Form 7A (version 5)
UCPR 14.3

DEFENCE OF THE FIRST DEFENDANT

(To Further Amended Statement of Claim)

COURT DETAILS	
Court	Supreme Court of New South Wales
Division	Common Law
Registry	Sydney
Case number	2014 / 200854
TITLE OF PROCEEDINGS	
Plaintiff	**Rodriguez & Sons Pty Limited (ACN 108 770 681)**
First Defendant	**Queensland Bulk Water Supply Authority, trading as Seqwater**
Number of defendants	3
FILING DETAILS	
Filed for	**Queensland Bulk Water Supply Authority, trading as Seqwater**, First Defendant
Legal representative	Justin McDonnell, King & Wood Mallesons
Legal representative reference	JAM/NC 0455057758
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The First Defendant adopts the headings set out in the Further Amended Statement of Claim.

PLEADINGS AND PARTICULARS

A The Plaintiff

1 In relation to paragraph 1 of the Further Amended Statement of Claim ("**FASOC**"), the First Defendant, Queensland Bulk Water Supply Authority, trading as Seqwater ("**Seqwater**"):

(a) admits paragraph 1(a);

(b) admits that the plaintiff held a registered lease over a shopfront in a shopping centre located at 180 Fairfield Road, Fairfield, shop 9 on lot 5 on plan RP 212124, Parish of Yeerongpilly, County of Stanley in the State of Queensland during December 2010 and January 2011; and

(c) subject to (b) above, does not know and therefore cannot admit the allegations pleaded in paragraphs 1(b) and (c).

B The Defendants

2 Seqwater admits the allegations pleaded in paragraph 2 of the FASOC.

3 Seqwater admits the allegations pleaded in paragraph 3 of the FASOC.

4 Seqwater admits the allegations pleaded in paragraph 4 of the FASOC.

C January 2011 Queensland Flood

5 In relation to paragraph 5 of the FASOC, Seqwater pleads that:

(a) over the 28 days prior to 6 January 2011, rainfall in South East Queensland had been well above the average rainfall for that period;

(b) the Brisbane River Basin has an area of approximately 14,000km^2 (approximately half of which is located downstream of Wivenhoe Dam) and comprises the five main catchments of the:

(i) Stanley River to Somerset Dam, which is approximately 1,320km^2 ("**Somerset Dam Catchment**");

(ii) Upper Brisbane River to Wivenhoe Dam (excluding the Somerset Dam Catchment), which is approximately 5,650km^2 ("**Wivenhoe Dam Catchment**");

(iii) Lockyer Creek to O'Reilly's Weir, which is approximately 2,960km^2 ("**Lockyer Creek Catchment**");

(iv) Bremer River to Ipswich which includes the sub-catchments of Warrill Creek to Amberley and Purga Creek to Loamside, which is approximately 1,745km^2 ("**Bremer River Catchment**"); and

(v) Lower Brisbane River to the river mouth (residual area), which is approximately 1,855km^2 ("**Lower Brisbane River Catchment**");

(c) the combined Somerset Dam Catchment and Wivenhoe Dam Catchment is approximately 6,990km^2 ("**Combined Dam Catchments**");

(d) the Lockyer Creek Catchment, Bremer River Catchment and Lower Brisbane River Catchment, including smaller contributing tributaries, are all located downstream of Wivenhoe Dam (collectively, the "**Downstream Catchments**"), and have a combined catchment area of approximately 7,000km^2;

Particulars of (b)-(d)

Seqwater, Brisbane River Flood Hydrology Models – Main Report, December 2013, Executive Summary, page 13 [SEQ.009.003.0359]

(e) the rainfall which fell in the 28 day period prior to 6 January 2011 resulted in the Combined Dam Catchments and the Downstream Catchments becoming wet though not saturated because there had been periods of zero or low rainfall which meant that the catchments had some opportunity to dry out meaning that some initial Loss (as defined in paragraph 165 below) had been recovered;

(f) in the period from 6 to 12 January 2011, further substantial rainfall fell across South East Queensland including over the Downstream Catchments and the Combined Dam Catchments;

(g) the rainfall which fell in the period 6 to 12 January 2011, resulted in flooding of areas along the Bremer River and Lockyer Creek and along the Brisbane River downstream of Wivenhoe Dam; and

(h) subject to the matters pleaded in (a) to (g) above, Seqwater otherwise admits the allegations pleaded in paragraph 5.

D Group Members and Common Questions

6 In relation to paragraph 6 of the FASOC, Seqwater:

(a) pleads that the pleading in paragraph 6 of the composition of the group of persons on whose behalf the proceedings have been commenced by the Plaintiff ("**Group Members**") does not comply with section 157 of the *Civil Procedure Act* 2005 (NSW) ("**CPA**") because not all of the Group Members have claims against any one or more of the Defendants, contrary to section 157(1)(a) of the CPA, since:

(i) the claims against the Defendants are pleaded to arise from loss or damage caused by the "Greater Flooding" defined in paragraph 346(b) of the FASOC;

(ii) paragraph 6 identifies the Group Members by reference to, relevantly, the inundation of land by flood waters from the Brisbane River or the Bremer River (and their tributaries);

(iii) the scope of the inundation pleaded in paragraph 6 is broader than, and in addition, or in the alternative, does not correlate to, the Greater Flooding pleaded in paragraph 346(b); and

(iv) therefore, not all Group Members may have claims against any one or more of the Defendants because a Group Member may have been inundated as pleaded in paragraph 6 but not have suffered loss or damage caused by the Greater Flooding pleaded in paragraph 346(b);

(b) does not admit that the Plaintiff is an appropriate representative of the Group Members for the purposes of section 157 of the CPA because Seqwater cannot admit, as it does not know, that the Plaintiff suffered loss or damage either from inundation of land by flood waters from the Brisbane River or the Bremer River (and their tributaries) as pleaded in paragraph 6 or from the Greater Flooding pleaded in paragraph 346(a); and

(c) otherwise does not admit, as it does not know, the allegations pleaded in paragraph 6.

7 Seqwater does not plead to paragraph 7 of the FASOC as it contains no allegations against Seqwater.

8 Seqwater does not plead to paragraph 8 of the FASOC as it contains no allegations against Seqwater.

9 In relation to paragraph 9 of the FASOC, Seqwater repeats paragraph 6(a) above and, therefore, does not admit the allegations pleaded in paragraph 9.

10 In relation to paragraph 10 of the FASOC, Seqwater:

(a) does not admit that the matters pleaded in paragraphs 10(a) to (ff) of the FASOC are questions of law or fact which are common to the claims of Group Members, by reason of the matters pleaded in paragraph 6 above;

(b) denies that the matters pleaded in paragraphs 10(u), (v), (w), (x), (z), (aa), (bb), (cc) and (dd) of the FASOC are questions of law or fact which are common to the claims of Group Members because these matters are not pleaded by reference to the

Greater Flooding defined in paragraph 346(b) of the FASOC by which the loss and damage claimed against the Defendants is alleged to have been caused;

(c) denies that the matters pleaded in paragraphs 10(aa), (bb), (cc) and (ee) of the FASOC are questions of law or fact which are common to the claims of Group Members because allegations concerning an interference with, private nuisance concerning or trespass on the land of different individuals does not give rise to common questions of law or fact; and

(d) otherwise does not plead to paragraph 10 as it contains no allegations against Seqwater.

E Somerset Dam

11 Seqwater admits the allegations pleaded in paragraph 11 of the FASOC.

12 Seqwater admits the allegations pleaded in paragraph 12 of the FASOC and pleads that the Stanley River drains an area of approximately 1,320km^2 into Somerset Dam.

13 In relation to paragraph 13 of the FASOC, Seqwater pleads that:

(a) water is released from Somerset Dam into the lower reaches of the Stanley River;

(b) the Stanley River joins the upper Brisbane River upstream of Lake Wivenhoe;

(c) the upper Brisbane River flows into Lake Wivenhoe, being the body of water behind Wivenhoe Dam;

(d) however, when Lake Wivenhoe is at its full supply level ("**FSL**"), the reservoir comprising Lake Wivenhoe backs up the Stanley River until it nearly reaches the toe of Somerset Dam; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, Seqwater otherwise admits the allegations pleaded in paragraph 13.

14 In relation to paragraph 14 of the FASOC, Seqwater pleads that:

(a) construction of Somerset Dam commenced in 1935;

(b) Somerset Dam was designed originally to meet the water supply demands for metropolitan Brisbane until 1980;

(c) by 1950 it was anticipated that the ability of Somerset Dam to meet water supply demand would be reached by 1970;

(d) Somerset Dam was also designed for flood mitigation purposes; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, Seqwater otherwise admits the allegations pleaded in paragraph 14.

15 In relation to paragraph 15 of the FASOC, Seqwater pleads that:

(a) in 1953, a small (4 megawatt) hydro-electric power station was commissioned at Somerset Dam;

(b) the hydro-electric power station at Somerset Dam was not in operation during December 2010 and January 2011 and had not been operational since about 2008; and

(c) Seqwater otherwise does not admit the allegations pleaded in paragraph 15.

16 In relation to paragraph 16 of the FASOC, Seqwater:

(a) pleads that at the time during December 2010 and January 2011, Somerset Dam had:

(i) a FSL of 99.0metres Australian Height Datum ("**AHD**");

(ii) a corresponding full supply volume designed to meet water supply demands ("**Full Supply Volume**") which was estimated to be approximately 379,850 megalitres ("**ML**") (being the drinking water storage compartment of Lake Somerset as pleaded in paragraph 16 of the FASOC);

(iii) a flood mitigation capacity which was estimated to be approximately 524,200ML, being the volume of water which could be temporarily stored between the FSL and up to the dam crest level of 107.46m AHD; and

(iv) a flood mitigation capacity which was estimated to be approximately 702,000ML, being the volume of water which could be temporarily stored between the FSL and the estimated failure level with the crest gates open of 109.7m AHD;

Particulars of (a)

(i) Attachment 5 of the Moreton Resources Operations Plan dated December 2009, without the amendments which took effect on or about February 2011, (the "**Moreton ROP**") published by the Queensland Department of Environment and Resources Management ("**DERM**") [SEQ.015.001.0149].

(ii) Section 9.1, Appendix D and Appendix I of the Manual of Operational Procedures for Flood Events at Wivenhoe Dam and

Somerset Dam (Revision 7) dated November 2009 (the "**Flood Mitigation Manual**") [SEQ.011.001.1290].

(b) subject to the matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 16.

