, and then considering the terms of the section. It seems to me that s 36 is intended to work in the traditional duty, breach, causation, damage framework, but to lower the standard owed.[71]

Wednesbury Standard of Care

[202] Section 36 of the *CLA* does contain a problem which has been noted in many New South Wales cases concerning s 43A – the use of words from *Associated Provincial Picture Houses Limited v Wednesbury Corporation.*[72]

[203] When the Ipp Report is considered – [10.26]-[10.27][73] it can be seen that this introduction of the *Wednesbury* standard was deliberate and apparently aimed at emphasising a public authority's right to make policy choices or choices where resources were scarce:

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68 *Precision Products (NSW) Pty Limited v Hawkesbury City Council* (2008) 74 NSWLR 102, 140 [171].

69 *Rickard v Allianz Australia Insurance Ltd & Ors* [2009] NSWSC 1115 [110]; *Collins v Clarence Valley Council (No 3)* [2013] NSWSC 1682 [200].

70 *Rickard v Allianz* (above) [111], [112]. In *Allianz Australia Insurance Ltd v Roads and Traffic Authority of New South Wales* [2010] NSWCA 328 at [75] the Court of Appeal in NSW refused to consider whether or not the two step approach was warranted or whether or not s 43A should be seen as a re-statement of a public authority's liability or as a defence. The High Court did not determine the issue in *Sydney Water Corp v Turano* (above).

71 In fact this is the approach favoured by Campbell JA in *Refrigerated Roadways* (above) p 432 [352]. Notwithstanding the language used in the New South Wales s 43A, he said: "Considered as a piece of text, the preferable reading seems to be that section 43A(3) imposes a more stringent standard for the existence of liability arising from exercise or failure to exercise a *'special statutory power'* than had applied, in at least some cases, before the enactment of section 43A. If an authority was subject to a duty to exercise care in exercising, or failing to exercise, a special statutory power, the question of whether there had been a breach of that duty would have been determined, before the enactment of section 43A, by reference to the court's own finding about whether there had been a failure to take reasonable care in exercising, or failing to exercise, that power. The preferable reading of section 43A(3), considered as text, is that it either replaces or supplements that standard by a standard that in its wording is more akin to the standard used in administrative law to decide whether an exercise of power is a valid exercise."

72 [1948] 1 KB 223, 229-230.

73 Extracted in *Refrigerated Roadways* p 433 [357].

> "10.26 … Rather, we think that Australian law should follow the lead of English law in this respect (see *Stovin v Wise* [1996] AC 923) by providing that in a claim for negligently-caused personal injury or death against a public functionary, where the alleged negligence consists of the exercise or non-exercise of a public function, and the public functionary pleads that the failure to take precautions to avoid the relevant risk was the result of a decision about the allocation of scarce resources or was based on some other political or social consideration, liability can be imposed only if the decision was so unreasonable that no reasonable authority in the defendant's position could have made it.
>
> 10.27 This test of 'unreasonableness' is taken from public law where it is known as the test of '*Wednesbury* unreasonableness' after the case in which Lord Greene MR invented it [*Associated Provincial Picture Houses Ltd v Wednesbury Corporation* [1948] 1 KB 223; [1947] 2 All ER 680]. The effect of the test is to lower the standard of care. It does not provide the defendant with an immunity against liability, but it does give the defendant more leeway for choice in deciding how to exercise its functions than would the normal definition of negligence (in terms of reasonable care)."

[204] Having regard to the use of the words "manifestly unreasonable" in the explanatory notes to the *Civil Liability Bill* one might agree with the Court of Appeal in New South Wales in *Precision Products,* "Whether it is appropriate to describe s 43A as encapsulating the blunt expression of 'gross negligence' is a matter of debate. However, it is plain that the drafter of s 43A was attempting to ameliorate the rigours of the law of negligence." – [177]. However, appreciating that general aim is not of any particular assistance when trying to come to terms with the words or concepts in s 36 of the *CLA.* The section certainly goes beyond a *Bolam* standard – cf s 22 of the *CLA.*[74]

[205] The *Wednesbury* test has been criticised, in an administrative law context, as being tautologous, circular and vague.[75] Its introduction to the law of negligence is fraught with difficulty. In *Refrigerated Roadways* (above), Campbell JA sets out a detailed, reasoned analysis of how *Wednesbury* unreasonableness is conceptually different from any notion of reasonableness in the tort law of negligence.[76] Professor Mark Aronson does the same in "Government Liability in Negligence".[77]

[206] The New South Wales Court of Appeal in *Allianz Australia* (above) at [81]-[89] refers to administrative law decisions showing how confined is the scope to review a decision on the grounds of *Wednesbury* unreasonableness. To do so "would

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74 See on this topic Carolyn Sappideen, "Bolam in Australia – More Bark Than Bite?" (2010) 33 (2) *University of New South Wales Law Journal* 386.

75 See the references in *Allianz Australia Insurance Ltd v Roads and Traffic Authority (NSW)* (above) [71].

76 430-431 [343]-[346]. See also the New South Wales Court of Appeal in *Allianz Australia Insurance Ltd v Roads and Traffic Authority (NSW)* (above) [78] ff.

77 Aronson, M "Government Liability in Negligence" (2008) 32(1) *Melbourne University Law Review* 44 at 80-81; and see the analysis of Hayne J in *Brodie* and McHugh J in *Crimmins* which Aronson cites on a related topic at p 67.

require something overwhelming" – *Wednesbury* itself cited at [81]; unreasonableness, "… such as to amount to an abuse of power".[78] Other more flamboyant descriptions such as "outrageous", "defiance of accepted moral standards" are cited – see [82], or "perverse" – [86]. The Court also cites the more moderate approach of Gummow J in *Minister for Immigration v Eshetu*:[79] "where the criterion of which the authority is required to be satisfied turns upon factual matters upon which reasonable minds could reasonably differ, it will be very difficult to show that no reasonable decision-maker could have arrived at the decision in question".

[207] It is clear that, so far as administrative law is concerned, the concept of unreasonableness which provides a ground of review is still evolving and may not be limited to the traditional *Wednesbury* grounds: *Minister for Immigration v Li.*[80] However that may be, s 36 of the *CLA* does use the *Wednesbury* language, and it is that which must somehow be applied in the context of tort law.

[208] In *Allianz Australia* Giles JA concluded:

> "Aronson sums it up in 'Government Liability in Negligence' … that '[o]nly the grossest unreasonableness will invalidate the exercise of a statutory discretion'. The learned author suggests that instead of transplanting *Wednesbury* unreasonableness '[i]t might have been more straightforward to draft the new standard simply as "gross negligence"'. I say nothing of that; in seeking to give content to the language of s 43A, however, a constant is that *Wednesbury* unreasonableness must be at a high level. The force of s 43A, in its use of language modelled on that of *Wednesbury* unreasonableness, lies in 'could properly consider', with the restraint of 'could' moderated by 'properly'. Necessarily, questions of degree and judgment arise in both reasonableness and properness."[81]

[209] The part of the Aronson article to which Giles JA refers reads:

> "The grounds of judicial review of administrative action have ebbed and flowed, but there is one constant. It is not the function of the judicial review court to determine the merits of the exercise of an administrative power. The court is limited to deciding whether that exercise was lawful, and it remains lawful even if the court thinks that it would have been better exercised in another way. Only the grossest unreasonableness will invalidate the exercise of a statutory discretion. This is most commonly expressed as requiring that the decision be so unreasonable that no reasonable decision-maker in the same position would have made that decision. Despite its evident circularity, it is that version which has been transplanted into the tort reform legislation." – p 80. (footnotes omitted).

[210] Unreasonableness in the *Wednesbury* sense must be such that it invalidates the exercise of power and this, in my view, is linked to the conceptual emphasis in the passage cited from Giles JA: the words of s 36 require an act so unreasonable that

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78 *A-G (NSW) v Quin* (1990) 170 CLR 1, 36, cited at [81].

79 (1991) 197 CLR 611, 654 [137].

80 (2013) 249 CLR 332 at 347 [21], 364 [68], 365 [70].

81 *Allianz Australia* (above) at [87].

no authority "could properly" consider it to be a reasonable exercise of its power. In my view these words require the kind of unreasonableness which invalidates, or makes improper, the act or omission as an exercise of statutory power. The effect of the section is therefore in my view to make it extraordinarily difficult for a plaintiff to prove breach.[82]

[211] Whatever my criticisms of the QFRS in its fighting of the subject fire, they do not amount to something which would amount to a breach within the meaning of s 36(2) of the *CLA*, were it applicable. Apart from Area Director James, there were several senior and experienced officers present at material times during this fire. Had the breaches complained of by the plaintiffs been of the magnitude required by s 36(2) it is inconceivable that no officer would have adverted to them and stopped them. Likewise, while Mr Glover retracted his opinions in support of the use of water after the experts conferred, the fact that he could have formed them originally (and in response to Mr Manser, not while actually fighting a fire) tells against breaches of the type described by s 36(2) of the *CLA.*

Statutory Immunity

[212] Section 129 of the *FRS Act* provides:

> "**129 Protection for acts done pursuant to Act**
>
> (1) No matter or thing done or omitted to be done by any person pursuant to this Act or bona fide and without negligence for the purposes of this Act subjects that person to any liability.
>
> …
>
> (3) Where any question arises as to whether a person's liability for any act or omission, the subject of any proceedings, is negatived under subsection (1) and the person claims to have acted pursuant to or for the purposes of this Act, the burden of proof of negligence and the absence of good faith lies upon the person alleging to the contrary.
>
> (4) If a person against whom proceedings are taken in any court for an act or omission alleges that the act was done or omission made for the purposes of this Act, the court may, on application, order a stay of proceedings if satisfied—
>
> (a) that there is no reasonable ground for alleging either negligence or want of good faith; or
>
> (b) that the proceedings are frivolous or vexatious.
>
> …"

[213] The first defendant submitted that s 129(1) had to be read as dealing with two factual scenarios: (1) acts or omissions "pursuant to" the *FRS Act* and (2) acts and omissions which were bona fide and without negligence done for the purposes of the *FRS Act*. In effect it submitted that the section ought to be read as though it was

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[82] Given that s 36 of the *CLA* applies to actions specifically created by statute, the effect seems odd, to say the least.

worded as s 28 of the *Plant Production Act* 1989, the subject of the judgment in *Colbran v State of Queensland.*[83] That section read:

> "(1) Liability at law shall not attach to the Crown … on account of any act or thing –
>
> (a) done or omitted to be done pursuant to this Act; or
>
> (b) done or omitted to be done bona fida for the purposes of this Act and without negligence.
>
> …"

[214] I accept that this is the correct interpretation of s 129(1) as a result of the natural meaning of the words used, and having regard to their sense, context and apparent purpose. There was no real alternative interpretation advanced by the plaintiffs.

[215] The plaintiffs contended that s 129(1) does not apply because the first defendant is not a person within the meaning of that section. This point fails.

[216] Section 32D(1) of the *Acts Interpretation Act* 1954 (Qld) provides that in an Act, a reference to a person generally includes a reference to a corporation as well as an individual. Schedule 1 of the *Acts Interpretation Act* defines corporation to include a "body politic".

[217] The plaintiffs' pleading is less clear than it could be on this matter, but at paragraph 1(d)(ii) it pleads that the QFRS is a "non-corporatized division of the Department of Community Safety of the State of Queensland, the first defendant" (sic). I read this as being an allegation that the QFRS is part of the Crown, or State of Queensland. That allegation was admitted by the first defendant.

[218] Throughout the statement of claim the plaintiffs refer to the QFRS as though it were the person who owed and breached duties – see for example paragraph 28, "The QFRS breached its duty of care to each of Hamcor and Armstrong by …". Notwithstanding it is declared to be a government entity,[84] the QFRS is not a juristic person – see *State of Queensland v Heraud.*[85]

[219] Section 8(1) of the *Crown Proceedings Act* 1980 (Qld) provides, "Subject to this Act and any other Act or law, a claim by or against the Crown may be made and enforced by a proceeding by or against the Crown under the title the 'State of Queensland'." Having regard to the naming of the first defendant as the only relevant defendant on the fire case and having regard to the plaintiffs' plea at paragraph 1(d)(ii) of the statement of claim, it must be that it is admitted between the parties that the QFRS is part of the Crown.