17 In relation to the allegations pleaded in paragraph 17 of the FASOC, Seqwater:

(a) pleads that the radial gates are also known as "crest" gates (the "**Somerset Dam Crest Gates**");

(b) pleads that water can only be released through the Somerset Dam Crest Gates when the level of Lake Somerset is above 100.45m AHD;

(c) pleads that the sluice gates are known as Sluice I, Sluice J, Sluice K, Sluice L, Sluice M, Sluice N, Sluice O and Sluice P respectively (collectively, the "**Sluice Gates**"); and

(d) pleads that the regulator valves are known as Regulator No. 2, Regulator No. 3, Regulator No. 12 and Regulator No. 13 respectively (collectively, the "**Somerset Dam Regulators**");

(e) subject to the matters pleaded in paragraphs (a) to (d) above, Seqwater otherwise admits the allegations pleaded in paragraph 17.

18 In relation to paragraph 18 of the FASOC, Seqwater pleads that:

(a) the operation of the Somerset Dam Crest Gates, Sluice Gates and Somerset Dam Regulators at Somerset Dam ("**Somerset Dam Gates**") is controlled and was controlled before and during December 2010 and January 2011;

(b) from or about 22 January 2010 and at all times during December 2010 and January 2011, operational decisions regarding flood releases from Somerset Dam during flood events, including the operation of any of the Somerset Dam Gates, was governed by the Flood Mitigation Manual (being the document referred to in the particulars to paragraph 16(a) above);

Particulars of (b)

(i) Section 1.7 of the Flood Mitigation Manual [SEQ.011.001.1290].

(ii) Pursuant to section 371 of the *Water Supply (Safety and Reliability) Act* 2008 (Qld), the Chief Executive of DERM may approve the Flood Mitigation Manual by gazette notice. Approval of the Flood Mitigation Manual was notified in the Queensland Government Gazette on 22 January 2010.

(c) subject to paragraphs (a) and (b) above, the Somerset Dam Gates can, and could during December 2010 and January 2011, be operated in different ways and in different combinations in order to:

(i) retain water within Lake Somerset, being the body of water behind Somerset Dam;

(ii) release water from Lake Somerset; and

(iii) vary the rate at which water is able to be released from Lake Somerset and the timing of any release;

(d) further to paragraph (c)(ii) above, the maximum and minimum rates at which water can be released from Somerset Dam, and which could be released from Somerset Dam at any particular time during December 2010 and January 2011, depends on the matters pleaded in paragraphs (i) to (iv) below:

(i) the level of Lake Somerset;

(ii) the level of Lake Wivenhoe, including whether:

(A) it was rising or falling at the time of making the release;

(B) it was predicted to exceed 75.5m AHD, triggering the first Auxiliary Spillway Fuse Plug (as defined in paragraph 45 below);

(iii) the predicted maximum storage levels in Lake Somerset and Lake Wivenhoe during the course of any occurring flood event; and

(iv) which one or more of the Somerset Dam Crest Gates, Sluice Gates and Somerset Dam Regulators comprising the Somerset Dam Gates was open and to what extent;

Particulars of (d)

Sections 9.2, 9.3, 9.5 and Appendix D of the Flood Mitigation Manual [SEQ.011.001.1290].

(e) if Somerset Dam fails, and if Somerset Dam had failed at any time in December 2010 or January 2011, water would have been discharged in an uncontrolled manner into Lake Wivenhoe, likely causing a cascade failure of Wivenhoe Dam; and

(f) Seqwater otherwise denies the allegations pleaded in paragraph 18.

19 In relation to paragraph 19 of the FASOC, Seqwater:

(a) repeats paragraphs 18(a) to (e) above; and

(b) otherwise denies the allegations pleaded in paragraph 19.

20 In relation to paragraph 20 of the FASOC, Seqwater:

(a) repeats paragraph 16(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 20.

21 In relation to paragraph 21 of the FASOC, Seqwater:

(a) repeats paragraph 16(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 21.

22 In relation to paragraph 22 of the FASOC, Seqwater:

(a) repeats paragraph 16(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 22.

23 In relation to paragraph 23 of the FASOC, Seqwater:

(a) pleads that if the level of the water surface in Lake Somerset is, and during December 2010 and January 2011 was, less than 100.45m AHD, then water could not be released from Lake Somerset by means of the Somerset Dam Crest Gates; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 23.

24 In relation to paragraph 24 of the FASOC, Seqwater:

(a) repeats paragraph 16(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 24.

25 Seqwater admits the allegations pleaded in paragraph 25 of the FASOC.

26 In relation to paragraph 26 of the FASOC, Seqwater pleads that:

(a) as at December 2010 and January 2011:

(i) the precise water level for Lake Somerset at which the water would cause Somerset Dam to become unstable and fail was not known;

(ii) subject to paragraph (i) above, the "**Estimated Failure Level**" of Somerset Dam, being the water level of Lake Somerset at which it was predicted that the water would cause Somerset Dam to become unstable and potentially fail was 109.7m AHD if all of the Somerset Dam Crest Gates were fully open;

(iii) the Estimated Failure Level of Somerset Dam was less than 109.7m AHD if all of the Somerset Dam Crest Gates were not fully open;

(iv) the Somerset Dam Crest Gates had not been operated under load (i.e. they had not been closed or open at a time when the water level of Lake Somerset exceeded 100.45m AHD) since 1974;

(v) if the Somerset Dam Crest Gates were closed under load:

(A) there would have been a risk that one or more of the Somerset Dam Crest Gates would have failed to open again under load;

(B) there would have been a risk that one or more of the Somerset Dam Crest Gates would have failed structurally under load;

(C) there would have been a risk that one or more of the concrete monoliths comprising the wall of Somerset Dam would have failed structurally under the additional load;

(D) the risks of the following events would have been increased:

A. reaching a critical water level for the structural stability of the concrete monoliths comprising the wall of Somerset Dam;

B. overtopping the abutment monoliths and introducing the risk of failure through undercutting the toe of the dam;

C. failure of the spillway dissipator if large releases were to be required to prevent Somerset Dam from overtopping; and

D. a necessity for higher releases into Lake Wivenhoe, which may result in larger discharges downstream in order to prevent a fuse plug initiating, initiation of the fuse plug spillway, or the possible cascade failure of Wivenhoe Dam;

(vi) the information available to the Flood Engineers as at December 2010 and January 2011 suggested that the Estimated Failure Level of Somerset Dam with the Somerset Dam Crest Gates closed was as low as 105.7m AHD;

Particulars of (a)(vi)

(i) Report by Mr R. (Ben) Russo dated July 1988 entitled "*Brisbane City Council – Safety Review – Somerset Dam*" at pages 7 and 18 [SEQ.006.001.9873 at .9884 and .9895].

(ii) Report by GHD dated September 1995 entitled "*South East Queensland Water Board – Safety Review – Somerset Dam*" at page 6, paragraph (xx) [SEQ.006.002.0001 at .0008].

(iIi) Report by Mr R. (Ben) Russo dated 5 August 1996 entitled "*1996 GHD Somerset Dam Safety Review – Comments by R. Russo*" at page 3 [SEQ.004.036.0982 at .0984].

(iv) Report by Sinclair Knight Merz dated March 2000 entitled "*Preliminary Risk Assessment Wivenhoe, Somerset and North Pine Dams – Final Report*" at pages 8, 19, appendix A, section 3 on pages 5 to 6, appendix B, section 4 on pages 26 to 38 and at section 6 on pages 60 to 65, appendix F, pages 7 and 9 [SEQ.004.036.7036 at .7050 and .7064], [SEQ.004.036.7110 at .7118 to .7119], [SEQ.004.036.7154 at .7184 to .7196, .7218 to .7223] and [SEQ.004.036.7464 at.7474 and .7476].

(v) Report by GHD dated September 2000 entitled "*South East Queensland Water Board: Safety Review, Report on Somerset Dam*" at 10.4.3 (d)(iv) and (e) on pages 53 to 55 and 57 [SEQ.004.036.6673 at .6729 to 6731 and .6773].

(vi) Report by the Snowy Mountains Engineering Corporation dated August 2004 entitled "*Somerset Dam – Detailed Risk Assessment*" at the executive summary on pages 1 to 4, sections 3.4 to 3.6 on pages 6 to 8, "additional comments" on page 21, and appendices 3.3 and 3.7 [SEQ.006.002.0261 at .0261 to .0264, .0274 to .0276, .0289, .0356 to .0427 and .0476 to .0488].

(vii) Report by Mr Greg Roads from WRM Water & Environment dated 8 October 2005 entitled "*Somerset and Wivenhoe Dam Flood Risk Analysis*" at section 5 on page 10 [SEQ.006.002.0246 at .0259].

(viii) Report by NSW Department of Commerce dated December 2004 entitled "*Somerset and North Pine Dams: Dam Safety Review*" at the executive summary – Somerset Dam at pages i to ii, section 2.1 at pages 3 to 4, at section 3 at pages 7 to 10, section 6 on

page 18, section 8 at pages 22 to 23 [SEQ.006.001.7576 at .7577 to .7578, .7584 to 7585, .7588 to .7591, .7599 and .7603 to .7604].

(ix) Report by NSW Department of Commerce dated May 2005 entitled "*Somerset Dam: Stability of Abutment Monoliths*" at the executive summary on pages i to iii and section 5 [SEQ.006.001.7498 at .7499 to .7501 and .7523 to .7525].

(x) Report by Mr Terry Malone dated October 2009 entitled "*Somerset Dam: Design Flood Hydrology*" at the executive summary on pages i to ii [SEQ.006.001.3772 at .3774 to .3775].

(b) subject to (a) above, if the level of water in Lake Somerset exceeds 107.46m AHD, being the level of the top of the Somerset Dam Crest Gates when closed (being the Somerset Dam "crest level") water can flow over:

(i) the top of the Somerset Dam Crest Gates if they are closed; and regardless,

(ii) the Somerset Dam breezeway, being that part of Somerset Dam which is located on either side of the Somerset Dam Crest Gates;

(c) further to (b) above, once the Somerset Dam breezeway is overtopped, the ability of Somerset Dam or its abutments and foundations to withstand flood loads becomes increasingly uncertain; and

(d) subject to the matters pleaded in paragraphs (a) to (c) above, Seqwater otherwise admits the allegations pleaded in paragraph 26.

27 In relation to paragraph 27 of the FASOC, Seqwater denies the allegations and repeats paragraphs 26 (a) to (c) above.

F Wivenhoe Dam

28 In relation to paragraph 28 of the FASOC, Seqwater:

(a) denies that Wivenhoe Dam is a saddle dam;

(b) pleads that two saddle dams known as "Saddle Dam 1" and "Saddle Dam 2" close off areas of low elevation on the left abutment of Wivenhoe Dam; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 28.

29 Seqwater admits the allegations pleaded in paragraph 29 of the FASOC.

30 In relation to paragraph 30 of the FASOC, Seqwater:

(a) repeats paragraphs 13(a) to (d) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 30.

31 In relation to paragraph 31 of the FASOC, Seqwater:

(a) repeats paragraphs 13(a) to (d) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 31.

32 In relation to paragraph 32 of the FASOC, Seqwater pleads that:

(a) Splityard Creek Dam is an ungated spillway dam;

(b) Splityard Creek Dam is designed for hydro-electric power generation and is not designed for water supply or for flood mitigation;

(c) electricity is generated by extracting water using the two main pumps of the Wivenhoe Power Station, from Lake Wivenhoe to the reservoir behind Splityard Creek Dam which water is then released from Splityard Creek Dam through tunnels to turbines that drive generators and, then back into Lake Wivenhoe;

(d) further to paragraph (c) above, the releasing of water through tunnels to generate electricity pleaded in paragraph (c) above is controlled;

(e) the reservoir behind Splityard Creek Dam has a full supply capacity which is, and was as at December 2010 and January 2011, estimated to be approximately 28,000ML and the catchment area of that reservoir is, and was as at December 2010 and January 2011, estimated to be approximately 3.6km^2;

(f) when the water level in the reservoir behind Splityard Creek Dam reaches its maximum capacity, any further inflows into the reservoir will cause water to flow over the ungated spillway, down Branch Creek and into Lake Wivenhoe;

(g) further to (f) above, the maximum rate at which water can be discharged over the Splityard Creek Dam spillway is, and was as at December 2010 and January 2011, 420m^3/s calculated based on both of the power station outlet works in the Wivenhoe Power Station operating at maximum capacity and continuously;

(h) however, if Splityard Creek Dam embankment fails, and if it failed during December 2010 or January 2011, water discharges in an uncontrolled manner down Pryde Creek which joins the Brisbane River below Wivenhoe Dam near Fernvale; and

Particulars of (a) to (h)

Wivenhoe Power Station Emergency Action Plan, Splityard Creek Dam, Part 1– Action Procedures And Technical Details T-MISC-149 [SEQ.001.042.7128].

(i) subject to the matters pleaded in paragraphs (a) to (h) above, otherwise admits the allegations pleaded in paragraph 32.

33 Seqwater admits the allegations pleaded in paragraph 33 of the FASOC and pleads, further, that Seqwater did not have day-to-day management or control of inflows to, or outflows from, Splityard Creek Dam during December 2010 or January 2011.

34 In relation to paragraph 34 of the FASOC, Seqwater:

(a) repeats paragraphs 32(a) to (h) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 34.

35 In relation to paragraph 35 of the FASOC, Seqwater:

(a) repeats paragraphs 32(a) to (h) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 35.

36 In relation to paragraph 36 of the FASOC, Seqwater:

(a) repeats paragraphs 32(a) to (h) above;

(b) pleads that since Splityard Creek Dam is ungated, any flow of water over the spillway, down Branch Creek and into Lake Wivenhoe is uncontrolled;

(c) pleads further that the releasing of water from the reservoir behind Splityard Creek Dam through tunnels to turbines that drive generators in order to generate electricity is controlled by a third party, as pleaded in paragraph 33 above; and

(d) subject to the matters pleaded in (a) to (c) above, otherwise admits the allegations pleaded in paragraph 36.

37 In relation to paragraph 37 of the FASOC, Seqwater:

(a) admits that water released from Lake Wivenhoe through Wivenhoe Dam flows into the Brisbane River;

(b) admits that the Brisbane River flows near the townships of Lowood and Fernvale and parts of the urban areas of Ipswich City and Brisbane City; and

(c) subject to the matters pleaded in (a) and (b) above, otherwise admits the allegations pleaded in paragraph 37.

38 Seqwater admits the allegations pleaded in paragraph 38 of the FASOC.

39 Seqwater admits the allegations pleaded in paragraph 39 of the FASOC and pleads, further, that:

(a) the Bremer River flows through central Ipswich and other urban areas of Ipswich City;

(b) Wivenhoe Dam releases do not contribute to the flood flows in the Bremer River, but may affect flood levels in the lower reaches of the Bremer River;

(c) repeats paragraph 5(b) above; and

(d) the distance along the Brisbane River between where Lockyer Creek joins the Brisbane River and where the Bremer River joins the Brisbane River is approximately 70 to 80 kilometres.

40 Seqwater admits the allegations pleaded in paragraph 40 of the FASOC and pleads, further, that the smaller watercourses include:

(a) England Creek;

(b) Black Snake Creek;

(c) Cabbage Tree Creek;

(d) Breakfast Creek;

(e) Moggill Creek;

(f) Kholo Creek;

(g) Wolston Creek;

(h) Six Mile Creek;

(i) Woogaroo Creek;

(j) Goodna Creek;

(k) Pullen Pullen Creek;

(l) Oxley Creek;

(m) Norman Creek;

(n) Enoggera Creek; and

(o) Bulimba Creek.

41 Seqwater:

(a) denies the allegations pleaded in paragraph 41 of the FASOC;

(b) repeats paragraphs 5(b) to (f) above; and

(c) pleads that, in general, the following factors influence whether flood waters reach, or cause damage to, urban areas downstream of Wivenhoe Dam including in Lowood, Fernvale, Ipswich City and Brisbane City:

(i) the depth of rainfall over the Downstream Catchments;

(ii) the temporal distribution of rainfall over the Downstream Catchments;

(iii) the spatial distribution of rainfall over the Downstream Catchments;

(iv) the volume of rainfall converted into runoff into the Bremer River and the Lockyer Creek, which may cause water to back up into other tributaries of the Brisbane River downstream of Wivenhoe Dam;

(v) the routing of flows into the Downstream Catchments;

(vi) the timing of the peak inflows of water into the Brisbane River from the Downstream Catchments;

(vii) the antecedent conditions of the Downstream Catchments, including:

(A) how much water any of the rivers or other water-courses are carrying; and

(B) the wetness of the catchment area of the Brisbane River that is downstream of Wivenhoe Dam,

before the commencement of the relevant flood event;

(viii) the effect of tidal levels on the Brisbane River, including potential storm surges in some weather events;

(ix) the capacity of Wivenhoe Dam to retain water within Lake Wivenhoe when operated in accordance with the Flood Mitigation Manual;

(x) the nature and extent of development downstream of Wivenhoe Dam including:

(A) the location of the development;

(B) drainage and other hydrological structures; and

(C) any flood mitigation measures;

(xi) any flood mitigation measures adopted by or for owners or users of property downstream of Wivenhoe Dam before and at the time of the relevant flood event; and

(xii) any hydraulic structures (e.g. bridges) and the state of their waterway areas.

42 In relation to paragraph 42 of the FASOC, Seqwater:

(a) pleads that the time for water to travel from Wivenhoe Dam to central Brisbane during a flood varies materially and is affected by:

(i) the timing and magnitude of water releases from Wivenhoe Dam;

(ii) whether the Brisbane River downstream of Wivenhoe Dam is in flood at the time the release from Wivenhoe Dam is made;

(iii) the extent and timing of any inflows into the Brisbane River from the Downstream Catchments;

(iv) the effect of tides on water levels in the lower Brisbane River; and

(v) the state of the river channel conditions such as vegetation and geomorphological conditions which may vary between floods; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 42.

43 In relation to paragraph 43 of the FASOC, Seqwater:

(a) pleads that:

(i) the primary reason for the development of Wivenhoe Dam was to meet the needs of the water supply demands of Brisbane and Ipswich;

(ii) Wivenhoe Dam was also developed for flood mitigation purposes, because of the high benefit-to-cost ratio in constructing a dual purpose dam;

(iii) further to paragraph (ii) above, Wivenhoe Dam was not developed or designed to, and could not, prevent all flooding downstream of the dam; and

(iv) a third reason for the development of Wivenhoe Dam was the potential to generate hydro-electric power using Lake Wivenhoe as a lower reservoir of a pumped hydro-electric power scheme;

(b) pleads that as at December 2010 and January 2011, Wivenhoe Dam had:

(i) a FSL of 67.0m AHD;

(ii) a corresponding Full Supply Volume which was estimated to be approximately 1,165,000ML;

(iii) a Flood Mitigation Capacity (from the FSL to 74.0m AHD) which was estimated to be approximately 910,000ML;

(iv) a Flood Mitigation Capacity (from the FSL to 80.0m AHD) which was estimated to be approximately 1,980,000ML; and

Particulars of (b)

(i) Attachment 5 of the Moreton ROP [SEQ.015.001.0149].

(ii) Section 8.2, Appendix C and Appendix H of the Flood Mitigation Manual [SEQ.011.001.1290].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 43.

44 In relation to paragraph 44 of the FASOC, Seqwater:

(a) repeats paragraphs 32(b) to (d) and 43(a)(iv)) above;

(b) pleads that the primary spillway at Wivenhoe Dam (as referred to in paragraph 46 below) contains a mini-hydro power station (the "**Wivenhoe Dam Mini-Hydro**"); and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 44.

45 Seqwater admits the allegations pleaded in paragraph 45 of the FASOC and pleads, further, that the construction of the auxiliary spillway at Wivenhoe Dam (the "**Auxiliary Spillway**"), which is fitted with three erodible fuse plugs (the "**Auxiliary Spillway Fuse Plugs**"), was completed in or about late 2005.

46 In relation to paragraph 46 of the FASOC, Seqwater:

(a) pleads that:

(i) the primary spillway at Wivenhoe Dam (the "**Primary Spillway**"), which contains:

(A) five radial gates, known as Gate 1, Gate 2, Gate 3, Gate 4 and Gate 5 respectively (collectively, the "**Wivenhoe Dam Radial Gates**");

(B) a regulator valve (the "**Wivenhoe Dam Regulator Valve**");

(C) the Wivenhoe Dam Mini-Hydro;

(collectively, the "**Primary Outlet Works**"), was constructed between the left and right abutments of Wivenhoe Dam; and

(ii) the Auxiliary Spillway was constructed on the right abutment of Wivenhoe Dam; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 46.

47 In relation to paragraph 47 of the FASOC, Seqwater pleads that:

(a) the operation of the Primary Outlet Works is controlled and was controlled before and during December 2010 and January 2011;

(b) from or about 22 January 2010 and at all times during December 2010 and January 2011, the operational decisions regarding flood releases from Wivenhoe Dam during flood events, including the operation of any of the Primary Outlet Works for flood mitigation purposes, was governed by the Flood Mitigation Manual;

Particulars of (b)

(i) Section 1.7 of the Flood Mitigation Manual [SEQ.011.001.1290].

(ii) Pursuant to section 371 of the *Water Supply (Safety and Reliability) Act* 2008 (Qld), the Chief Executive of DERM may approve the Flood Mitigation Manual by gazette notice. Approval of the Flood Mitigation Manual was notified in the Queensland Government Gazette on 22 January 2010.