[220] The Crown is a person within the meaning of s 129(1) of the *FRS Act* because it is a body politic[86] – see the *Acts Interpretation Act* provisions set out above. There is no contrary intention to be found anywhere in the *FRS Act.*

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83 [2007] 2 Qd R 235.

84 Departmental Arrangement Notice (No 2), 14 June 2002, pursuant to *The Public Service Act* 1996 (Qld).

85 [2012] 2 Qd R 598, particularly at 603 [24].

86 *Bass v Permanent Trustee Co Ltd* (1999) 198 CLR 334, 349; *Cadia Holdings Pty Ltd v New South Wales* (2010) 242 CLR 195, 219 [63].

[221] As *Ardouin's* case shows, there is a long history of there being immunities in statutes creating fire brigades. There has long been, for example, a very comprehensive provision in New Zealand – see s 46(2) of the *Fire Services Act* 1949 cited in *Williams v Hutt Valley and Bays Fire Board*.[87] The reason for these immunities may well be the devastatingly large consequences of errors made in fighting fires. It may also be the fact that fighting fires is a task which in its nature may require brigades to destroy or damage property, and act very quickly, in the agony of the moment. In *Williams v Hutt Valley* the New Zealand Court of Appeal said:

> "… A fire is no place for deliberate decisions. Quick decisions require to be made as to the best way the fire brigade can go about its task of quelling the fire and rescuing persons who are in danger. On occasions fire brigades may have to destroy or damage adjoining property to prevent the fire spreading.
>
> In the nature of things, then, fire authorities and members of the force require some protection from actions which otherwise might be regarded as tortious in their nature. …"[88]

[222] This history, and these identifiable policy objectives, militate in favour of construing the word "person" in s 129 as including the juristic person responsible for the fire-fighting and hazardous materials response, as well as the individuals concerned.

[223] As well, s 7 of the *FRS Act* provides that the State is bound by that Act. It would be an odd construction if the State were bound by, but did not have the benefit of, the Act.

[224] I interpret the word "person" in s 129(1) of the *FRS Act* to include the first defendant, as a body politic.

[225] The plaintiffs' next contention was that the first limb of s 129(1) did not apply to the situation here because the acts and omissions which it relied upon as making the QFRS liable to it were not done pursuant to the *FRS Act*, but only for the purposes of the Act. The first defendant took the position that the application of water to the plaintiffs' land was something done pursuant to the Act and therefore within the first limb of s 129(1). Both sides relied upon the case of *Colbran.* This contest proceeded on the basis, which I accept is correct, that if I found the first defendant owed a duty to the plaintiffs and had breached it, the second limb of s 129(1) would not protect the QFRS because the actions, although bona fide, were negligent.

[226] As *Colbran* makes clear, *Ardouin's* case is relevant here. Firstly, the restrictive principle extracted at paragraph [196] above applies. Secondly, the statute in question in *Ardouin* granted immunity to persons "exercising any powers conferred by this Act". Williams JA in *Colbran* cited Dixon CJ in *Ardouin* (p 109) as saying that he considered this phrase referred "primarily to the exercise of powers which of their nature will involve interferences with persons or property", for example, performing what would otherwise be illegal acts. He did not think the phrase encompassed the doing of acts which were "of an ordinary character involving no invasion of private rights and requiring no special authority". The factual

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87 [1967] NZLR 123.

88 See also to the same effect *Tally v Motueka Borough* [1939] NZLR 252, 254.

circumstance of *Ardouin's* case provide an example of the latter type of act – driving a vehicle on a road. That general approach was taken in *Australian National Airlines Commission v Newman*[89] and *Puntoriero v Water Administration Ministerial Corporation.*[90] Williams JA said in *Colbran,* "The pattern emerges that there is a distinction between an act which can only lawfully be done if done pursuant to an expressed power conferred by an Act, and an act done in furtherance of the purposes of the legislation which does not require the conferral of power in order for it to be done lawfully." – p 241.

[227] Jerrard JA in *Colbran* said of the same line of cases, "If, as I consider correct, the ordinary meaning of 'acts or omissions done pursuant to the Act', in the context of legislation like this, is a description of acts or omissions directly or expressly authorised or required by the terms of the Act, …" – p 246. He thought that the phrase did not include **"**acts or things done or able to be done without any need for the exercise of a statutory power".[91]

[228] Philippides J was the third member of the Court in *Colbran.* She said: "A statute only "authorises" those acts which it expressly nominates and those acts and matters which are necessarily incidental to the acts so expressly authorised or to their execution." – p 252.

[229] Section 53 of the *FRS Act,* see [128] above, provides that an authorised fire officer may take any reasonable measure to protect persons, property or the environment from fire or a hazardous materials emergency. Subsection (2) begins, "Without limiting the measures that may be taken for such a purpose …" and then lists various activities. Applying water is not an activity listed. The activities listed are of a more general than specific nature, no doubt because the legislature did not wish to limit the powers of the QFRS by trying to foresee what it might need to do in the many and varied circumstances which might confront it.

[230] Given the inclusory words at the beginning of s 53(2) I do not see that applying water in an attempt to extinguish a fire needs to be expressly listed as an activity in s 53(2) in order for that activity to be something which, when done by the QFRS, is done pursuant to the *FRS Act* within the meaning of s 129(1) of the *FRS Act.* I would not like to say that a citizen who applied water bona fide in an attempt to extinguish fire on property which they did not own would be acting illegally or tortiously. Each case would no doubt turn on its own facts. The application of water by the QFRS in this case was something for which it needed the authority of s 53(1) of the *FRS Act*. Water was applied in enormous volumes and at a spectacular rate because the QFRS was able to access the fire hydrants and water mains in a way which no ordinary citizen could do. In applying water as it did, the QFRS was using its special statutory powers to deal with an emergency. This application of water was something which of its nature involved large-scale interference with property of others. In my view, the application of water by the QFRS was something done pursuant to the *FRS Act* within the meaning of s 129(1) of that Act.

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89 (1987) 162 CLR 466, 477.

90 (1999) 199 CLR 575.

91 *Colbran* (above), 246.

[231] Lastly, as to s 129(1), it was submitted by the plaintiffs that the introductory words to s 53, that is, authority to take "any reasonable measure", meant that if it were found that the application of water by the QFRS was in breach of a common law tortious duty there could be no protection within the first limb of s 129(1), for the QFRS only had power to act reasonably pursuant to the Act. I reject this interpretation: it would leave the first limb of s 129(1) with a very much reduced application (it is possible it might still apply to a case of trespass or other non-intentional tort). Further, interpreting the words in s 53(1) in this way would mean that there would be no purpose in having two separate limbs to s 129(1), for negligent acts would never be protected, whether they were pursuant to the Act or for the purposes of the Act.

[232] My view is that the words empowering the QFRS to take any reasonable measure at s 53(1) of the *FRS Act* are to be interpreted having regard to the authority to act of the executive arm of government. The executive has authority to act so long as it does not act unreasonably in the *Wednesbury* sense – see *Holgate-Mohammed v Duke*.[92] To adapt the words used by Campbell JA, in *Refrigerated Roadways* (above) at [343] ff, the plaintiffs' argument involves conflating two different senses of the word "reasonable". As Campbell JA says at [344], a question about whether a statutory authority has acted in a way which is not a reasonable exercise of power is answered by a reference to the proper scope of the statutory power and any consideration of reasonableness is in that administrative law context. Questions of reasonableness involved in deciding whether or not there has been a breach of a duty of care are quite different to this. As I have already explained, the application of water by the QFRS cannot be regarded as unreasonable in the *Wednesbury* sense.

[233] In my view the application of water by the QFRS fell within s 129(1) of the *FRS Act* – it was something done by the officers of the QFRS pursuant to the Act and they accordingly have immunity pursuant to that provision.

Plaintiffs' Proof of Causation of Loss

[234] As noted above at [162], the plaintiffs and the defendants agreed a dollar value for the items of loss the plaintiffs claimed, but did not agree anything further than this. That is, there was no agreement as to causation of loss.

[235] At trial the plaintiffs set out to prove what had been spent complying with directions of the EPA and orders of the Planning and Environment Court. For reasons which I now explain, this approach was too broad to allow me to assess either what loss the plaintiffs might have suffered in tort, or whether the plaintiffs would have been indemnified under the insurance policies they pleaded should have been in place. Although it advances discussion of part of the insurance case somewhat out of turn, I deal with the problems vis-à-vis all three defendants at this part of the judgment.

Pleading

[236] The plaintiffs' statement of claim pleaded this against the QFRS:

> "29 By reason of the breaches of duty pleaded in paragraph 28 hereof:

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92 [1984] AC 437, 443.

(a) the bunds and dams on the Premises were unable to contain the volume of water used by the QFRS in fighting the Fire; and

(b) water runoff from that used to fight the Fire contaminated the Land and entered the environment surrounding the Premises;

(c) that part of the Land described as Lot 101 became liable to the operation of Chapter 7 of the *Environmental Protection Act* (Qld) 1994 ('the EP Act') and in particular Part 8 of that chapter entitled 'Contaminated Land';

(d) in the alternative to sub-paragraph (c) above, even if the Land would have become liable to the operation of Chapter 7 of the EP Act, and in particular Part 8 of that chapter entitled "Contaminated Land", were the Fire competently fought, the Land would have been liable to the operation of the EP Act in relation to a level of contamination far less than did occur by reason of the breach of duty and far more easily and inexpensively remediated;

…

(g) In or about October 2005 Hamcor and Armstrong became liable pursuant to section 391 of the EP Act to remediate the Land or alternatively became liable to remediate the Land to a far greater extent than would have been necessary without the breach of duty;

(h) Hamcor and Armstrong have become legally liable to, and have, paid compensation pursuant to their obligation under section 391 of the EP Act in remediating the Land as pleaded in paragraph 30 below, or alternatively have paid a far greater amount than would have been necessary without the breach of duty."[93] (my underlining)

[237] The pleading in relation to causation of loss as against the QFRS does not attempt to come to terms with the very significant difficulty of showing how the plaintiffs' position after the fire differed from that which would have obtained had there been no breach of duty by the QFRS.

[238] The plaintiffs continued to approach the difficulties as to causation at a high level of abstraction claiming, at paragraph 30(b) of the statement of claim, costs "in remediating the [land at Narangba] in relation to pollution from run-off of the water used to fight the fire, including: engaging environmental consultants; engaging contractors to give effect to what has been determined as works necessary to give effect to that remediation, and complying with orders from the Planning Court".

[239] The pleading against the insurers as to causation was similarly superficial. Paragraph 50 of the statement of claim said that the plaintiffs would have been able to secure "insurance cover for pollution and environmental risks associated with the

[93] The characterisation of loss at sub-paragraph (h) as compensation is artificial. It would appear that the obligation on the plaintiffs to remediate their land under the EP Act was cast in this way so that the plaintiffs could argue they would have had a claim under a public liability insurance policy had one been in place (see [337]).

Premises in an amount of not less than $10,000,000 by: (a) becoming insured or interested parties on the [Binary Industries liability policy]; and/or (b) becoming insured or interested parties on an ISR policy …". Paragraph 51(g) of the statement of claim is to the effect that had an ISR policy been in place for the benefit of the plaintiffs at the time of the fire, that policy "would have been construed by underwriters so as to indemnify the plaintiffs in respect of the physical loss and damage to the Premises and the stock and contents, their costs of remediation arising out of pollution, including an obligation to remove debris from the premises".