(c) subject to paragraphs (a) and (b) above, the Primary Outlet Works can, and could as at December 2010 and January 2011, be operated in different ways and in different combinations in order:

(i) to retain water within Lake Wivenhoe; or

(ii) to release water from Lake Wivenhoe and to vary the rate at which water is able to be released from Lake Wivenhoe and the timing of any release; and

(d) further to paragraph (c)(ii) above, the maximum and minimum rates at which water can be released from Wivenhoe Dam, and which could be released from Wivenhoe Dam at any particular time during December 2010 and January 2011, depends on the matters pleaded in paragraphs (i) to (iii) below:

(i) the level of water in Lake Wivenhoe;

(ii) which one or more of the Wivenhoe Dam Radial Gates, Wivenhoe Dam Regulator Valve and Wivenhoe Dam Mini-Hydro comprising the Primary Outlet Works was operable and was open and to what extent; and

(iii) whether any one or more of the Auxiliary Spillway Fuse Plugs had been triggered and if so, the time taken to completely erode any Auxiliary Spillway Fuse Plug;

Particulars of (d)

Appendix C of the Flood Mitigation Manual [SEQ.011.001.1290].

(e) if Wivenhoe Dam fails, and if Wivenhoe Dam had failed at any time during the period 1 December 2010 to 19 January 2011, water would have discharged in an uncontrolled manner into the Brisbane River which would have catastrophic consequences; and

(f) subject to the matters pleaded in paragraphs (a) to (e) above, otherwise denies the allegations pleaded in paragraph 47.

48 In relation to paragraph 48 of the FASOC, Seqwater:

(a) repeats paragraphs 47(a) to (e) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 48.

49 Seqwater admits the allegations pleaded in paragraph 49 of the FASOC.

50 In relation to paragraph 50 of the FASOC, Seqwater pleads that;

(a) the Auxiliary Spillway Fuse Plugs are designed to erode in a predictable manner when the water level of Lake Wivenhoe exceeds, respectively, 75.7m AHD, 76.2m AHD and 76.7m AHD (also known as the “triggers” for the Auxiliary Spillway Fuse Plugs);

Particulars of (a)

Section 8.2 of the Flood Mitigation Manual [SEQ.011.001.1290].

(b) following the commencement of the erosion of any one or more of the Auxiliary Spillway Fuse Plugs:

(i) the release of water from Wivenhoe Dam can be partially controlled by manipulating the Wivenhoe Dam Radial Gates;

(ii) further to (i) above, the Wivenhoe Dam Radial Gates cannot be fully closed if this would result in the Wivenhoe Dam Radial Gates being overtopped, thus potentially being damaged and rendered inoperable;

(iii) further to (i) and (ii) above, the ability to close the Wivenhoe Dam Radial Gates would depend on the Flood Engineers' evaluation of the suitability of the conditions to do so; and

(iv) water will continue to be released from the Auxiliary Spillway Fuse Plugs until the water level of Lake Wivenhoe reaches the FSL of 67m AHD; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, Seqwater otherwise denies the allegations pleaded in paragraph 50.

51 In relation to paragraph 51 of the FASOC, Seqwater:

(a) repeats paragraphs 50(a) and (b) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 51.

52 In relation to paragraph 52 of the FASOC, Seqwater:

(a) repeats paragraphs 43(b) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 52.

53 In relation to paragraph 53 of the FASOC, Seqwater:

(a) repeats paragraphs 43(b) and 50(a) above;

(b) admits that as at December 2010 and January 2011, because the Primary Spillway fixed crest level was 57.0m AHD, if the level of the water surface in Lake Wivenhoe was less than 57.0m AHD, then water could not be released from Lake Wivenhoe by means of the Wivenhoe Dam Radial Gates;

(c) admits that as at December 2010 and January 2011, Wivenhoe Dam had an Estimated Failure Level at the dam crest level of 80.0m AHD; and

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise admits the allegations pleaded in paragraph 53.

G Flood Mitigation

54 In relation to paragraph 54 of the FASOC, Seqwater pleads that:

(a) flood mitigation:

(i) at its most basic level, is:

(A) capturing water and releasing it in a manner that aims to ensure that flows and river levels downstream of the dam are lower than they would have been if the dam had not been there; and

(B) delaying the rate of rise of downstream river levels and the onset of critical flooding, providing an opportunity for downstream populations to evacuate and prepare for flooding; and

(ii) usually involves ensuring that peak outflows from the dam do not exceed peak inflows;

(b) in the case of Somerset Dam and Wivenhoe Dam, was at all material times to be undertaken within the policy and regulatory framework pleaded at paragraphs 55 to 113 below;

(c) was at all material times to be undertaken in accordance with the Flood Mitigation Manual;

(d) by reason of section 1.7 of the Flood Mitigation Manual, the Flood Engineers were directed that they must use the Flood Mitigation Manual for the operation of the dams during flood events; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, Seqwater otherwise denies the allegations pleaded in paragraph 54 of the FASOC.

Policy and regulatory framework

55 As at December 2010 and January 2011 the population of South East Queensland exceeded 3 million people.

56 The population of South East Queensland requires a secure supply of water for domestic, industrial and agricultural use and for essential services.

57 South East Queensland is susceptible to substantial variations in rainfall from year to year.

58 Prior to December 2010 South East Queensland had from time to time experienced periods of drought.

59 Prior to December 2010 South East Queensland had from time to time experienced substantial and intense rainfall events, including events causing flooding of urban areas in Brisbane City and Ipswich City.

60 The Parliament of Queensland decided in 1934 that a dam should be built at the current site of Somerset Dam for the purposes of water supply and preventing or mitigating floods in the Brisbane River and gave effect to that decision in an Act.

Particulars

The short title of the Act was *Bureau of Industry Acts Amendment Act 1934* (Qld). The long title of the Act was "An Act Relating to Brisbane and Ipswich Water Supply and Flood Prevention…"

61 Somerset Dam:

(a) was selected over other possible sites because, *inter alia*, a dam constructed on the Stanley River at that site could provide flood mitigation as well as water supply; and

(b) was not designed to prevent all flooding downstream of the dam.

62 The design of Somerset Dam:

(a) entailed a tension between its water supply and flood mitigation roles; and

(b) resulted in a policy decision being made as to the amount of the dam's capacity that would be set aside for water supply, being the capacity up to the FSL.

63 The policy decision pleaded in the preceding paragraph was the subject of a report presented by the Bureau of Industry to Parliament in May 1934 entitled "Report on Recommendations by the Special Committee appointed to Investigate and Report Upon Brisbane Water Supply and Flood Prevention".

64 The initial FSL for Somerset Dam was 315 feet above sea level (approximately 96m AHD).

65 The FSL for Somerset Dam was subsequently raised to 325 feet above sea level (approximately 99.0m AHD) so as to increase the security of the water supply provided by Somerset Dam.

66 The Parliament of Queensland decided in 1979 that a dam should be built at the current site of Wivenhoe Dam for the purposes of water supply and mitigating floods in the Brisbane River and gave effect to that decision in an Act.

Particulars

Wivenhoe Dam and Hydro-Electric Works Act 1979 (Qld).

67 Wivenhoe Dam:

(a) was selected over other possible sites because, *inter alia*, a dam constructed on the Brisbane River at that site could provide flood mitigation as well as water supply; and

(b) was not designed to prevent all flooding downstream of the dam.

68 The design of Wivenhoe Dam:

(a) entailed a tension between its water supply and flood mitigation roles; and

(b) resulted in a policy decision being made as to the amount of the dam's capacity that would be set aside for water supply, being the capacity up to the FSL.

69 The policy decision pleaded in the preceding paragraph was:

(a) the subject of a report in June 1977 to the Co-Ordinator General's Department by T.J. Grigg entitled "A Comprehensive Evaluation of the Proposed Wivenhoe Dam on the Brisbane River: An Examination of the Economic, Financial, Social and Environmental Effects" [SEQ.001.014.2912]; and

(b) reflected in section 4 of the *Wivenhoe Dam and Hydro-Electric Works Act* 1979 (Qld), which defined "full supply level" as:

> *the maximum water storage level assigned to a reservoir for the permanent storage of water for the purpose of water supply.*

70 At all times from the construction of Wivenhoe Dam to January 2011, the FSL for Wivenhoe Dam was 67.0m AHD.

71 In or about September 2001:

(a) SunWater Engineering Services delivered to the South East Queensland Water Corporation a report entitled "South East Queensland Water Corporation Report on Feasibility of Making Pre-releases from SEQWC Reservoirs" (the "**SunWater Report**") [SEQ.001.043.7897];

(b) the SunWater Report recommended that the pre-release of water from Wivenhoe Dam for flood mitigation purposes not be considered, with Wivenhoe Dam continuing to be operated in accordance with the then current manual of operational procedures for flood mitigation; and

(c) the Board of the South East Queensland Water Corporation considered the SunWater Report and adopted the recommendation.

72 In or about February 2001, the levels of Lake Wivenhoe and Lake Somerset exceeded their respective FSL's and releases were made from Wivenhoe Dam in accordance with the terms of the flood mitigation manual in effect at that time.

73 South East Queensland experienced a prolonged drought beginning in or about 2001.

74 From in or about February 2001 to in or about February 2010, the level of Lake Somerset remained below its FSL.

75 From in or about February 2001 to in or about October 2010 the level of Lake Wivenhoe remained below its FSL.

76 On 19 August 2007, the level of Lake Somerset was 88.10m AHD, which was approximately 24% of Full Supply Volume.

77 In March 2008 the level of Lake Wivenhoe was 50.0m AHD, which was approximately 13% of Full Supply Volume.

78 Restrictions on the use of water were in force in the local government areas administered by the Brisbane City Council and Ipswich City Council at all times from 13 May 2005 to January 2011.

Particulars

(i) Level 1 restrictions were in place from 13 May 2005 to 3 October 2005;

(ii) Level 2 restrictions were in place from 3 October 2005 to 13 June 2006;

(iii) Level 3 restrictions were in place from 13 June 2006 to 1 November 2006;

(iv) Level 4 restrictions were in place from 1 November 2006 to 10 April 2007;

(v) Level 5 restrictions were in place from 10 April 2007 to 23 November 2007;

(vi) Level 6 restrictions were in place from 23 November 2007 to 21 July 2008;

(vii) High level restrictions were in place from 21 July 2008 to 10 April 2009;

(viii) Medium level restrictions were in place from 11 April 2009 to 1 December 2009; and

(ix) Permanent conservation measures were in place from 1 December 2009 to 1 January 2013.

79 From in or about November 2005 the State of Queensland, the Brisbane City Council and the Ipswich City Council provided subsidies for householders in South East Queensland who installed water tanks and other devices to monitor and reduce use of water for domestic purposes.

Particulars

The *Water Amendment Regulation (No 6) 2006* (Qld) was subordinate legislation 2006 Number 202. It was made by the Governor-in-Council on 8 August 2006 and notified in the Queensland Government Gazette on 8 August 2006.

80 On 8 August 2006 a new "Part 8 – Water Supply Emergency (SEQ Region)" was included in the *Water Regulation 2000* (Qld) by the *Water Amendment Regulation (No 6) 2006* (Qld).

Particulars

The *Water Amendment Regulation (No 6) 2006* (Qld) was subordinate legislation 2006 Number 202. It was made by the Governor-in-Council on 8 August 2006 and notified in the Queensland Government Gazette on 8 August 2006.