[240] There is a further general plea about insurance at paragraphs 57-58A of the statement of claim:

> "57. By reason of the breaches pleaded in each of paragraphs 53-56 above:
>
> (a) Hamcor and Armstrong had no insurance cover for liability, including to pay compensation, arising from pollution and environmental risks associated with the Premises;
>
> (b) after the Fire, Hamcor and Armstrong became liable, including to pay compensation, as alleged in paragraphs 29 and 30 above.
>
> 58. Consequent upon the breach of duty by Marsh and/or Otago, Hamcor and Armstrong have suffered loss and damage being indemnity that would otherwise have been available to them under the policy of insurance which Marsh and/or Otago failed to procure, with an indemnity limit of not less than $10,000,000.
>
> 58A. Alternatively, consequent upon the breach of duty by Marsh and/or Otago, Hamcor and Armstrong have suffered loss and damage being a loss of opportunity to be indemnified under an ISR policy in respect of their costs of remediation arising out of pollution."

Plaintiffs' Evidence as to Loss and Causation

[241] The plaintiffs' evidence as to loss was from Mr Hayward, a Mr Machado and a Mr Smith. As well there was a report from a Mr Lee tendered by the second and third defendants. All this evidence was at a high level of generality.

[242] The plaintiffs' claim proceeded on the basis that its loss was the cost of complying with the requirements of the EPA and the orders of the Planning and Environment Court. To comply with orders of the EPA the plaintiffs were required to have an independent engineer supervise or project manage the remediation work. He would interpret the orders of the EPA or Planning and Environment Court and "do whatever is necessary to get the work done" – tt 11.21, 11.22, 11.75 and 12.6. The independent project manager would then vet invoices for such work, and Mr Hayward would pay in accordance with them – tt 12.6-12.7. The amounts which Mr Hayward authorised for payment he checked to ascertain that they were in relation to the post-fire work on the Narangba site – t 11.22. But he gave no detail other than this as to what the costs related to.

[243] For many years the person who fulfilled the role of project manager was a Mr Lee on behalf of Douglas Partners. He worked at the site from late 2006 until June

2011. Mr Hayward said that nobody would have a greater knowledge of what occurred during that time than Mr Lee. The plaintiffs asked Mr Lee to write a report for use in the proceeding. However, they chose not to call him. His report was tendered, without objection, by the second and third defendants (exhibit 40).

[244] For the purposes of this litigation, Mr Hayward supplied the invoices he authorised to be paid to a Mr Machado, a loss adjustor, who provided two reports and gave evidence.[94]

[245] In Mr Machado's first report, he says that he has examined almost 2,800 pages of invoices for work undertaken on the land at Narangba after the fire. He undertakes some analysis of the work carried out by the 20 largest contractors by amount charged.

- The largest was Veolia Environmental Services, who charged $3.25 million to provide services associated with removal and disposal of solid and liquid waste, see paragraph 4.1 of Mr Machado's report.
- The second largest contractor was a builder – Rubach. He charged $2.755 million to demolish buildings on the site, construct bund walls, relocate stockpiles of soil, brace and shore up remaining buildings, build temporary buildings to provide for storage of contaminated material, etc – paragraph 4.2 of Mr Machado's report. There was no supporting documentation available to Mr Machado which would enable him to analyse any of this work in detail and Mr Machado could not say that the expenditure was reasonable from his own review.
- Douglas Partners, at $2.617 million, was the third largest contractor. Its charges were for providing environmental management remediation planning and remediation works, including for stormwater, dam earthworks, ground-water investigations, etc – paragraph 4.3 of Mr Machado's report.
- The fourth largest contractor was Trident, a company associated with Mr Hayward. It provided labour to the site to the tune of $900,000. That company provided only timesheets and Mr Machado could not see what tasks had been undertaken.
- The fifth largest contractor was Trans-Pacific Industries, in an amount of just under $500,000. It provided contaminated waste collection and disposal which was predominantly liquid waste but did include some solid waste and sludge – paragraph 4.5 of Mr Machado's report.

[246] Mr Machado was frank in admitting that he had difficulty in assessing the reasonableness of the costs incurred, or for that matter, even understanding what charges had been made for. He was asked to act as though he were a loss assessor tasked with evaluating the plaintiffs' claim on behalf of an insurer. But that was largely an artificial task as he was not asked to assume that any particular policy of insurance applied – t 10.33. So, for example, he did not turn his mind to whether or not any task which was carried out was referrable to, for example, removal of debris, reinstatement of insured property, or for that matter even with respect to insured property or a risk insured under any particular provision of any policy.

[247] The remediation works have not finished. Mr Smith of Waste Solutions Australia Pty Ltd has charge of bringing the project to completion. There were three reports from him in evidence. Despite their size, they said little of substance, other than

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94 The second report updates the first but does not change the matters summarised here.

that his estimate is that there remains around $2.5 million to be spent before the task is complete. This includes an amount of nearly $600,000 to remediate the ground-water. It includes substantial amounts to put a 600 millimetre soil capping over contaminated soil on the land, which Mr Smith agreed in cross-examination was a very large task – t 9.77. It includes a cost to decommission dams – t 9.82. It includes amounts to remove much of the existing concrete floors and pavements and replace them with new concrete – exhibit 32, tab 2, p 31. It also includes an amount to "bio-remediate" around 700,000 cubic metres of soil in the stockpiles and the concrete hardstand which must be removed – t 9.60. Monitoring of ground-water and control of stormwater run-off will continue.

[248] In three major respects the plaintiffs' evidence would have prevented my assessing damages in tort or what insurance indemnity would have been available, had I otherwise found it necessary to undertake either of these exercises. I will discuss each of these three matters in turn.

(1) Monies Spent due to Contamination of Adjoining Land

[249] It will be recalled – see [159]–[161] above – that the plaintiffs' claim was for damage to their own land.

[250] Compliance with the requirements of the EPA and Planning and Environment Court involved more than simply dealing with the effect of the contaminated fire-water on the plaintiffs' land. Immediately after the fire, a statutory agency collected contaminated soil from "a huge area" of the bushland to the south and west of the plaintiffs' land and placed it on the plaintiffs' land – t 11.24. There remain very large stockpiles of contaminated soil on the plaintiffs' land, "by far the bulk of" which was soil removed by that statutory agency from the neighbouring land – t 11.71. Mr Lee discusses a stockpile of approximately 1,200 m^2, which he says is soil which did not originate or wash off the plaintiffs' land but was natural soil removed from adjoining public land. He is critical of this movement, saying that no emergency measures could have justified it. He gives his view that it was illegal to have moved the soil.

[251] Some smaller part of the stockpiles which still sit on the plaintiffs' land comprise soil dredged out of the plaintiffs' dams after the fire. It will be recalled that the plaintiffs' dams were located at the highest point of the Narangba land, and that consequently there was little contaminated fire-water in them on the morning after the fire. However, the plaintiffs' dams became significantly contaminated because on 30 August 2005 the plaintiffs were ordered to pump contaminated water from the creek in the bushland adjoining their land into the dams at the back of the Narangba site as an interim measure to take contaminants out of the environment – t 12.4. Mr Lee is critical of the pumping of contaminated fire-water into the Binary dams. He says that moving contaminated fire-water from the creek to the plaintiffs' land into the plaintiffs' dams caused the contamination which, in turn, resulted in the remaining stockpiles of contaminated soil being on the plaintiffs' land – they were scrapings from the dams contaminated by water brought in from off site.

[252] To prevent rain carrying contaminants from the stockpiles to other soil, the stockpiles have been covered with tarpaulins since their creation. They are still covered. Maintaining these tarpaulins and replacing them when necessary has been very expensive – t 11.71. In fact, Mr Lee said that one of the largest costs to the

plaintiffs was the maintenance of the tarpaulins over the stockpiles and the remediation of the stockpiles of soil. At one point at least the stockpiles of earth were capped – t 12.3. Mr Smith plans to cap them again.

[253] The EPA established a dam on the bushland adjoining the plaintiffs' land in which to contain stormwater run-off from contaminated land. From time to time over the years since the fire, stormwater volumes have meant that the plaintiffs' dams were too full, and contaminated water was pumped from them into the EPA's dam – t 11.76. Then in 2010 the EPA destroyed its dam and required the plaintiffs to pump its remaining contents back into their dams – t 11.37 and t 11.77.

[254] From the evidence it seems that nearly all the costs associated with the stockpiles and dams are costs to deal with contamination of neighbouring land. The plaintiffs' evidence made no distinction between the cost of the work described above and the cost of remediating their own land – t 12.5. It is clear that very significant monies were spent other than on remediating damage by fire-water to the plaintiffs' land. It was not the plaintiffs' case that the actions of third parties putting contaminated soil and water on their land was foreseeable by the QFRS. It was not the plaintiffs' case that they had suffered pure economic loss caused independently of application of water to their land.

(2) Comparison with Loss After a Let Burn Strategy

[255] There was no expert evidence which dealt with the situation the plaintiffs would have been in had a let burn strategy, or a modified let burn strategy, been adopted.

[256] The costs of Rubach builders, see [245] above, appear to include costs which were to deal with the effect of the fire, not the effect of contamination by chemicals. Presumably these costs would have been the same or higher had a modified let burn strategy been adopted, but there is no evidence as to this.

[257] My findings are that it would not have been in breach of the duty QFRS owed the plaintiffs had QFRS applied water to (i) the LPG cylinders and solvent tank throughout the course of the fire and (ii) other targeted areas such as the firewall in the Southern building and the store of chemicals between the Northern and Southern buildings. No witness gave any evidence as to what would have been the situation had such a modified let burn strategy been adopted. Presumably there would still have been liquid chemical spilt onto the plaintiffs' land. Presumably some of it would still have combined with water used for specific purposes. No expert attempted to give estimations of the amount of water which would have been used in this more targeted application of water. No-one analysed where such water, with or without chemical contaminants, would have flowed.

[258] In the context of discussing the risk of air pollution from a let burn strategy Mr Manser said (at p 38-9 of his report):

> "… the high temperature well oxygenated flames of early flaming fires consume most of these combustion products to perform simple, mostly innocuous products such as carbon dioxide and water. A combustion temperature of 98° Celsius, for example, provides complete thermal decomposition of herbicides with resulting emissions of primarily carbon and water. At this temperature, all

> contaminants are carried high into the atmosphere where dispersion ensures that toxic levels at or near ground do not occur."

[259] Mr Manser was there talking about the risk of air pollution and I do not think it is correct to read his opinion as meaning that a let burn strategy would have resulted in there being no chemical contamination on ground.

[260] Officer Duncan thought that sprays on the tanks would have been fine sprays which "shouldn't have been spreading any chemicals around the site" – t 6.18 – and would be likely to evaporate, in the main – t 6.18.

[261] Apart from these seemingly stray pieces of evidence, there was simply no evidence as to what the plaintiffs' position would have been had a modified let burn strategy been adopted.

[262] Seemingly in recognition of the lack of evidence on this crucial point, the plaintiffs' submissions as to causation were put on the alternative basis that the negligent acts of the QFRS were a material cause of the pollution and environmental damage to their land, and reliance was put on cases where, say, because of limitations in medical knowledge, it was impossible for a plaintiff to prove, even on the balance of probabilities that but for the negligence alleged, harm would not have been suffered.[95] In my view the principles in those cases, and the extraordinary circumstances contemplated by s 11(2) of the *CLA* cannot assist the plaintiffs here. There was no evidence that it would be impossible to prove what the result of a modified let burn strategy would have been. There was simply no attempt to prove this part of the plaintiffs' case.

[263] Mr Machado attempted to address what removal of debris would have cost on the site had a let burn strategy been followed. I am not entirely certain why he undertook that task. He used the word debris to mean rubbish caused by fire that was physically separate from the land itself, and wrote, in contradistinction, of contamination by chemical residues. His work must be based on assumptions as to the course of a let burn strategy which assumptions are not stated in his report. In any event, Mr Machado was not qualified to give expert opinion about these things, he was a loss adjustor and not a scientist, engineer or fire expert. In any event, he concludes, "It is difficult to say what the cost of the removal of debris would have been had the fire been left to burn in a controlled manner."

(3) Work to Maintain Site before Remediation

[264] There has been significant work done on the plaintiffs' land between the time of the fire and the time of the trial which was necessary to comply with the orders of the EPA and the Planning and Environment Court which was not work which could be described as remediating the land, even allowing for the width and imprecision of that term.