81 The new "Part 8 – Water Supply Emergency (SEQ Region)" to the *Water Regulation 2000* (Qld):

(a) was included because the then current drought in South East Queensland was the worst on record and the State of Queensland wished to use powers under the *Water Act 2000* (Qld) to implement a strategy to secure the essential water supply needs of the region;

Particulars of (a)

Preamble, paragraph 1 of the *Water Amendment Regulation (No 6) 2006* (Qld).

(b) was a water supply emergency regulation under the *Water Act 2000* (Qld);

Particulars of (b)

Section 82(1) of the *Water Regulation 2000* (Qld).

(c) identified the water supply emergency to which it applied as a water supply emergency that was developing involving the essential water supply for the South East Queensland region for domestic purposes and essential services arising from the extended severe drought conditions and as a potential shortfall in supply would exist if there was limited rainfall events within the next 3 years and the requirements of Part 8 were not implemented;

Particulars of (c)

Section 84(1) of the *Water Regulation 2000* (Qld).

(d) had the purpose of outlining a range of measures to be carried out, and outcomes to be achieved, by services providers, and works to be carried out by the coordinator-general, to ensure the security of essential water supplies for the South East Queensland region;

Particulars of (d)

Section 82(2) of the *Water Regulation 2000* (Qld).

(e) provided for the following measures:

(i) the construction of the Western Corridor Recycled Water Scheme (Stages 1A, 1B and 2);

(ii) the construction of the Southern Regional Water Pipeline;

(iii) the construction of the Eastern Pipeline Inter-connector;

(iv) the construction of the Northern Pipeline Inter-connector;

(v) the construction of the South East Queensland (Gold Coast) Desalination Facility;

(vi) the construction of the Traveston Crossing Dam Stage 1;

(vii) the construction of Wyaralong Dam;

(viii) the raising of Mt Crosby Weir;

(ix) the raising of Hinze Dam Stage 3 and preparing for associated water harvesting works; and

(x) the development of underground water resources at Bribie Island and in the area around Brisbane.

Particulars of (e)

Section 82(3)(a) of the *Water Regulation 2000* (Qld).

(f) provided for the following outcomes:

(i) demand management strategies including ensuring service providers' participation in pressure and leakage reduction programs and a domestic retrofit program;

(ii) other water efficiency outcomes aimed at greater use of recycled water for industrial and commercial customers and reduced water use by power stations; and

(iii) maximising the sustainable take of water, including the sustainable take of groundwater from North Stradbroke Island; and

Particulars of (f)

Section 82(3)(b) of the *Water Regulation 2000* (Qld).

(g) provided for the following works:

(i) the construction of Cedar Grove Weir; and

(ii) the construction of Bromelton Off-stream Storage.

Particulars of (f)

Section 82(3)(c) of the *Water Regulation 2000* (Qld).

82 From 8 August 2006 to January 2011, the State of Queensland expended vast amounts of money implementing the range of measures, outcomes and works required by "Part 8 – Water Supply Emergency (SEQ Region)" to the *Water Regulation 2000* (Qld).

83 From in or about March 2007 consideration was given to the raising of the FSLs for Somerset Dam and Wivenhoe Dam so as to increase the security of the water supply provided by Somerset Dam and Wivenhoe Dam.

Particulars

(i) In March 2007 Seqwater completed a report in conjunction with the Queensland Department of Natural Resources and Water entitled "Provision of Contingency Storage in Wivenhoe & Somerset Dams" [SEQ.001.001.4588].

(ii) In December 2007 SunWater completed a report entitled "Wivenhoe Dam: Assessment of Wivenhoe Dam Full Supply Level on Flood Impacts" [SEQ.001.001.4687].

(iii) In December 2009 Seqwater completed a report entitled "Report for Wivenhoe Dam Full Supply Level Review: Technical Assessment of Raising Potential" [SEQ.001.001.4749].

(iv) Project Start-up meetings to begin the Wivenhoe Dam raising operational full supply level study were held on 19 March 2010, 8 April 2010, 22 April 2010 and 6 May 2010.

(v) In April 2010 Seqwater submitted terms of reference to the Queensland Water Commission for the Wivenhoe Dam Operational FSL Raising Flood Hydrology Working Group.

(vi) In June 2010 the Queensland Water Commission completed a draft progress report on the Wivenhoe Dam raising operational full supply level study.

(vii) In August 2010 the Queensland Water Commission approved a brief for the Wivenhoe Dam raising operational full supply level study.

(viii) In October 2010 Parliamentary briefing notes were provided to the Minister for Natural Resources about the Wivenhoe Dam raising operational full supply level study [SEQ.001.002.8426].

(ix) In December 2010 Seqwater provided to the Queensland Water Commission a proposal to conduct the Wivenhoe Dam raising operational full supply level study and the Queensland Water Commission accepted that proposal.

84 From October 2010 to December 2010 the Minister for Natural Resources, Mines and Energy and Minister for Trade (the "**Minister**") sought advice on the benefit for flood mitigation of temporarily reducing the FSLs of Somerset Dam and Wivenhoe Dam.

85 In or about December 2010 the SEQ Water Grid Manager advised the Minister on the benefit for flood mitigation of temporarily reducing the FSLs of Somerset Dam and Wivenhoe Dam.

Particulars

(i) Written advice was given on or about 24 December 2010, as pleaded in paragraph 244(g) below.

(ii) Letter from Gary Humphrys to the Hon Stephen Robertson MP dated 24 December 2010 [SEQ.001.019.0099].

(iii) The substance of:

(A) the advice was that releasing water to below FSL may provide some benefits in terms of reduced community and operational impacts during minor inflow events. However, for medium and major flood events, Seqwater considered that pre-emptive releases would provide negligible benefits; and

(B) the SEQ Water Grid Manager's advice was that, from a water security objective, it had no in-principle objection to minor releases from Wivenhoe, Somerset and North Pine Dams to minimise the operational and community impacts of gate releases where the minor releases being considered were to draw down Lake Wivenhoe and Lake Somerset to 95% of their respective FSLs and North Pine Dam to 97.5% of its FSL.

86 In or about December 2010 the Minister decided not to temporarily reduce the FSLs of Somerset Dam and Wivenhoe Dam.

87 Further or alternatively, the Minister did not, in the period from October 2010 to February 2011, make a decision to temporarily reduce the FSLs of Somerset Dam and Wivenhoe Dam.

Water Act

88 At all material times:

(a) water supply from, *inter alia*, Somerset Dam and Wivenhoe Dam was governed by or under the *Water Act* 2000 (Qld) (the "**Water Act**");

(b) the Queensland Water Commission was established by section 342 of the Water Act;

(c) the principles under which the Queensland Water Commission was to perform its functions for the South East Queensland Region included:

(i) the general principle stated in section 346(2) of the Water Act that water in the region is to be managed on a sustainable and integrated basis to provide secure and reliable supplies of water of acceptable quality for all uses; and

(ii) the specific principle for water sharing stated in section 346(3)(a) of the Water Act that water is a scarce resource that is to be shared across the region;

(d) the Regional Water Security Program, issued by the Minister following advice from the Queensland Water Commission in accordance with sections 360I-360M of the Water Act, addressed, *inter alia*, the volume of water that could be supplied from water storages and other supplies within South East Queensland in given years;

(e) the *Water Resource (Moreton) Plan 2007* (Qld) (the "**Moreton WRP**"), approved by the Governor-in-Council in accordance with section 50 of the Water Act, addressed, *inter alia*, the availability of water and a framework for sustainably managing and taking that water;

(f) the Moreton ROP approved by the Governor-in-Council in accordance with section 103 of the Water Act, addressed, *inter alia*, the implementation of the Moreton WRP;

(g) Seqwater held a Resource Operations Licence granted by the Chief Executive under section 107 of the Water Act on 7 December 2009 which authorised Seqwater to interfere with the flow of water in the Central Brisbane River Water Supply Scheme (the "**Central Brisbane River ROL**") to the extent necessary to operate the water infrastructure to which that licence applied;

(h) Seqwater held a Resource Operations Licence granted by the Chief Executive under section 107 of the Water Act on 7 December 2009 which authorised Seqwater to interfere with the flow of water in the Stanley River Water Supply Scheme (the "**Stanley River ROL**") to the extent necessary to operate the water infrastructure to which that licence applied (the Central Brisbane River ROL and the Stanley River ROL are referred to, collectively, as the "**Seqwater ROLs**");

(i) the term "water infrastructure" was defined in Schedule 4 of the Water Act as, *inter alia*, works operated by the holder of a Resource Operations Licence or other authorisation that is relevant to the management of water entitlements;

(j) the term "water entitlement" was defined in Schedule 4 of the Water Act as a water allocation, interim water allocation or water licence; and

(k) the term "works" was defined in Schedule 4 of the Water Act as:

(i) operations of any kind and all things constructed, erected or installed for the purposes of the Water Act; and

(ii) any land used for the operations.

89 The proposed arrangements for implementing the Moreton WRP, and the priorities for the conversion to, or granting of, water allocations, prescribed in section 95 of the Moreton WRP included, *inter alia*:

(a) within two years after the commencement of the Moreton WRP, it was proposed to prepare a resource operations plan:

(i) to convert authorisations in priority area 1 to water allocations;

(ii) to deal with unallocated surface water available for future water requirements in priority area 1;

(iii) to make environmental management rules, water sharing rules, water allocation change rules and seasonal water assignment rules for water in priority area 1; and

(iv) to implement the monitoring requirements in part 9 of the Moreton WRP for priority area 1; and

(b) within four years after the commencement of the Moreton WRP, it was proposed to amend the resource operations plan:

(i) to convert authorisations in priority area 2 to water allocations;

(ii) to deal with unallocated surface water available for future water requirements in priority area 2;

(iii) to make environmental management rules, water sharing rules, water allocation change rules and seasonal water assignment rules for water in priority area 2; and

(iv) to implement the monitoring requirements in part 9 for priority area 2.

90 By section 94 and Schedule 13(1)(a) of the Moreton WRP, the term “priority area 1” was defined as the area of, *inter alia*, the Central Brisbane River water supply scheme consisting of the following:

(a) the full supply level of the impoundment of Wivenhoe Dam on the Brisbane River; and

(b) the Brisbane River downstream of Wivenhoe Dam at AMTD 150.2km to Mt Crosby Weir at AMTD 90.8km.

91 By section 94 and Schedule 13(2)(e) of the Moreton WRP, the term “priority area 2” was defined as the area of, *inter alia*, the Stanley River water supply scheme consisting of the full supply level of the impoundment of Somerset Dam on the Stanley River.

92 At all material times during December 2010 and January 2011:

(a) the Central Brisbane River Water Supply Scheme included water up to the full supply level of Wivenhoe Dam, but not above the full supply level;

(b) the Stanley River Water Supply Scheme included water up to the full supply level of Somerset Dam, but not above full supply level;

(c) by section 10(1) of the Moreton ROP, a resource operations licence holder for the Moreton ROP was, *inter alia*, the resource operations licence holder for the Central Brisbane River Water Supply Scheme and the Stanley River Water Supply Scheme;

(d) the areas managed under the resource operations licences listed in section 10(1) were shown on the maps in Attachment 2(b) to 2(e) of the Moreton ROP, and included, *inter alia*, Somerset Dam and Wivenhoe Dam;

(e) the Moreton ROP provided:

(i) in sections 13(2), that sections 13(3) to (11) applied when a resource operations licence holder was "unable to meet the requirements of" the Moreton ROP on the day the plan commences;

(ii) in section 13(3)(a), that within two months of the commencement of the Moreton ROP, the resource operations licence holder had to submit a statement of programs then currently in existence to the chief executive of DERM for approval (the "**Statement of Current Programs**");

(iii) in section 13(3)(b), that within six months of the commencement of the Moreton ROP, the resource operations licence holder had to submit "a program for meeting the requirements of" the Moreton ROP, including a "timetable" and interim methods to be used, to the chief executive of DERM for approval (the "**Interim Program**");

(iv) in section 13(4), that the resource operations licence holder may, where an emergency or operational incident results in an inability to comply with any rules or requirements of the Moreton ROP, submit an interim program for meeting the requirements of the Moreton ROP to the chief executive of DERM for approval, inducing a timetable and interim methods to be used; and

(v) in section 13(7), that the chief executive of DERM could:

(A) approve a submitted program with or without conditions;

(B) amend and approve the amended program; or

(C) require the resource operations licence holder to submit a revised program or approval;

(f) the Moreton ROP, in implementing the Moreton WRP, provided for the sustainable management of water by, *inter alia*, detailing the operating, environmental management and water sharing rules for the Central Brisbane River and Stanley River water supply schemes;

Particulars

Section 15 of the Moreton ROP.

(g) on the day that the Moreton ROP had effect, the Chief Executive was required pursuant to section 34(1)(a) of the Moreton ROP to grant a resource operations licence to Seqwater for, *inter alia*, the Central Brisbane River and Stanley River water supply schemes;

(h) pursuant to section 34(2)(a) of the Moreton ROP, the infrastructure associated with the resource operations licence for the Central Brisbane River and Stanley River water supply schemes was described in Attachment 5 to the Moreton ROP;

(i) pursuant to section 70 of the Moreton ROP, that Chapter 5 of the Moreton ROP (which included section 72 pleaded below) applies to:

(i) the resource operations licence holder for the Central Brisbane River and Stanley River water supply schemes; and

(ii) all water allocations associated with the Central Brisbane River water supply scheme;

(j) section 72(1) and Attachment 5 of the Moreton ROP set out the operating levels for and described the infrastructure in the Central Brisbane River and Stanley River water supply schemes, including the full supply level and minimum operating level for Wivenhoe Dam and Somerset Dam;

(k) upon its proper construction, section 72(3) of the Moreton ROP provided that the resource operations licence holder must not release water comprised in the Central Brisbane River and Stanley River water supply schemes from any infrastructure to which section 72(1) applied unless the release was necessary to:

(i) meet the minimum flow rates in section 75; or

(ii) supply downstream demand; and

(l) section 166(a) of the Moreton ROP relevantly provided that the resource operations licence holder must notify the chief executive of DERM within one business day of becoming aware of a non-compliance by the resource operations licence holder with the rules in the Moreton ROP.

93 Upon its proper construction, the operating and environmental management rules set out in Chapter 5 of the Moreton ROP applied to:

(a) water stored in Wivenhoe Dam up to its full supply level; and

(b) water stored in Somerset Dam up to its full supply level,

(the compartments referred to in this paragraph are referred to, collectively, as the "**water supply storage compartments**").

94 Upon the proper construction of section 72 of the Moreton ROP:

(a) Seqwater was prohibited from releasing water from the water supply storage compartments for flood mitigation purposes;

(b) the section did not address the release of water from above the fully supply levels of Wivenhoe and Somerset Dams (referred to collectively as the "**flood storage compartments**").

95 Prior to about 14 February 2011, the Moreton ROP did not provide for a resource operations licence holder, with an approved interim program, to submit any revised program to the chief executive of DERM for consideration.

96 On about 14 February 2011, the Moreton ROP was amended by the addition of a new section 13(6A), which provided that despite anything in sections 13(2) to (4), a resource operations licence holder with an approved interim program may submit to the chief executive of DERM a revised program for consideration under section 13(7).

97 By condition 1.1 of the Seqwater ROLs, Seqwater was required to comply with the operating arrangements and supply requirements detailed in Chapter 5 of the Moreton ROP (which included section 72(3) of the Moreton ROP).

98 By section 813 of the Water Act, it was an offence for a holder of a resource operations licence to contravene a condition of the licence.

99 At all material times during December 2010 and January 2011:

(a) Seqwater was bound by a contract with the Water Grid Manager made by the Minister under section 360ZDD of the Water Act on or about 28 June 2010 (the **"Grid Contract**");

(b) Seqwater was bound by the South East Queensland Water Market Rules made by the Minister under section 360ZCX of the Water Act (the "**Market Rules**");

(c) the Grid Contract provided, *inter alia*:

(i) (by clause 9) that Seqwater was obliged to make water available in accordance with, *inter alia*, the Grid Contract and the Market Rules; and

(ii) (by clause 11(c)) that Seqwater must use its best endeavours to minimise, mitigate and measure water losses in the "Service Provider Infrastructure" (which included Wivenhoe Dam and Somerset Dam), including storage losses (including evaporation and leakage), release losses, transport losses and treatment losses; and

(d) the Market Rules provided, *inter alia*:

(i) (by clause 2.15(c) and clause 3.7(a)) that Seqwater must comply with and perform all of its obligations under, inter alia, the Grid Contract; and

(ii) (by clause 3.22) that any failure to comply with, inter alia, the Grid Contract, will be treated as a breach of the Market Rules and may, inter alia, result in penalties under the Water Act.

Safety and Reliability

100 At all material times:

(a) flood mitigation by, *inter alia*, operation of Somerset Dam and Wivenhoe Dam was governed by or under the *Water Supply (Safety and Reliability) Act 2008* (Qld) (the "**Safety and Reliability Act**"); and

(b) the Flood Mitigation Manual, approved by the chief executive of DERM under section 371 of the Safety and Reliability Act, contained the operational procedures for Somerset Dam and Wivenhoe Dam for the purposes of flood mitigation.

101 The Safety and Reliability Act:

(a) by section 49(1) provided that a service provider, owner of land, operator of water infrastructure, operator of relevant water infrastructure or lessee of a service provider or operator of water infrastructure (each an "affected party") was not liable for an event or circumstance beyond the control of the affected party;

(b) by section 49(2) provided that section 49(1):

(i) applied only if, in relation to the event or circumstance, the affected party acted reasonably and without negligence; and

(ii) did not affect, or in any way limit, the liability of an affected party for negligence;

(c) by section 49(3) provided that in section 49, an "event or circumstance" includes:

(i) the escape of water from water infrastructure or works;

(ii) flooding upstream or downstream of water infrastructure or works; and

(iii) contamination, or the quality, of water including manufactured water flowing, or released, from water infrastructure, relevant infrastructure or works.

(d) by section 374(2) provided that an owner of a dam who observed the operational procedures in a flood mitigation manual, approved by the chief executive of DERM, for the dam does not incur civil liability for an act done, or omission made, honestly and without negligence in observing the procedures.

The Interim Program

102 On about 5 February 2010, Seqwater submitted a Statement of Current Programs to the chief executive of DERM for approval in accordance with section 13(3)(a) of the Moreton ROP (the "**February 2010 Program**").

Particulars

Email from Claire Thorstensen of Seqwater to Tom Crothers of DERM dated 5 February 2010 re Seqwater implementation of Moreton Resource operations Plan [SEQ.016.049.7623], [SEQ.016.049.7624], [SEQ.016.049.7625] and [SEQ.016.049.7626].

103 In respect of section 72(3) of the Moreton ROP, the February 2010 Program provided that:

(a) Seqwater's operations were not compliant with section 72(3) of the Moreton ROP; and

(b) releases were made for operational purposes, water quality and ecosystem health including fish management.

104 On or around 12 March 2010, the February 2010 Program was approved in accordance with section 13(7) of the Moreton ROP.

Particulars

Letter from Lyall Hinrichsen of DERM to Peter Borrows of Seqwater dated 12 March 2010 [QLD.001.001.0252].

105 On or around 8 June 2010, Seqwater submitted an Interim Program to the chief executive of DERM for approval in accordance with section 13(3)(b) of the Moreton ROP (the "**June 2010 Program**").

Particulars

Email from Erin O'Donnell of Seqwater to Will Latham of DERM dated 8 June 2010 re Submission of Interim Programs for Gold Coast, Logan and Moreton ROPs [SEQ.016.005.9342], [SEQ.016.005.9349], [SEQ.016.005.9362].

106 On about 2 August 2010, in accordance with section 13(7) of the Moreton ROP, DERM invited Seqwater to consider a number of comments and resubmit the Interim Program in light of those comments.

Particulars

Letter from RB (Tom) Crothers of DERM to Alex Fisher of Seqwater dated 2 August 2010 [SEQ.016.050.8830]

107 On or around 27 August 2010, Seqwater submitted its revised Interim Program to the chief executive of DERM for approval in accordance with section 13(7) of the Moreton ROP (the "**August 2010 Program**").

Particulars

Email from Claire Thorstensen of Seqwater to Lyall Hinrichsen of DERM dated 2 August 2010 re copy of updated Interim Programs attached [SEQ.016.049.5618], [SEQ.016.049.5625] and [SEQ.016.049.5636].

108 In respect of section 72(3) of the Moreton ROP, the August 2010 Program provided that:

(a) Seqwater's operations were not compliant with section 72(3) of the Moreton ROP;

(b) releases were made for operational purposes, water quality and ecosystem health including fish management; and

(c) Seqwater would continue to make releases from infrastructure for the purposes of water consumption, "flood mitigation", operational maintenance and fish recovery and maintenance.

109 On or around 3 December 2010, DERM approved the August 2010 Program in accordance with section 13(7) of the Moreton ROP.

Particulars

Letter from Gary Burgess of DERM to Alex Fisher of Seqwater dated 3 December 2010 (the "**Interim Program Approval**") [QLD.001.001.0600].