[265] Money was spent to make safe contamination on the land in circumstances where the plaintiffs could not afford to complete the process of remediation of the land. Significant items of expenditure of this nature included the construction of three plastic-lined stormwater storage dams on site equipped with additional pumps so

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95 See the discussion in "Australian Torts Law", (3rd ed), Stickley, Butterworths, 2013.

that stormwater which became contaminated after falling on the plaintiffs' land could be safely stored – t 11.32 and t 11.67. Generally control of stormwater on the site was a costly exercise. Stormwater on the site was subject to regular and rigorous testing. For about four years stormwater from the site was not allowed to be discharged into the normal Council stormwater system – t 11.32 and t 11.69. It had to be collected and pumped into dams on site – t 11.70 – and from there it had to be carted off-site by specialist waste disposal merchants – t 12.4. There were trenches, stormwater piping (t 11.73) and ground-water monitoring bores (t 12.2) installed.

[266] Mr Lee says that one of the largest, most difficult and expensive factors to control after the fire was the disposal of new stormwater, which was generated from rain falling on contaminated surfaces. This water had to be stored, disposed of and tested. He thought that up to half the Trident costs were taken up managing stormwater. He also explains how 14 ground-water monitoring wells were installed during 2007 and 2008 to monitor contamination of the ground-water.

[267] The concrete areas on site had to be sealed three or four times to prevent contaminants in them leaching out – t 11.69.

[268] I turn now from matters of causation to the first defendant's case on contributory negligence.

Contributory Negligence

[269] The QFRS argued that the plaintiffs contributed to their own loss because they: (1) failed to install a fire detection system; (2) failed to install a fire suppression system; (3) failed to have any foam on site; (4) failed to have proper bunding or storage on site so that contaminated water would be safely contained; and (5) failed to ensure that there were no flammable chemicals stored between the two largest buildings on site. The first defendant did not run its contributory negligence case with any enthusiasm at trial. I deal briefly with each of these five matters in turn.

[270] There is no evidence which would allow me to conclude that a fire of the scale which occurred here would have been moderated to any significant degree by the presence of a fire detection system, a fire suppression system or having quantities of foam on site. The fire occurred at night time. There was nobody at the factory. Narangba is sufficiently isolated that I cannot assume that a detection system would have resulted in the fire being attended more quickly than it was. The fire was so fierce and rapid I cannot conclude that earlier attendance would have made any difference to its course. The amount of foam necessary to deal with a fire of any size on this site was beyond the capability of the QFRS; I do not think it is reasonable to assume that a private enterprise would have foam of any great quantity on site. I cannot think that having a small quantity of foam on site would have altered the course of this fire.

[271] As a matter of generality, it is probably true to say that the plaintiffs' loss has been made worse because it did not have proper bunding or any other sensible arrangements for a spill on site. The location of overflow dams uphill from the rest of the site, and the almost total lack of bunding on site were remarkable enough. However, rather in the same way that I cannot conclude with any precision on the evidence how the plaintiffs would have been better off had a modified let burn

strategy been adopted by the QFRS, I cannot conclude with any degree of precision to what extent the plaintiffs would have been better off had there been proper bunding and containment systems on the Narangba land. There is simply not sufficient evidence to allow me to do that. In the joint report the fire experts unanimously criticised the lack of bunding and containment systems on site. Their opinion was that adequate bunding would have been in the vicinity of the volume of water estimated to have been applied to the site by the QFRS in fighting this fire. However, there was no detail as to where that bunding or containment would have been and what would have been the result for the contamination of the plaintiffs' land had it existed at the time of this fire. In these circumstances, I do not have the evidence to make any sensible findings as to the effect which the plaintiffs' failure to have a proper bunding and containment system had on their loss.

[272] My finding is that the fire spread from the Northern building to the Southern building because of a rocketing drum. Mr Manser's evidence,[96] which I accept, was that it is likely to have begun in the south-west corner of the Southern building not, in a way which the first defendant faintly explored, which was predicated on flammable chemical being stored in the covered area between the Northern and Southern buildings.

[273] Accordingly, even had I made a finding in the plaintiffs' favour against the QFRS, I could make no finding of contributory negligence. I turn now to the plaintiffs' case against the second and third defendant brokers.

Insurance case

Duty owed to plaintiffs?

[274] The second defendant is an insurance broker. The third defendant is the corporate entity operated by a Mr Stuart Munro, as an authorised representative of the second defendant, to provide broking services.

[275] The plaintiffs owned the land on which the chemical factory was situated, and owned the buildings and chattels on it. These were leased to Binary Chemicals Pty Ltd. Binary Industries Pty Ltd succeeded Binary Chemicals; it was incorporated by Mr Hayward and Mr Armstrong to take over the business at Narangba when a customer threatened to sue Binary Chemicals. This occurred part way through Mr Munro's dealings with Mr Armstrong.

[276] Mr Donald Hayward is the person who had the running of the first plaintiff. He was also a director of Binary Chemicals, and then Binary Industries. He is a chartered accountant, although it is some 15 years since he has practised that profession. He is an experienced businessman.

[277] The second plaintiff, Terrence Armstrong, was a chemical engineer. He had the day-to-day running of Binary Chemicals and then Binary Industries, as Managing Director. As well as the factory at Narangba, Binary Industries ran a factory in Western Australia. The plaintiffs owned the land and buildings there too. Mr Hayward's evidence was that if there were any important decisions to be made about Binary Chemicals or Binary Industries, Mr Armstrong would consult him. He

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[96] t 3.5 and t 3.6.

described the placing of insurance as an important decision in this category – t 11.26.

[278] Mr Armstrong did not give evidence at the trial and this was not explained. He was involved in a single vehicle collision after the fire, and apparently suffered serious injuries. He died during the time this judgment was reserved, but I was not told, and could not infer, that there was anything which might have prevented him giving evidence at trial.

[279] It was Mr Armstrong who dealt with Mr Munro, on behalf of the second and third defendants. Mr Hayward met Mr Munro once, but had no dealings with him. Mr Armstrong consulted Mr Hayward on the decision to place insurance through the second and third defendants, but otherwise Mr Hayward had no involvement with arrangements concerning the second and third defendants. The result is that I have no evidence other than that of Mr Munro as to dealings between the second and third defendants and Binary Industries. Mr Munro impressed as an intelligent, thorough and honest person. He had been an insurance broker for in excess of 25 years. He kept diary notes and sent emails confirming his dealings with Mr Armstrong. I accept his evidence as reliable and honest.

[280] Before 2003 the plaintiffs and Binary Chemicals both used the same broker to provide all the insurance all three of them needed to run the factory at Narangba. This was Mr Ron Hayden who Mr Hayward had dealt with in a friendly way for years – t 11.40. Mr Hayward had a high opinion of, and confidence in, Mr Hayden – t 11.26 and t 11.40. At about the time of the events of concern in this case Mr Hayden sold his business to Austbrokers.

[281] Mr Munro had a client involved in the herbicide industry. That client told him that Binary Chemicals could not obtain any public liability cover and suggested that Mr Munro might like to contact Binary Chemicals. Mr Munro did. He rang Binary Chemicals and spoke to Mr Armstrong in early February 2003. Mr Armstrong told Mr Munro that his insurance broker, Hayden, had been unable to renew Binary Chemicals' public liability cover since October 2002. Mr Munro knew Mr Hayden and knew that he operated a small independent broking business. He also knew that it was a difficult market in which to obtain public liability policies in the chemical manufacturing industry.

[282] Mr Munro went to Narangba on 3 February 2003 and met with Mr Armstrong. Mr Armstrong explained that Binary Chemicals manufactured insecticides and herbicides. He told Mr Munro he was concerned that Binary Chemicals had no public liability insurance in place at the time: he was operating the company without it and customers asked for evidence of insurance. He gave Mr Munro the Binary Chemicals' certificate of insurance for the 2001/2002 year and asked him to see if he could replace it. That certificate was in evidence. It shows a public and products liability policy in an amount of $10 million in the name of Binary Chemicals Pty Ltd which ran out on 1 October 2002, and for which the premium had been just over $50,000. Mr Munro asked to be shown over the factory but Mr Armstrong refused.

[283] On his return to his office on 3 February 2003, Mr Munro emailed Mr Armstrong asking for information, including "current schedules of all insurance policies". Mr Armstrong was dilatory in response. About a month later Mr Munro met with him again, trying to obtain the information he had requested in his email of

3 February 2003. After that, up until July 2003, Mr Armstrong from time to time provided the documents Mr Munro required. The various documents requested all related to Binary Chemicals: for example, its licence to store flammable goods and its insurance claims history.

[284] In July 2003 Mr Armstrong contacted Mr Munro, telling him that Binary Chemicals Pty Ltd had changed its name to Binary Industries Pty Ltd. Mr Munro's evidence was that Mr Armstrong told him, wrongly, that this was just a name change. Mr Munro acted in accordance with that advice – eg., providing Binary Chemicals' claims history to the insurers. There was no evidence that Mr Munro was ever told about the claim which inspired the incorporation of Binary Industries, or that this was ever disclosed to any prospective insurer. The ramifications of the non-disclosure of (i) that claim; (ii) the purpose for which Binary Industries was incorporated, and (iii) the true position that Binary Industries was a new company, were not pursued in this proceeding.

[285] Mr Armstrong continued to provide documents piecemeal. On 1 August 2003 he provided insurance schedules showing property insurance arranged by Austbrokers. The fax from Binary to Mr Munro said, "Please find attached documents relating to Binary Industries building cover". One insurance schedule showed that the property insured was named as three entities: Binary Chemicals Pty Ltd, Terry Armstrong, and Hamcor Pty Ltd. In the case of the property insurance for the operation at Narangba, the document also recorded, "Broad form liability section: not insured".

[286] While the insurance schedule showed there was no broad form liability cover on the property policy, Mr Munro said that did not signify that the plaintiffs had no broad form liability cover or ISR policy. He would have expected that to have been recorded on another insurance schedule – t 12.82. Further, Mr Munro said he would not have expected necessarily to have been provided with such a schedule, as the point of his asking for insurance schedules was to show prospective underwriters the asset schedule which related to the prospective insured, in this case Binary Industries – t 12.42. I accept that evidence; it was not challenged.

[287] When Mr Munro first attended at Narangba on 3 February 2003, Mr Armstrong told him that Binary Chemicals was a lessee of the premises. When Mr Munro received the insurance schedules on 1 August 2003 he understood that the owners of the land were the three named insureds: Binary Chemicals Pty Ltd, Terry Armstrong and Hamcor Pty Ltd. He was not told any more than that about the relationship between those three entities – t 12.75, t 12.77, t 12.78 and t 13.5.

[288] Mr Munro began seeking public and products liability cover for Binary Industries in August and September 2003. The market was very difficult. Eventually he placed $2 million cover with London underwriters – tt 12.45-46. He then pursued the remaining $8 million cover, and eventually obtained that as excess cover. The premium for the total cover was approximately $168,000.

[289] Having obtained positive indications from the underwriters, Mr Munro prepared the formal documents to put the cover in place in the form of an insurance report which included a Services Agreement between Binary Industries and the second defendant. The insurance was in the name of Binary Industries; the Services Agreement was between the second defendant and Binary Industries, and the services the subject of the agreement were stated to be services to Binary Industries. At page 26 of the

Services Agreement there was a notice, "INTEREST OF THIRD PARTIES IN PROPERTY INSURANCE. Your policy may not provide cover for any party other than the named insured or anyone specifically referred to in the policy. Please read your policy carefully and if you intend to insure the interest of any other parties, such as lenders, principals, etc, you must request this." The Services Agreement was never signed by Binary Industries. But after receiving it, Mr Armstrong gave instructions to effect cover. Mr Hayward never saw the Services Agreement.

[290] There was then no contact between Mr Armstrong and Mr Munro until the insurance was due for renewal. Mr Munro sent a renewal questionnaire to the attention of Mr Armstrong in August 2004. Mr Armstrong did not respond. Mr Munro followed up and organised a meeting at Narangba. Mr Armstrong had not completed the questionnaire. Mr Munro completed it in discussion with him that day.