110 The Interim Program Approval provided, relevantly, that:

> "*I am satisfied that the interim program as submitted meets the requirements set out under the Plan and accordingly, I have approved the program.*
>
> *…*
>
> *In considering the program, I noted particular anomalous matters that the Authority will need to address in the foreseeable future as compliance with the requirements of the Plan is necessary to ensure that water planning objectives and outcomes are achieved. These anomalies include the minimum flow requirements and tailwater monitoring for Mt Crosby Weir, tailwater monitoring at Somerset Dam and releases from infrastructure for particular purposes not recognised under the Plan.*
>
> *The Authority's interim methods for monitoring minimum average flow through the fishway and over the crest of Mt Crosby Weir will be acceptable as an interim arrangement, as also is the case for outflow estimations from the recorded opening of the gates, sluices and valves at Somerset Dam.*
>
> *However, as these interim methods will be insufficient to achieve necessary compliance with the Plan in the longer term, it will be necessary for the Authority to engage the Department of Environment and Resources Management at an early stage concerning potential solutions.*
>
> *The Authority's releases from infrastructure that do not comply with sections 72 and 75 of the Plan and that are made in extraordinary or emergent circumstances may be the subject of an operational report submitted in accordance with section 166 of the Plan. However, any releases made contrary to the Plan provisions remain as instances of non-compliance, regardless of circumstances.*
>
> *Accordingly, while it will be necessary for the Authority to lodge an operational report on every occasion that it makes a release not authorised under the Plan, it will not be appropriate to use this mechanism to deal with ongoing and routine releases that are unauthorised, therefore, if the Authority intends to make presently unauthorised releases as part of continuing routine operations, it again should further engage the Department concerning potential solutions."*

111 On its proper construction, the Interim Program Approval:

(a) did not authorise Seqwater to make releases beyond those permitted by section 72(3) of the Moreton ROP;

(b) required any such releases to be reported as instances of non-compliance under section 166 of the Moreton ROP; and

(c) further, or alternatively, was an approval on condition that:

(i) any release contrary to section 72(3) would remain a non-compliance with the Moreton ROP; and

(ii) any release contrary to section 72(3) must be reported as a non-compliance with the Moreton ROP under section 166.

112 Alternatively to paragraph 111:

(a) on the proper construction of the February 2010 Program, the August 2010 Program and the Interim Program Approval, the reference in the August 2010 Program to releases for "flood mitigation" was a reference to releases made in accordance with the Flood Mitigation Manual; and

(b) on its proper construction, the Flood Mitigation Manual did not authorise the making of releases from below the FSL of Wivenhoe Dam or Somerset Dam for the purposes of flood mitigation, except in circumstances where it was necessary to take base flow into account in determining the final gate closure and, as a result, the level of Lake Somerset or Lake Wivenhoe was temporarily allowed to fall below FSL to provide for a full dam at the end of the Flood Event.

113 In relation to paragraph 55 of the FASOC, Seqwater:

(a) repeats paragraphs 18(c), 47(c), 54(a) and (b) above;

(b) admits the allegations pleaded in paragraphs 55(a) and (b), save that:

(i) the Flood Engineers conducted flood operations at Somerset Dam and Wivenhoe Dam within the policy and regulatory framework pleaded at paragraphs 55 to 112 above; and

(ii) at all material times including during December 2010 and January 2011, by reason of section 1.7 of the Flood Mitigation Manual:

(A) the Flood Mitigation Manual contained the operational procedures for Somerset Dam and Wivenhoe Dam for the purposes of flood mitigation; and

(B) the Flood Engineers of Somerset Dam and Wivenhoe Dam were directed that they must use the Flood Mitigation Manual for the operation of the dams during flood events;

(c) denies the allegations pleaded in paragraphs 55(c), (d) and (f);

(d) pleads that the actions proposed in paragraphs 55(c) and (d) would not be consistent with the general approach of ensuring that peak outflows from the dam do not exceed peak inflows; and

(e) does not admit the allegation in paragraph 55(e) which is stated in unduly broad and abstract terms.

114 In relation to paragraph 56 of the FASOC, Seqwater:

(a) repeats paragraphs 26(a) to (c) above;

(b) pleads that:

(i) the failure of Somerset Dam would create a significant risk of causing a cascade failure of Wivenhoe Dam and catastrophic flooding, including loss of life, downstream of the dams;

(ii) accordingly, when conducting operations in real time, great care must be taken to avoid the failure of Somerset Dam;

(iii) the Flood Mitigation Manual addressed that risk by, *inter alia*, the provision, within the Strategy S2 operational strategy for Somerset Dam, for an operating target line for Lake Somerset and Lake Wivenhoe to be followed, being that depicted in the graph set out in section 9.3 of the Flood Mitigation Manual (the "**Operating Target Line**");

(iv) the Operating Target Line was derived from a study of failure risk and selected based on the following factors:

(A) equal minimisation of the risk of failure based on peak flood levels in both Somerset Dam and Wivenhoe Dam in relation to their associated failure levels (failure risk), as pleaded in paragraphs 26 and 53 above;

(B) minimisation of flows in the Brisbane River downstream of Wivenhoe Dam; and

(C) consideration of the time needed at the onset of a flood event to properly assess the magnitude of the event and the likely impacts,

so that the likely optimal strategy to maximise the flood mitigation benefits of both Somerset Dam and Wivenhoe Dam can be selected; and

Particulars

Terry Malone and John Tibaldi, Somerset-Wivenhoe Interaction Study, October 2009 [SEQ.001.001.3434].

(v) it would be contrary to the Flood Mitigation Manual, and would increase the risk of failure of Somerset Dam, for operations within Strategy S2 to be conducted by departing from the Operating Target Line and seeking to store an increased volume of water in Somerset Dam contrary to the Operating Target Line without some certainty that the safety of Somerset Dam is protected;

(c) denies the allegations in paragraph 56 to the extent they are inconsistent with the matters pleaded in paragraphs (a) and (b) above; and

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise admits the allegations pleaded in paragraph 56.

115 In relation to paragraph 57 of the FASOC, Seqwater:

(a) repeats paragraphs 43(b)(iii), 50(a) and (b) and 53(c) above;

(b) pleads that when the level of Lake Wivenhoe exceeds 74.0m AHD, alternative strategies are necessary to prioritise the protection of the safety of Wivenhoe Dam by minimising the possibility of exceeding the dam crest level of 80.0m AHD, and to consider actions to reduce the possibility and triggering one or more of the Auxiliary Spillway Fuse Plugs, provided dam safety was not compromised; and

(c) subject to those matters, otherwise denies the allegations pleaded in paragraph 57.

116 In relation to paragraph 58 of the FASOC, Seqwater:

(a) denies the allegations pleaded; and

(b) repeats paragraphs 110 to 113 above.

117 Seqwater denies the allegations pleaded in paragraph 59 of the FASOC and:

(a) repeats paragraphs 68, 69 and 110 to 112 above;

(b) pleads that the FSL for both Somerset Dam and Wivenhoe Dam is the level at which the water in Lake Somerset and Lake Wivenhoe needs to be maintained in

order to ensure that, as far as is possible, the sufficiency of the water supply to Brisbane and the areas surrounding Brisbane is maintained; and

(c) denies that at any time during December 2010 or January 2011 there existed current or forecast rainfall directly over Lake Somerset or Lake Wivenhoe as alleged in paragraph 59(e) of the FASOC or at all, in any quantifiable or specific form.

118 In relation to paragraph 60 of the FASOC, Seqwater:

(a) repeats paragraphs 110 to 112 and 114 above;

(b) pleads that Somerset Dam and Wivenhoe Dam are operated in conjunction and in accordance with the Flood Mitigation Manual so as to:

(i) preserve as much as possible the safety of the two dams; and

(ii) maximise the overall flood mitigation capabilities of the two dams; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 60.

H Seqwater's Ownership and Control of Somerset Dam and Wivenhoe Dam

119 Seqwater admits the allegations pleaded in paragraph 61 of the FASOC.

120 In relation to paragraph 62 of the FASOC, Seqwater:

(a) pleads that with effect from 7 December 2009 and as at December 2010 and January 2011, Seqwater held the Seqwater ROLs;

(b) pleads that:

(i) the Central Brisbane River ROL authorised Seqwater to interfere with water in the Central Brisbane River Water Supply Scheme which consisted of, relevantly, water up to the FSL of Wivenhoe Dam; and

(ii) the Stanley River ROL authorised Seqwater to interfere with water in the Stanley River Water Supply Scheme which consisted of, relevantly, water up to the FSL of Somerset Dam;

(c) repeats paragraphs 88(g) and (h) and 97 above; and

(d) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 62.

121 In relation to paragraph 63 of the FASOC, Seqwater:

(a) repeats paragraphs 88(g) and (h) and 97 above; and

(b) subject to those matters, otherwise does not admit the allegations pleaded in paragraph 63.

122 Seqwater denies the allegations pleaded in paragraph 64 of the FASOC.

123 In relation to paragraph 65 of the FASOC, Seqwater:

(a) repeats paragraphs 88(g) and (h) and 97 above; and

(b) subject to those matters, otherwise does not admit the allegations pleaded in paragraph 63.

124 In relation to paragraph 66 of the FASOC, Seqwater:

(a) repeats paragraphs 88(g) and (h), 93, 94 and 97 above;

(b) repeats paragraphs 93 and 94 above;

(c) pleads that the effect of sections 72(3) and 75 of the Moreton ROP was that Seqwater could not release water from any of its infrastructure including from Somerset Dam and Wivenhoe Dam when the level of Lake Wivenhoe or Lake Somerset were at or below their respective FSLs, unless the release was necessary:

(i) to meet the minimum flow rate of 8.64ML/d ($0.1m^3/s$) from Mount Crosby Weir, unless critical water sharing arrangements were in force; or

(ii) to supply downstream demand; and

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise admits the allegations pleaded in paragraph 66.

125 Seqwater admits the allegations pleaded in paragraph 67 of the FASOC.

126 Seqwater denies the allegations pleaded in paragraph 68 of the FASOC and repeats paragraph 92(e) above.

127 In relation to paragraph 69 of the FASOC, Seqwater:

(a) pleads that by section 13(10) of the Moreton ROP, where there is a conflict between the provisions of the Moreton ROP and a program approved in accordance with section 13(7) of the Moreton ROP, the approved program prevails for the duration that the approved program is in place; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 69.

128 In relation to paragraph 70 of the FASOC, Seqwater:

(a) repeats paragraph 102 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 70.

129 In relation to paragraph 71 of the FASOC, Seqwater:

(a) repeats paragraph 103 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 71.

130 In relation to paragraph 72 of the FASOC, Seqwater:

(a) repeats paragraphs 104, 111 and 112(a) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 72.

131 In relation to paragraph 73 of the FASOC, Seqwater:

(a) repeats paragraphs 105 to 112 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 73.

132 In relation to paragraph 74 of the FASOC, Seqwater:

(a) repeats paragraph 108 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 74.

133 In relation to paragraph 75 of the FASOC, Seqwater:

(a) repeats paragraphs 109 to 112 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 75.

134 In relation to paragraph 76 of the FASOC, Seqwater:

(a) repeats paragraphs 119 to 133 above;

(b) admits that Seqwater had authority to operate Somerset Dam and Wivenhoe Dam for flood mitigation purposes; and

(c) subject to the matters pleaded in (a) and (b) above, otherwise denies the allegations pleaded in paragraph 76.