[291] On this occasion, early October 2004, Mr Munro asked if he could source Director's and Officer's liability insurance for Binary Industries. Mr Armstrong refused – t 12.51. Mr Munro then asked whether he could provide a quote on buildings, contents, plant and equipment at the factory. Mr Armstrong agreed to this. Mr Munro asked Mr Armstrong to send details of the policies and renewals from the current broker to facilitate this – t 12.51. Mr Armstrong did not. Nor did he provide the necessary details to effect Binary Industries' product and public liability renewal. Mr Munro sent a follow-up email – 19 October 2004 – asking for the documents relevant to Binary Industries' renewal. He added to that email, "We also discussed the property covers for Narangba and WA. Are you able to fax these over and I will let you know if these are competitive or not." Mr Armstrong sent information as to Binary Industries' renewal, but not the property covers – t 12.52. Mr Munro never raised the matter of the property insurance again. He explained, "I'd raised it twice. I thought it might have been a bit of – unprofessional to keep asking."

[292] Mr Munro arranged the renewal and prepared an insurance report as he had the year before. Again, there was a Services Agreement as part of the insurance report. It was in the same terms as the year before. Again it was not signed by Binary Industries. But again, after receipt, Mr Armstrong gave instructions to renew the policy.

[293] Mr Munro was cross-examined along the lines that had he made general rather than focussed inquiries of Mr Armstrong he would have discovered that the plaintiffs had no liability insurance cover for the site. Mr Munro responded that he did not make those inquiries because he was given a specific task: to obtain one particular type of insurance – liability insurance – for Binary Industries in circumstances where the broker who acted for Binary Industries generally, and for the owners of the land generally, could not obtain that particular cover in circumstances where the market was difficult and the broker was much smaller than the second defendant.

[294] The plaintiffs' case was that Mr Munro offered to Mr Armstrong, "to seek liability, including pollution liability, insurance for the enterprise" at Narangba – paragraph 33 of the statement of claim. That allegation was not proved. To the contrary, Mr Munro had a defined retainer, to place cover for Binary Chemicals' liability insurance in terms similar to the policy which had lapsed in 2002. There is no doubt that the second and third defendants fulfilled the terms of that retainer.

[295] There is no doubt that the second and third defendants owed a duty to Binary Industries, to take reasonable care in providing broking services to it: that was implicit in the contract between them.[97] The plaintiffs say that because of Mr Munro's communications with Mr Armstrong, the second and third defendants owed a duty to the plaintiffs, not in contract, but in tort. That duty was said to be one to investigate the relationship between Binary Industries and the plaintiffs; investigate the insurances all three had arranged through Mr Hayden, and realise that these were inadequate to a situation in which the plaintiffs became subject to an obligation to remediate the land at Narangba – paragraph 49 of the statement of claim. My view is that no such duty was owed.

[296] Mr Munro was given a specific task on behalf of Binary Industries. He was not even asked to ensure that all Binary Industries' insurance needs were met. He was told that there were brokers who had the task of attending to Binary Industries' general insurance needs. There was nothing ambiguous about his task. He asked questions designed to ensure he had all the information relevant to the task he accepted. The oral arrangements were confirmed in writing sent to Mr Armstrong once cover was found. The 2004 renewal was on the same basis.

[297] Before the November 2004 renewal Mr Munro knew the names of the plaintiffs, and knew that they owned, or part-owned, the land where the factory was situated. He could see this from the schedules sent to him on 1 August 2003. That Mr Armstrong was listed as a property insured could reasonably have indicated to Mr Munro that there was some relatively close relationship between the owners of the land, Binary Industries and Mr Armstrong. I find that Mr Munro did realise that, but did not know the precise relationship. This was implicit in the conversation of October 2004 when Mr Armstrong agreed that Mr Munro could look at providing quotes for property cover. That is, it was implicit in that conversation that there was some point in asking Mr Armstrong about obtaining quotes for the plaintiffs.

[298] At all times Mr Munro knew that another broker had the task of obtaining all the insurance the plaintiffs and Binary Industries had in relation to the Narangba enterprise, apart from Binary's public liability policy. He had no reason to think that any of this insurance was not adequate.

[299] Mr Munro asked to review the plaintiffs' property insurance in October 2004. After Mr Armstrong initially agreed to this, he acted in a way which clearly enough implied a refusal.

[300] In all these circumstances it was not reasonably foreseeable to someone in Mr Munro's position that, unless he acted to review, and adequately insure the plaintiffs, they might be inadequately insured and suffer loss.

[301] The plaintiffs' claim against the second and third defendants is one for pure economic loss. Even had the plaintiffs shown that the loss they claim should have been reasonably foreseeable to the second and third defendants, that would not have been sufficient to establish a duty of care.[98]

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97 *Ogden & Co Pty Ltd v Reliance Fire Sprinkler Co Pty Ltd* [1973] 2 NSWLR 7, 39, and generally *Astley v Austrust Ltd* (1999) 197 CLR 1, 22-23 [47].

98 *Woolcock Street Investments Pty Ltd v CDG Pty Ltd* (2004) 216 CLR 515, 529-531 [21]-[24].

[302] There could not be said to have been any reliance by the plaintiffs on Mr Munro. To the contrary, Mr Armstrong had only engaged him to act in relation to one specific part of Binary Industries' cover. He rejected Mr Munro's attempts to assume a wider role either offering directors' insurance to Binary Industries, or property insurance to the owners of the land. There is no evidence at all that the second and third defendants assumed any responsibility towards the plaintiffs. The plaintiffs were not vulnerable to the second and third defendants in the sense made relevant by cases such as *Perre* (above). To the contrary, they had their own brokers whom they relied upon to do the very task which they say the second and third defendants ought to have assumed on their behalf.

[303] There is no case where a third party, in a position analogous to the plaintiffs, has been found to be owed a duty of care by brokers who were acting pursuant to a contract with someone else. In *Punjab National Bank v de Boinville*[99] a duty was found in extraordinary circumstances which were expressly considered by the English Court of Appeal sufficient to incrementally develop the category of cases in which a duty will be owed in a case of economic loss. The plaintiff was a person whom the broker knew was to become the assignee of an insurance policy, and the plaintiff had actively participated in giving instructions to the broker for the purchase of the relevant policy. The judgments in that case make it very clear that in the absence of extraordinary circumstances, a broker owes no duty of care to prevent economic loss except in accordance with his or her contract of retainer.

[304] *BP plc v AON Ltd*[100] is another extraordinary case where a duty was found to be owed by a broker to a company with which it had no contract. The broker had conducted himself so as to assume an obligation "as explicitly as if he were personally contractually binding himself to provide the … services." – [166] and [167]. It was found that, objectively, it was reasonable for the stranger to the contract to have relied upon that assumption of responsibility by the broker. The facts here contrast.

[305] In *Bank of New Zealand v Sedgwick*[101] there was found to be no duty of care owed by a broker to a bank which was noted on the insurance policy as an interested party and which the broker knew was a mortgagee. There was nothing to indicate any assumption of responsibility for the bank's interests, nor any reasonable basis for the bank relying on the broker.

[306] The few other cases as to brokers' duties to persons with whom they have no contract are not directly comparable, and all are resolved against the idea that a duty is owed in such circumstances.[102] That this is the general situation is apparent from the review of cases in Derrington and Ashton, "The Law of Liability Insurance".[103]

[307] There are cases which hold that where a broker receives general instructions he or she may, no doubt depending on the particular facts, be under a duty to ask for more

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99 [1992] 3 All ER 104.

100 [2006] 1 All ER (Comm) 789.

101 (1995) 8 ANZIC 61-280.

102 *Norwest Refrigeration Services Pty Ltd v Bain Dawes (WA) Pty Ltd* (1983-1984) 157 CLR 149; *Duncan Stevenson Macmillan & Ors v A W Knott Becker Scott Ltd & Ors* [1990] 1 LlRep 98; *Verderame & Ors v Commercial Union Assurance Co plc & Anor* [1992] BCLC 793.

103 [2-110], [2-129], [2-133] – [2-134] and [2-136].

detail of the insured's business to ensure that all foreseeable risks are covered.[104] The facts of those cases are distinct from the facts here, where the duty is alleged to be owed to persons other than Binary Industries, whose affairs were, to the knowledge of the second and third defendants, in the care of another broker. No duty arises on the facts here.

Dr Manning

[308] The plaintiffs led expert evidence from this gentleman. Evidence from experienced insurance brokers is admissible as to the practice of brokers, which is of assistance to the Court in determining, usually, the question of whether or not there has been a breach of duty.[105] This is because the Court will be usefully informed as to relevant practices in the industry in judging whether or not conduct has fallen short of an acceptable standard. Of course, the evidence is not conclusive on this issue.[106]

[309] Dr Manning was asked to assume various facts pleaded in the statement of claim for the purpose of making his report, see paragraph 1.1 of his report of 31 July 2012. This involved him proceeding on the wrong factual premise pleaded at paragraph 33(b) of the statement of claim, "Munro offered to Armstrong to seek liability, including pollution liability, insurance for the enterprise" at Narangba. He admitted in cross-examination that he thought that the plaintiffs were engaged in chemical manufacture as part of that enterprise – t 10-26. He admitted in cross-examination that he was not aware of the actual contract of retainer between Binary Industries and the second and third defendants – t 10-16. He also admitted he did not understand that Binary Industries and the plaintiffs had another broker who arranged all their other property and business policies – tt 10-13 and 14, and that he did not understand that Mr Munro had been given a copy of Binary's lapsed liability policy with specific instructions to replace it – t 10-5.

[310] These wrong and incomplete factual premises as to retainer can be seen to be central to Dr Manning's views that a reasonable broker in the position of the second and third defendants would have acted to identify the plaintiffs and advise them as to their risks. For example, his conclusion at paragraph 8.1 of his first report is that "a reasonably competent insurance broker exercising reasonable care and skill would have … ascertained the identity of all the legal entities to be insured under the insurance program and arranged cover for them all". The difficulty is that, contrary to Dr Manning's assumptions, there was only one legal entity to be insured – Binary Industries – and cover was arranged for that company.

[311] Objection was correctly taken to much of Dr Manning's reports. He does not express views as to his knowledge of practice in the broking industry. He either gives conclusions of mixed fact and law on the issues I must decide – that is he swears the issue repeatedly,[107] or gives statements of his own practices, beliefs and

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104 Eg., *Caldwell v JA Neilson Investments Pty Ltd* (2007) 69 NSWLR 120, 136 [103], cited in *Horsell International Pty Ltd v Divetwo Pty Ltd* [2013] NSWCA 368, [235]. And see that latter case at [236] ff generally on the duties owed by brokers. *Geoffrey W Hill and Associates (Insurance Brokers) Pty Ltd v Squash Centre (Allawah North) Pty Ltd* (1990) 6 ANZ Insurance Cases 61-012; *Ground Gilbey Limited & Anor v Jardine Lloyd Thompson UK Limited* [2011] EWHC 124 (Comm).

105 Phipson on Evidence (Sweet and Maxwell), 17th ed, 33-86; *Fanhaven Pty Ltd v Bain Dawes Northern Pty Ltd* [1982] 2 NSWLR 57.

106 *Fanhaven* (above) and generally the High Court in *Rogers v Whitaker* (1992) 175 CLR 479.

107 As he was asked to do by his poorly framed instructions – see eg., section 1 of his first report.

expectations, including as a teacher. Either way his views are inadmissible. Much of his oral evidence was the same: what he would have done – see eg., tt 10-17 and 10-19; what he taught in courses – t 10-18. His evidence as to his own habits, and their correctness, became almost proselytising – eg., t 10-19. He insisted, to the point of absurdity, that there was no situation in which a broker could accept a limited retainer to undertake an isolated task – t 10-19. He said he would always insist on knowing all the relevant facts and would refuse to accept an engagement where he was not given access to them. Of course this begs the question as to what were the relevant facts, and leads back to his wrong assumptions about retainer.

[312] Dr Manning was unable to accept assumptions during cross-examination. He demonstrated either partiality, or very superficial thinking, by refusing to even reconsider his views when confronted in cross-examination with assumptions contrary to the wrong and incomplete factual premises he had assumed.

[313] There is a further problem. Fundamentally, although it was unstated, the plaintiffs relied upon Dr Manning's opinion, not to support their case on breach of duty, but to support the notion that a duty was owed to them. If the defendants' retainer had been on behalf of all those who were involved in the enterprise at Narangba, there was no need to call a witness to say good practice would demand that cover ought to be obtained for all the relevant entities. Because of Dr Manning's wrong assumptions as to retainer, his view was that the second and third defendants should have made inquiries to identify the plaintiffs and then act for them, as well as for Binary Industries.

[314] I am not aware of any case that allows evidence as to practice in an industry or profession as being relevant to the existence of a tortious duty in a novel situation. Even if it could be relevant, for all the reasons discussed above, I would not take Dr Manning's view into account in determining the question of whether a duty was owed in tort to the plaintiffs in this case.

Alternative Case as to Duty

[315] The plaintiffs' case was put on alternative grounds that (1) the second and third defendants owed a duty under s 912A(1)(a) of the *Corporations Act* 2001 (Cth) to ensure that their services were provided efficiently, and (2) that pursuant to s 12ED(1)(a) of the *Australian Securities and Investments Commission Act* 2001 (Cth) there was a term implied in the contract entered into by the second and third defendants that they would render their services with due care and skill. Neither of these provisions can assist the plaintiffs.

[316] As to the first, I cannot see that the general provision at s 912A(1)(a) together with the general power at s 1324(10) operate to give someone other than the person to whom the financial service was provided any right to damages. In any event, the provision at s 1324(10) is an alternative discretion to award damages in circumstances where there is power to grant an injunction to prevent contraventions of the *Corporations Act*. It is not applicable in the circumstances here where, even if there were a breach of the *Corporations Act*, it happened many years before this proceeding was brought. Furthermore, it follows from my findings as to retainer, that there was no inefficiency in providing any service.

[317] As to the second, the contract here was between Binary Industries and the second and third defendants. Implying a term in it will not avail the plaintiffs. Further, the term is one which would be implicit without the section. Lastly, the contract between Binary Industries and the second and third defendants was fulfilled with due care and skill.

Causation

[318] I go on to consider, *obiter*, in light of my finding that the second and third defendants owed no duty to the plaintiffs, whether the plaintiffs have proved that any breach of the tortious duty they postulated could have caused them loss. I find that they have not proved this. There are several independent reasons why.

Causation 1

[319] The plaintiffs' chain of reasoning – see paragraphs 49 and 50A of the statement of claim – must be first that they would have co-operated in revealing all relevant facts to Mr Munro when he (hypothetically) enquired about their public liability insurance or as to liability they might suffer as owners of the land on which the factory was situated. I am not persuaded that Mr Armstrong would have provided that information. He would not allow Mr Munro to look at the plaintiffs' property insurance when Mr Munro did request this.

[320] It is true that this approach by Mr Munro was on the basis that the second and third defendants might be able to provide a competitive quote, and one might speculate about whether Mr Armstrong would have responded differently if Mr Munro had put a review of the plaintiffs' insurance position on the basis that it was sensible to review the adequacy of cover. But this is simply speculation. Mr Armstrong may still have responded that he preferred to rely upon the brokers who had carriage of all insurances other than Binary's liability policy, and refused to allow Mr Munro to look at the plaintiffs' insurance position. Mr Armstrong did not have a diligent attitude to insurance – he was tardy in responding to every request Mr Munro made of him, even at the end of 2003 when he had been running a large chemical manufacturing plant without liability insurance for a year, a matter which Mr Hayward recognised was of concern, and Dr Manning thought was foolish – t 10-15.

[321] Mr Armstrong did not give evidence and there was no explanation for this. I cannot draw an inference that had Mr Munro asked to review the adequacy of the plaintiffs' insurance cover Mr Armstrong would have agreed, or that he would have referred the matter to Mr Hayward for discussion or decision.

Causation 2

[322] For the reason just outlined, I think the evidence which Mr Hayward gave about his attitude to a hypothetical offer to review the plaintiffs' policies, or recommendations to obtain other policies, is irrelevant. Nonetheless, in the absence of Mr Armstrong, Mr Hayward's views on the topic were canvassed, in disregard of s 11(3) of the *CLA*. No objection having been taken to this evidence, I use it in accordance with *Balnaves v Smith.*[108]

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108 [2012] QSC 192, fn 9.

[323] Mr Hayward gave evidence that he made what were effectively false book entries to demonstrate that the plaintiffs had received rent in relation to the Narangba site after the fire in order to make the site more attractive to a potential purchaser – t 11.24. He also participated in the incorporation of Binary Industries to take over the business at the Narangba site when a customer threatened to sue Binary Chemicals – t 11.48. Both of those actions involved dishonesty. Notwithstanding that, I thought his evidence before me was honest enough. Particularly on the topic of what he would have done had insurance been offered to the plaintiffs before the fire, I thought that he did the best he could. He recognised the difficulties associated with hindsight.

[324] Mr Hayward disclaimed any detailed knowledge of insurance, and said he relied on his broker – t 11.41.[109] He was an accountant and a businessman, and thus had more knowledge of insurance matters than, say, a householder, see eg., tt 11.41, 11.49 and 11.55. Nonetheless I accept that generally he would take advice from his brokers (Austbrokers) rather than try to come to terms with the details of policies or the insurance market himself. There were exceptions to his simply taking advice proffered by his broker. In the case of insuring stock, and insuring against loss of profits, he would not take advice, because he took the view that buying such insurances was a poor investment – tt 11.60 and 11.61. He estimated that around $1.5 million worth of stock was lost to Binary in the fire in 2005. It was uninsured. The customers' stock was also lost. Binary Industries did not insure it.

[325] Mr Hayward said he had no understanding that the plaintiffs were potentially at risk of the kind of liability they came under to remediate the land after the fire – t 11.26. He thought that had it been drawn to his attention he would have, "given it a lot of consideration and … most likely ... would've ... taken that insurance" – tt 11.27 and 11.57.[110] That hindsight view cannot help but be heavily influenced by the fire and the events which have occurred subsequent to it. There is some (not much) objective evidence which bears on the subjective likelihood of the plaintiffs taking extra insurance had they been advised to do so – see s 11(3)(a) of the *CLA*. I put more weight on the objective evidence as to the plaintiffs' likely actions than Mr Hayward's hindsight belief that if properly advised he would have taken out insurance.

[326] Prior to the fire the Queensland and Western Australian chemical businesses had the same insurances – a combination of the policies arranged for Binary Industries by the second and third defendants and the pre-existing policies arranged by Mr Hayden. Notwithstanding this, Mr Hayward did not take out insurance which would have offered more in respect of the Western Australian plant after the fire in Narangba, even though insurance for the Queensland property had proved to be inadequate. By way of explaining this, Mr Hayward said he had only understood

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109 When Mr Hayward gave evidence that he relied on his broker, t 11.56, he meant Mr Hayden – t 11.57. In fact he had no dealings with the second and third defendants, Mr Armstrong dealt with them.

110 The plaintiffs' case on insurance was put to him in terms in cross-examination – ie that he would have taken the specific types of policies pleaded to have been to the plaintiffs' advantage and he was asked whether he would have cancelled other insurance to allow this etc. etc. – eg., at tt 11.64, or 11.53. He answered to the effect that he would have taken insurance if the advice had been to do so. I do not think more is to be made of this part of his evidence than this. That is, I do not think he entirely understood the intricacies of the various policy permutations and combinations put to him.

that the insurance was inadequate in the two years prior to the trial – t 11.58. He said he had not thought about that enough – t 11.59.

[327] I am unable to conclude that the plaintiffs would have acted in accordance with the advice they pleaded that the second and third defendants ought to have given them before the fire. First, for the reasons I have explained, I am not persuaded that Mr Armstrong, the second plaintiff, would have acted as a diligent and responsible director had he been offered advice. The evidence as to his attitude to insurance tends to suggest the contrary.

[328] Secondly, I am not persuaded that Mr Hayward would have acted in accordance with recommendations made before the fire in circumstances where he did not act to improve his position in relation to the Western Australian plant after the fire. It is difficult to credit that he only understood the gap in insurance cover recently. The evidence in the case was that following the fire the plaintiffs made claims on existing insurers to recover their loss in remediating the land at Narangba and that these claims had been unsuccessful. Mr Hayward was involved in making, and compromising, these claims. I find it very difficult to believe that in the course of those exercises he did not come to appreciate that there was inadequacy in the plaintiffs' insurance cover.

[329] The fact that the insurance inadequacy for the Western Australian plant was never addressed does not sit in isolation. It sits against a background where Binary Industries was allowed, by Mr Armstrong and Mr Hayward, to operate without public liability insurance for just over 12 months. As well, the Narangba plant was allowed to operate without insurance as to stock, even though the value of the stock there was high. These were risks which Mr Armstrong and Mr Hayward were prepared to take. The incorporation of Binary Industries in order to avoid a claim made against Binary Chemicals, and the false book-keeping entries to make the Narangba site more attractive to a potential purchaser, also show that Mr Hayward and Mr Armstrong were comfortable with assuming quite significant risk in their commercial enterprises.

Causation 3

[330] Mr Hayward's evidence as to the ISR policy was that he would only have bought cover if Austbrokers, as well as the second and third defendants, had recommended it – t 11.64. He named a Mr Downey as the person from whom he received advice from Austbrokers after Mr Hayden left the business. Nobody from Austbrokers was called to give evidence as to what recommendations they might have made had they been asked. I am not persuaded that they would have recommended an ISR policy in circumstances where they had not done so in the past.

[331] Furthermore, Mr Jones, a very experienced property insurance underwriter, was called by the second and third defendants. He said two significant things. First, that no insurer would have provided ISR cover to the plaintiffs while their existing property cover for the Narangba site remained in place. He gave reasons for this which I need not detail as this evidence was not challenged in cross-examination. In fact the plaintiffs amended their statement of claim very late in the trial to plead

that, had they been properly advised by the second and third defendants, they would have, *inter alia*, discontinued their property cover in train of acquiring ISR cover.[111]

[332] Secondly, Mr Jones said that covers for removal of debris and extra costs of reinstatement were available to the plaintiffs as options or extensions on their existing property insurance. These are the types of covers which the plaintiffs say they would have had the advantage of, had the second and third defendants obtained an ISR policy for them. The availability of these options or extensions on the plaintiffs' property cover was not challenged when Mr Jones was cross-examined.

[333] Had the second and third defendants recommended an ISR policy, and had the plaintiffs consulted Austbrokers, it may very well be that Austbrokers, rather than recommending the plaintiffs cancel their existing property policies, recommended that the plaintiffs take up options to extend cover under them. The plaintiffs ran no alternative case that had they been advised by the second and third defendants to buy an ISR policy they would not have done so, but would have extended their property cover. There was no evidence as to the terms of the extended property cover.

Causation 4

[334] I am not persuaded that the plaintiffs proved they could have been named as insureds or interested parties on the Binary Industries' liability policy. Mr Munro said that could have been requested. In response he expected that the underwriters would have required information including claims histories from the additional insureds. The underwriters, if satisfied, may have included the plaintiffs on that policy or asked for a stand-alone policy. There was no evidence led on behalf of the plaintiffs that if claims histories and other information from the plaintiffs had been provided to the underwriters who took on the Binary Industries' risk, those underwriters would have named the plaintiffs as insureds or interested parties. All the evidence was that the market was very difficult. It cannot be assumed that insurance would have been available. The plaintiffs simply failed to prove their case in this regard.

[335] Likewise, there was no real evidence that there was an insurer who would have provided the ISR policy to the plaintiffs had they been inclined to buy it. Mr Manning said at t 6.26 that an ISR policy would have been available, but this was an opinion at a level of generality from someone who was not in command of all the relevant facts which should have been brought to the insurer's attention, and was not a broker or an underwriter. Once again, I think the plaintiffs really failed to prove their case in this regard – cf t 16.56 where I drew my concerns to the plaintiffs' counsel in addresses. They were not allayed.

Causation 5

[336] More independent reasons as to why the plaintiffs' claim must fail on causation are found when attention is turned to whether the policies which the plaintiffs say ought to have been obtained would have been of benefit in all the events which have occurred.

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111 See s 51A(a)(iv) of the amended statement of claim.

Plaintiffs on Binary Policy

[337] I will deal first with the plaintiffs' case that the second and third defendants ought to have brought about a situation where the plaintiffs were named as insureds or interested parties on the policy which was obtained for Binary Industries. Whether the plaintiffs had been named as insureds or interested parties on that policy, the policy would not have covered their costs of complying with orders of the EPA to remediate the Narangba land. Relevantly, the insurance obtained for Binary Industries contained a promise that, "The Insurers will indemnify the Insured against their liability to pay compensation for … damage …". The plaintiffs contended that orders of the Planning and Environment Court obliging the plaintiffs to remediate their land fell within the words "liability to pay compensation". This point as to the interpretation of the contract of insurance was heard separately in advance of the trial. The plaintiffs lost.[112] They lost again on appeal.[113] Undaunted, the plaintiffs applied for special leave and that application was refused by the High Court.

ISR Policy

[338] The type of policy the plaintiffs alleged that the defendants ought to have obtained was an Australian standard form ISR policy, Mark IV, with additional benefits and limits of cover for: (1) removal of debris at $900,000, and (2) extra cost of reinstatement at $750,000.[114] The plaintiffs did not claim that the ISR policy would have fully indemnified them in the circumstances which have occurred, but claim that an amount of $1.65 million would have been available to them pursuant to it.

[339] The defendants say that even had the ISR policy pleaded by the plaintiffs been in place at the time of the fire, the plaintiffs would not have been indemnified pursuant to it in relation to the loss claimed in this proceeding. I determine these construction issues in part based on the scheme of the ISR policy pleaded by the plaintiffs. I set the policy out in abbreviated form in Annexure A to this judgment.

Debris

[340] I deal first with the plaintiffs' contention that the provisions as to removal of debris would have responded to partly indemnify them in respect of the costs spent complying with the EPA's requirements to remediate the land.

[341] The ISR policy provided at section 1:

> "Subject to the liability of the Insurer(s) not being increased beyond the Limit(s) of Liability already stated herein, the Insurer(s) will also indemnify the Insured for:
>
> (a) …
>
> …
>
> (f) costs and expenses necessarily and reasonably incurred in respect of:

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112 *Hamcor Pty Ltd and Anor v The State of Queensland and Ors* [2013] QSC 9.

113 *Hamcor Pty Ltd & Anor v Marsh Pty Ltd & Anor* [2013] QCA 262.

114 These monetary limits were the subject of evidence, see t 11.9 ff and t 11.62, and calculation based on other policy limits, and were accepted by the second and third defendants.

i) the removal, storage and/or disposal of debris or the demolition, dismantling, shoring up, propping, underpinning or other temporary repairs consequent upon damage to property insured by this Policy and occasioned by a peril insured against;

ii) the Insured's legal liability in respect of removal, storage and/or disposal of debris, notwithstanding Excluded Peril 8 in relation to premises, roadways, services, railway or waterways of others, consequent upon damage to the Property Insured by a peril hereby insured against, for such costs together with the cost of cleaning provided that such liability was not assumed by the Insured under an agreement entered into after the commencement of the Period of Insurance or any renewal thereof unless liability would have attached in the absence of such agreement.

Provided that the insurance under this section does not extend to any liability that the Insured may incur as a consequence of pollution of any kind;

iii) the demolition and removal of any property belonging to the Insured which is no longer useful for the purpose it was intended, providing such demolition and removal is necessary for the purpose of the reinstatement or replacement of Property Insured under this section and is consequent upon damage to the Property Insured by a peril hereby insured against;

…" (tabulation in the original)

[342] The plaintiffs' case relied on cl (f)(i), not cl (f)(ii) – tt 9.23-24.

[343] Here, chemicals mixed with water applied by the QFRS soaked into the plaintiffs' land; the concrete floors to the large sheds and other paved areas on that land, and contaminated the ground-water. The plaintiffs argued that their costs of remediation fell within the words "removal, storage or disposal of debris". The second and third defendants said that chemical contamination was not debris within the meaning of the policy.

[344] There is no definition of the term debris in the policy, and surprisingly, no case law which is of assistance. The plaintiffs argued that the Court of Appeal had determined this point in their favour when the preliminary points were argued before trial. The relevant part of the Court of Appeal's decision is:

"[27] The primary judge relevantly found:

'[53] Those costs were also not capable of being the subject of indemnity under the ISR policy identified by the [appellants].

[54] That policy provided indemnity in respect of costs and expenses necessarily and reasonably incurred in respect of "the removal, storage and/or disposal of debris". The use of the term "debris" is consistent with a requirement that any indemnity relate to the cost of the removal storage and/or

> disposal of accumulated physical items. It is inconsistent with indemnity being given for the costs of remediation of pollution in respect of the insured's own property.
>
> [55] This interpretation is supported by the express exclusion contained within the pleaded clause that the insurance "does not extend to any liability that the Insured may incur as a consequence of pollution of any kind". The position of those words is consistent with the intention of the parties being that clauses (f)(i) and (f)(ii) of the policy not extend to any liability the insured may incur as a consequence of pollution.'
>
> [28] I accept the appellants' contention that the use of the term 'debris' is not inconsistent with an indemnity for the costs of remediation of polluted property. The word 'debris' is capable of describing various forms of residue from the destruction by fire of premises: plant and goods such as ash; charred, melted or heat damaged materials; and water damaged materials." (my underlining).

[345] The Court of Appeal declined to make any rulings or declarations in relation to the ISR policy. It set aside those which had been made by the primary judge.

[346] It is fair to say that the Court of Appeal did not warmly embrace the argument that the chemical residue in the concrete, soil and ground-water of the plaintiffs' land could not be debris within the meaning of the policy. On the other hand, the Court of Appeal distinctly did not say that chemical residue in soil or ground-water was debris. The examples given at [28] of the Court of Appeal judgment are all examples of physical items separate from the soil or ground-water. The definition of debris in the shorter Oxford English Dictionary is, "The remains of anything broken down or destroyed; ruins, wreck … any similar rubbish formed by destructive operations". The Macquarie Dictionary says debris is, "The remains of anything broken down or destroyed, ruins, fragments, rubbish".

[347] Perhaps in molecular terms the chemical contamination of the soil and ground-water at the Narangba site is the remains of something broken down by the destructive operation of fire on the drums containing chemicals. There was no scientific evidence to that effect, or to the effect that these chemicals remained, or remain, separate from the land or ground-water. I do not think that the word debris ought to be construed in a way which hinges on a scientific or molecular analysis. In ordinary English usage it seems to me that the effect of contaminated fire-water having soaked into the soil and ground-water is that the soil and water are contaminated or polluted, not that the land and water have become debris, or that there is debris in the land and water which cannot be seen separately from them.

[348] It is not of course determinative, but I did note that both Mr Machado, an experienced loss adjustor[115] and Mr Lee, an engineer specialising in remediation of land (eg., report p 3) both discussed removal of debris as something different from the bio-remediation or decontamination of the plaintiffs' land and ground-water. They both spoke of debris as physical rubble or remains separate from chemical

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[115] See his first report and particularly his discussion of removal of debris and his reference to the work of the plaintiffs' property insurer's loss adjustor which is annexure 2 to Mr Machado's report.

pollution. Neither of those gentlemen was addressing the construction problem I am dealing with. However, they were discussing the after effects of the fire on the plaintiffs' land. I see this language use as confirming my views about the ordinary meaning of the word debris in this context.

[349] In the plaintiffs' favour, however, it seems to me that pavement and concrete flooring which was soaked with fire-water and thus contaminated may be debris within the meaning of this clause. It is physically separate from the land and water. If it were structurally weakened, deformed or discoloured by fire such that it could no longer be used, it would properly be regarded as debris within the ordinary meaning of the word. As a matter of ordinary language the chemical-soaked concrete could be regarded as debris. Of course, my view about this does not affect the outcome for the plaintiffs.

Debris consequent on damage to Insured Property

[350] Independently of their arguments as to the meaning of the word debris, the defendants argued that the plaintiffs' costs associated with chemical contamination of their land would not have been costs of removing, storing or disposing of debris under an ISR policy because any debris would not have been debris consequent on damage to insured property. It is necessary to start with the insuring clause and look to see whether, had the ISR policy been in place, there would have been any physical loss, destruction or damage to the "Property Insured described in section 1". The property insured is "all real and personal property of every kind … belonging to the Insured or for which the Insured is responsible …".

[351] The expert opinion of both the plaintiffs' witnesses in cross-examination[116] was that the term "debris" in the clause under consideration was construed within the insurance industry in Australia as meaning debris which was the remains of property which was itself insured property under the policy.

[352] The meaning given to a particular word or term in an industry is relevant if it can be shown that the parties intended that the word or term have that meaning in their contract.[117] But this principle can only be of assistance where both the contracting parties are part of the industry and thus can both be taken to be cognisant of the meaning and to have used the word in that way. The only relevance of a common industry meaning can be that it affects the objective intention of both parties in using the word.[118] Insurers may well all have the same view as to what debris means in a clause such as this, but there is no reason to think that the plaintiffs had that knowledge or understanding. Therefore I do not think the understanding of insurers is relevant when I interpret the word debris.

[353] The issue does not end there for the defendants say, independently of industry usage, that properly construed, the word debris in this policy can mean only the broken down or destroyed components of property which was itself insured. I accept this submission. I think it flows from the words "consequent upon damage to the property insured" in cl (f)(i). If an insured had two buildings on land and insured one but not the other, I cannot see that the cost of removing debris

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116 Dr Manning, t 10-21 and Mr Matteson, t 11-13.

117 Lewison, K, The Interpretation of Contracts (Sweet and Maxwell), 4th ed, 5.09.

118 *Electricity Generation Corp v Woodside Energy Ltd* [2014] HCA 7, [35]; *Byrnes v Kendle* (2011) 243 CLR 253, [98]-[99]; *Chartbrook Ltd v Persimmon Homes Ltd* [2009] 1 AC 1101, [47].

consisting of the rubble of the uninsured building could be something which fell within cl (f)(i). If it is assumed that the plaintiffs would have insured their buildings under an ISR policy, but not the stock in them, I cannot see that the situation is any different. That is, I cannot see that even if the chemical contamination to the land, pavement and ground-water were to be regarded as debris, it would be debris consequent on damage to property insured. To the contrary, it would be debris consequent upon damage to property (stock) which was not insured.

[354] The chemicals which caused contamination to the plaintiffs' land were either owned by Binary Industries itself and were uninsured[119] or were the property of customers of Binary Industries and were not insured by Binary Industries.[120] The defendants argued that even if it were assumed that the plaintiffs purchased an ISR policy, the plaintiffs would not have insured stock pursuant to it. Mr Hayward gave evidence in cross-examination that it was unlikely he would have insured stock if he had purchased an ISR policy – t 11.63-64. No doubt it would very much have depended on the advice he was given. Once again I come back to Mr Hayward's evidence that any advice from the second and third defendants would have been taken to Austbrokers for their opinion. Given Mr Hayward's views about not insuring stock, and Austbrokers' failure to change these in the past, I am not able to conclude that the plaintiffs would have insured stock, even had they bought an ISR policy.

[355] By reason of the eighth exclusion under the heading Property Exclusions, land is excluded from property insured. Also excluded are dams and their contents – see the ninth property exclusion. There was therefore no alternative argument available to the plaintiffs that contamination of their land and dams was in some way itself damage to insured property or debris consequent on such damage.

Proviso to cl (f)(ii)

[356] It was contended by the defendants that the proviso situated under cl (f)(ii) applied to cl (f)(i). I reject this argument.

[357] This proviso excludes "any liability that the insured may incur as a consequence of pollution of any kind". It is necessary to have regard to the setting out of the whole ISR policy in Annexure A to fully appreciate the difficulties in interpreting this proviso. The competing arguments as to its construction are canvassed in the Court of Appeal judgment between these parties at [29]-[33]. I agree with the difficulties identified by Muir JA. There are two Sections to the ISR policy and both before and after the proviso in question the words "this section" are used in a way which clearly mean either Section 1 or Section 2 of the policy. An instance of this occurs just half a dozen lines below the use of the words "this section" in the proviso. This juxtaposition favours the defendants' argument, for one should strive to give consistent meaning to the same language.

[358] Against the defendants' construction is the location of the proviso. It would be remarkable to locate it below cl (f)(ii) if it were intended to apply to other clauses. The proviso following cl (g) contrasts. It is located at the end of the series of clauses (a)-(g) and is expressed to apply to all of clauses (b)-(g). Furthermore, there are memoranda which apply to every part of Section 1 grouped together under a

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119 t 11-60.

120 Exhibit 5, tab 144 and t 11-52.

heading to that effect situated at the end of Section 1. Then there are exclusions, memoranda and conditions which apply to every clause in the policy grouped together at the end of Section 2 under the headings such as, "Exclusions to all Sections".

[359] A strong indication that the proviso located below cl (f)(ii) is to apply only to cl (f)(ii) is its subject matter. Of all the matters at clauses (a)-(g), cl (f)(ii) is the only one which deals with indemnity against the insured's legal liability to a third party. Indeed, this is an unusual indemnity in a policy which is primarily a property policy rather than a liability policy. Unlike any of the other clauses (a)-(g), cl (f)(ii) deals with the insured's legal liability. The proviso deals with a qualification on "liability that the insured may incur". That is, the substance of the proviso applies most logically to the substance of cl (f)(ii).

[360] I construe the proviso situated under cl (f)(ii) as applying only to that subclause and not limiting cover at cl (f)(i).

[361] I note that there was expert evidence as to industry meaning of the word "liability" in cl (f)(ii) and the proviso under it. For reasons expressed above, I do not find that relevant in interpreting the contract.

[362] As noted above, the plaintiffs relied upon cl (f)(i), not cl (f)(ii), as being of benefit to them had the policy been in place at the time of the fire. The plaintiffs' arguments were designed to limit the operation of the proviso to cl (f)(ii). In my opinion, that proviso means that cl (f)(ii) would not have availed the plaintiffs had the policy been in place because, having regard to the ordinary meaning of words, any liability the plaintiffs might have had in relation to the property of others was as a consequence of pollution. Furthermore, the plaintiffs did not put their case on the ground that they had any liability in relation to the "premises, roadways, services, railway or waterways of others".

Removal of Debris

[363] As originally formulated the plaintiffs' insurance case was that they should have been insured under Binary Industries' liability policy and that the cost of complying with directions of the EPA was a liability to pay compensation – see paragraph 29(h) of the statement of claim at [236] above. The claim as to the ISR policy was added later, but the pleading never outlined how amounts spent by the plaintiffs were within the removal of debris or extra costs of reinstatement provisions of that policy. Nor was there any attempt at trial to isolate parts of the costs incurred by the plaintiffs as referable to these provisions.

[364] When regard is had to the evidence of Mr Machado, Mr Smith and the report of Mr Lee, it is not at all clear what costs were spent on removal, storage or disposal of debris. For example, there are invoices from Veolia for "the removal of solid waste" in amounts of over half a million dollars each, which do not allow one to tell whether or not the solid waste was soil, sludge, broken down concrete, or something which would normally fit within the ordinary meaning of debris – see tt 10.38-39. In fact from Mr Smith's reports it is not clear that remediation of the plaintiffs' land involves removal of those parts of it which contain chemical residue; there seems to be a plan to keep much of it on site and bio-remediate it there, including, it seems, contaminated concrete floors and pavements.

[365] In his report Mr Lee gives his understanding that perhaps 95 per cent of all debris and rubble from the fire were removed from the site to licensed landfill within a few weeks of the fire – p 3. I do not know what that cost.

[366] Mr Machado calculated that, of the amount (ca. $3 million) paid to the plaintiffs by their property insurers, an amount of $265,145 was attributable to removal of debris after the fire. This was accepted by the second and third defendants. Mr Machado's calculation was based on the work of the loss adjustors for the property insurer who paid the plaintiffs. Their report is annexure 2 to Mr Machado's first report. Reading it shows just how complicated issues as to the interaction between work to remove debris and to deal with contamination were, even at that early stage. The clear inference from the report is that removal of debris would cost more than the $265,000 or so allowed. Equally clear however is that calculation of a reliable estimate for removal of debris is complex. It is not something I can essay without proper evidence.

[367] I cannot find that the plaintiffs have proved an identifiable amount of loss which consists of removal, storage or disposal of debris.

Extra Costs of Reinstatement

[368] I now deal with the plaintiffs' claim that they would have had available to them extra costs of reinstatement pursuant to the ISR policy had that been in place. It can be seen from Annexure A that the ISR policy contains first a memorandum called, Reinstatement or Replacement, and then a memorandum called, Extra Costs of Reinstatement. The provisions of both these memoranda are quite inapt to indemnify the plaintiffs against the costs of remediating the land, soil and ground-water at Narangba. By their terms, these provisions apply to buildings, machinery and plant, as well as "all other property". Property must mean insured property and that excludes land other than buildings. It does not affect my thinking in this regard that the memorandum headed Reinstatement or Replacement contains the phrase "damaged property insured" and the memorandum headed, Extra Costs etc, just says, "damaged property". Furthermore, when the meaning of reinstatement is examined it is apparent that reinstatement could not apply to remediation of land and ground-water – it applies to buildings or property which can be repaired so that their condition is as they were "when new", see the words used in the memoranda themselves and the provisions which follow them.

[369] Once again, it may be that contaminated concrete flooring and pavement is to be treated differently from contaminated soil and water and, unlike soil and water, does fall within the definition of property and indeed "damaged property insured". And, once again, I have no evidence which would enable me to make a reliable estimate of costs incurred by the plaintiffs were they entitled to be indemnified under this clause.

Disposition

[370] I give judgment for the first, second and third defendants against the first and second plaintiffs.

ANNEXURE A

"SECTION 1 – MATERIAL LOSS OR DAMAGE

THE INDEMNITY

In the event of any physical loss, destruction or damage … not otherwise excluded happening at the Situation to the Property Insured described in Section 1 the Insurer(s) will, subject to the provisions of this Policy … indemnify the Insured …

Subject to the liability of the Insurer(s) not being increased beyond the Limit(s) of Liability already stated herein, the Insurer(s) will also indemnify the Insured for:

(a) architects', surveyors', consulting engineers', legal and other fees …

(b) any fee, contribution or other impost payable to any Government, Local Government or other Statutory Authority …

(c) costs and expenses necessarily and reasonably incurred for the purpose of extinguishing fire …

(d) costs and expenses … for the temporary protection and safety of property …

(e) costs of replacing locks …

(f) costs and expenses necessarily and reasonably incurred in respect of:

i) the removal, storage and/or disposal of debris or the demolition, dismantling, shoring up, propping, underpinning or other temporary repairs consequent upon damage to property insured by this Policy and occasioned by a peril insured against;

ii) the Insured's legal liability in respect of removal, storage and/or disposal of debris, notwithstanding Excluded Peril 8 in relation to premises, roadways, services, railway or waterways of others, consequent upon damage to the Property Insured by a peril hereby insured against, for such costs together with the cost of cleaning provided that such liability was not assumed by the Insured under an agreement entered into after the commencement of the Period of Insurance or any renewal thereof unless liability would have attached in the absence of such agreement.

Provided that the insurance under this section does not extend to any liability that the Insured may incur as a consequence of pollution of any kind;

iii) the demolition and removal of any property belonging to the Insured which is no longer useful for the purpose it was intended, providing such demolition and removal is necessary for the purpose of the reinstatement or replacement of Property Insured under this section and is

consequent upon damage to the Property Insured by a peril hereby insured against;

(g) damage to clothing and tools of trade …

Provided that the insurance under Clauses (b) to (g) inclusive above shall not be subject to application of any Co-insurance clause or memorandum contained in this Policy.

THE PROPERTY INSURED

All real and personal property of every kind and description (except as hereinafter excluded) belonging to the Insured or for which the Insured is responsible …

BASIS OF SETTLEMENT

(a) On buildings, machinery, plant and all other property and contents …

(b) On raw materials, supplies and other merchandise …

(c) On material in process of manufacture …

(d) On finished goods …

(e) On computer systems records, documents …

(f) On patterns, models, moulds or lasts …

(g) On glass …

(h) On directors' and employees' clothing …

(i) On empty premises awaiting demolition …

MEMORANDA TO SECTION 1

Except to the extent that this Policy is hereby modified under the following Memoranda the terms, Conditions and limitations of this Policy shall apply.

INTERESTS OF OTHER PARTIES

…

BRANDED GOODS

…

DECLARED VALUES

…

REINSTATEMENT OR REPLACEMENT

(Applicable to buildings, machinery, plant and all other property and contents; other than those specified in items (b) to (i) under Basis of Settlement).

The basis upon which the amount payable is to be calculated shall be the cost of reinstatement of the damaged property insured at the time of its reinstatement, subject to the following Provisions and subject also to the terms, Conditions and Limit(s) or Sub-Limit(s) of Liability of this Policy.

For the purpose of the insurance under this memorandum, "reinstatement" shall mean:

(a) Where property is lost or destroyed: in the case of a building, the rebuilding thereof or in the case of property other than a building, the replacement thereof by similar property; in either case in a condition equal to, but not better or more extensive than, its condition when new.

(b) Where property is damaged: the repair of the damage and the restoration of the damaged portion of the property to a condition substantially the same as, but not better or more extensive than, its condition when new.

Provisions

i …

ii …

iii …

iv …

v …

EXTRA COST OF REINSTATEMENT

(Applicable to buildings, machinery, plant and all other property and contents; other than those specified in items (b) to (i) under Basis of Settlement).

This Policy extends to include the extra cost of reinstatement (including demolition or dismantling) of damaged property necessarily incurred to comply with the requirements of any Act of Parliament or Regulation made thereunder or any By-Law or Regulation of any Municipal or other Statutory Authority; subject to the following Provisions and subject also to the terms, Conditions and Limit(s) or Sub-Limits of Liability of this Policy.

Provisions

i …

ii …

iii …

iv …

v …

FLOOR SPACE RATIO INDEX (PLOT RATIO)

…

ACQUIRED COMPANIES

…

CO-INSURANCE

…

SECTION 2 – CONSEQUENTIAL LOSS

THE INDEMNITY

…

EXCLUSIONS TO ALL SECTIONS

PROPERTY EXCLUSIONS

This Policy does not cover physical loss, destruction of or damage to the following property or loss under Section 2 resulting therefrom:

1. property … whilst in transit …
2. Money:

   …
3. jewellery, …
4. … locomotive or rolling stock …
5. vehicles …
6. livestock, …
7. standing timber, …
8. land, provided that this exclusion shall not apply to structural improvements on or in the land if such structural improvements are not otherwise excluded in this Policy;
9. bridges, canals, roadways and tunnels, railway tracks (other than on the premises occupied or used by the Insured), dams and reservoirs (other than tanks) and their contents.
10. docks, wharves and piers …
11. mining property …

…

PERILS EXCLUSIONS

The Insurer(s) shall not be liable under Sections 1 and/or 2 in respect of:

1. … loss … occasioned by … war …
2. … loss … caused by … radioactivity …
3. … loss … occasioned by … flood …
4. … loss … occasioned by … moths, termites or other insects …
5. … loss … occasioned by … incorrect siting of buildings …
6. … loss … occasioned by … theft … spontaneous combustion …
7. … loss … occasioned by … fraudulent or dishonest acts …
8. any legal liability of whatsoever nature other than as herein provided;
9. consequential loss of any kind …

MEMORANDA APPLICABLE TO ALL SECTIONS

…

CONDITIONS – APPLICABLE TO ALL SECTIONS

…”