I SunWater's Control of Somerset Dam and Wivenhoe Dam

135 Seqwater admits the allegations pleaded in paragraph 77 of the FASOC.

136 In relation to paragraph 78 of the FASOC, Seqwater pleads that:

(a) by clause 3.1 and 3.2(a) of the Service Level Agreement – Flood Management Services between Seqwater and the Second Defendant, SunWater Limited ("**SunWater**"), dated 13 October 2009 [SEQ.001.022.8933] (the "**Flood Management Services Agreement**"), SunWater agreed to provide to Seqwater the "**Services**", being the services set out in the Service Schedule to the Flood Management Services Agreement ("**Service Schedule**");

(b) by clause 3.2(b) of the Flood Management Services Agreement, SunWater had to use appropriately qualified and experienced personnel in providing the Services to Seqwater;

(c) by clause 3.2(c) of the Flood Management Services Agreement, SunWater had to act in accordance with the reasonable directions from Seqwater in respect of the SunWater's performance of the Services;

(d) by clause 1 of the Service Schedule, SunWater, *inter alia*, agreed:

(i) to provide flood management services, relevantly, for Somerset Dam and Wivenhoe Dam in accordance with the provisions of the Service Schedule, any applicable emergency action plans ("**EAPs**"), standing operational procedures ("**SOPs**") and the Flood Mitigation Manual; and

(ii) to review the SOPs and the Flood Mitigation Manual in July of each year and to advise Seqwater in writing of either any improvements recommended to the SOPs or the Flood Mitigation Manual or confirmation that each remained satisfactory;

(e) by clause 2 of the Service Schedule, SunWater, *inter alia*, agreed to ensure that only staff and subcontractors who were adequately trained specifically in relation to the tasks to be undertaken under the Flood Management Services Agreement were permitted to perform the Services;

(f) by clause 3 of the Service Schedule, SunWater, *inter alia*, agreed to review the operation of the flood control centre, now called the Flood Operations Centre, required to be established by SunWater pursuant to clause 5 of the Service Schedule ("**Flood Operations Centre**") and the "Flood Alert Network" each year and prepare an annual report on upgrade and maintenance requirements for the following financial year;

(g) by clause 4 of the Service Schedule, SunWater, *inter alia*, agreed to perform maintenance of equipment or components as required;

(h) by clause 5 of the Service Schedule, SunWater, *inter alia*, agreed:

(i) to be prepared competently to deal with flood events in accordance with the requirements of any EAPs, SOPs and the Flood Mitigation Manual;

(ii) to establish a dedicated Flood Operations Centre and to maintain the Flood Operations Centre in good operating order at all times thought the term of the Flood Management Services Agreement;

(iii) to ensure that the flood response teams for the Flood Operations Centre were fully familiar with all the capabilities of the real time flood model supplied to SunWater by Seqwater (the "**RTFM**") and were capable of maintaining the RTFM and its connections in operational order and using the RTFM to its full extent during flood events;

(iv) to make arrangements and connections to link the RTFM to the "Flood ALERT Network" system installed by Seqwater and the backup RTFM; and

(v) to submit to Seqwater prior to 30 September each year a formal "Statement of Preparedness";

(i) by clause 6 of the Service Schedule, SunWater, *inter alia*, agreed:

(i) to perform flood operations during flood events in accordance with the relevant provisions of the EAPs and SOPs which referred to the Flood Mitigation Manual; and

(ii) to prepare during the drainage phase of a flood event a report to be completed and submitted to Seqwater within two weeks of the end of the flood event;

(j) in relation to "Flood Operations" as pleaded in paragraph 78(a), Seqwater repeats paragraph 113 above; and

(k) subject to the matters pleaded in paragraphs (a) to (j) above, Seqwater otherwise admits the allegations pleaded in paragraph 78.

137 Seqwater admits the allegations pleaded in paragraph 79 of the FASOC.

138 Seqwater admits the allegations pleaded in paragraph 80 of the FASOC.

139 Seqwater admits the allegations pleaded in paragraph 81 of the FASOC.

140 Seqwater admits the allegations pleaded in paragraph 82 of the FASOC.

141 Seqwater admits the allegations pleaded in paragraph 83 of the FASOC.

142 In relation to paragraph 84 of the FASOC, Seqwater:

(a) repeats paragraphs 135 to 141 above;

(b) admits paragraph 84(a);

(c) denies paragraph 84(b) and:

(i) repeats paragraph 113 above in relation to "Flood Operations" as pleaded; and

(ii) pleads that pursuant to the Flood Management Services Agreement as extended in accordance with the agreements pleaded in paragraphs 81 to 83 of the FASOC, SunWater agreed to provide to Seqwater the Services including in relation to the Flood Operations Centre, as pleaded in paragraph 136(a) to (i) above; and

(d) in relation to paragraph 84(c):

(i) repeats paragraph 113 above in relation to "Flood Operations" as pleaded;

(ii) pleads that pursuant to the Flood Management Services Agreement as extended in accordance with the agreements pleaded in paragraphs 81 to 83 of the FASOC, SunWater agreed to provide to Seqwater the Services including in relation to the Flood Operations Centre, as pleaded in paragraph 136(a) to (i) above; and

(iii) subject to the matters pleaded in paragraphs (i) and (ii) above, otherwise admits the allegations pleaded in paragraph 84(c).

J The Flood Mitigation Manual

Status, Purpose and Objectives of the Flood Mitigation Manual

143 In relation to paragraph 85 of the FASOC, Seqwater:

(a) admits that the Flood Mitigation Manual was prepared following a six month period of investigation, consultation and review that was completed in or around December 2009;

(b) pleads that Seqwater, as the owner of Somerset Dam and Wivenhoe Dam, was required to give the Chief Executive of DERM a copy of the Flood Mitigation Manual for approval;

(c) pleads that the Chief Executive of DERM may have approved the Flood Mitigation Manual by gazette notice;

(d) pleads that any approval of the Flood Mitigation Manual must have been for a period of not more than five years;

(e) pleads that the Chief Executive of DERM may have obtained advice from an advisory council before approving the Flood Mitigation Manual;

Particulars of (b) to (e)

Water Supply (Safety and Reliability) Act 2008 (Qld), sections 371-372.

(f) pleads that from or about January 2010, being from when the Flood Mitigation Manual was notified in the Queensland Government Gazette, and at all times during December 2010 and January 2011, the operational decisions regarding flood releases from Somerset Dam and Wivenhoe Dam during flood events, including the operation of any of the Primary Outlet Works and any of the Somerset Dam Gates, were governed by the Flood Mitigation Manual, as pleaded in paragraphs 18(b) and 47(b) above; and

(g) subject to the matters pleaded in paragraphs (a) to (f) above, otherwise admits the allegations pleaded in paragraph 85.

144 In relation to paragraph 86 of the FASOC, Seqwater:

(a) repeats paragraphs 136(d) and (h) and 143(b) above;

(b) repeats paragraph 113 above in relation to “Flood Operations” as pleaded; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 86.

145 In relation to paragraph 87 of the FASOC, Seqwater:

(a) pleads that pursuant to section 1.3 of the Flood Mitigation Manual, the purpose of the Flood Mitigation Manual was:

(i) to define procedures for the operation of Somerset Dam and Wivenhoe Dam to reduce, so far as practicable, the effects of flooding associated with the dams; and

(ii) to be achieved by the proper control and regulation, in time of flood, of the releases and infrastructure at the dams, with due regard to the safety of the dam structures;

(b) repeats paragraph 113 above in relation to “Flood Operations” as pleaded; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 87.

146 Seqwater admits the allegations pleaded in paragraph 88 of the FASOC.

147 In relation to paragraph 89 of the FASOC, Seqwater:

(a) admits that, in meeting the objectives in section 3.1 of the Flood Mitigation Manual (which are pleaded in paragraph 88 of the FASOC), Somerset Dam and Wivenhoe Dam were required to be operated to account for the potential effects of closely spaced flood events, (the term “Flood Event” being defined in section 1.2 of the Flood Mitigation Manual, namely, being a situation where the “Duty Flood Operations Engineer” expects the water level in either of Wivenhoe Dam or Somerset Dam to exceed the FSL for that dam);

(b) pleads that:

(i) section 3.1 of the Flood Mitigation Manual also required that Somerset Dam and Wivenhoe Dam be operated to prevent, where possible, the trigger of one or more of the Auxiliary Spillway Fuse Plugs; and

(ii) by section 3.2 of the Flood Mitigation Manual, the structural safety of both Somerset Dam and Wivenhoe Dam was required to be the first consideration in the operation of the dams for the purposes of flood mitigation; and

(c) subject to the matters in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 89.

Flood Operations Personnel and Responsibilities

148 Seqwater admits the allegations pleaded in paragraph 90 of the FASOC.

149 In relation to paragraph 91 of the FASOC, Seqwater:

(a) admits that Robert Ayre and John Ruffini were the two persons authorised to perform the function of “Senior Flood Operations Engineer”, as defined in section 1.2 of the Flood Mitigation Manual, during December 2010 and January 2011, as pleaded in paragraph 91(a);

(b) pleads that in the period December 2010 to January 2011:

(i) Mr Ayre was an employee of SunWater; and

(ii) Mr Ruffini was an employee of DERM; and

(c) in relation to paragraph 91(b):

(i) pleads that Mr Ayre acted as the Senior Flood Operations Engineer during the period December 2010 to January 2011 except for the period from on or about 10 December 2010 to on or about 19 December 2010 while Mr Ayre was on holiday and during which period Mr Ruffini acted as the Senior Flood Operations Engineer; and

Particulars of (c)(i)

(A) Flood Event Log, entry for 10 December 2010 at 16:00:00 [SEQ.001.011.4349].

(B) Flood roster for the six week period beginning 29 November 2010, [SEQ.001.018.5694].

(C) Mr Ayre was next rostered on for duty at the Flood Operations Centre on 19 December 2010 at 07.00, as was recorded in the Flood Operations Centre sign on sheet [SEQ.004.025.0181].

(ii) subject to paragraph (i) above, otherwise denies the allegations pleaded in paragraph 91(b).

150 Seqwater does not plead to paragraph 92 of the FASOC as it contains no allegations against Seqwater.

151 Seqwater does not plead to paragraph 93 of the FASOC as it contains no allegations against Seqwater.

152 In relation to paragraph 94 of the FASOC, Seqwater:

(a) admits, in relation to the allegations pleaded in paragraph 94(a), that a function of the Senior Flood Operations Engineer when on duty was:

(i) to be in charge of “Flood Operations”, as that expression is used in section 2.2 of the Flood Mitigation Manual, during a Flood Event;

(ii) denies that “Flood Operations” as used in section 2.2 of the Flood Mitigation Manual has the meaning pleaded in paragraph 55 of the FASOC; and

(iii) repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 55 of the FASOC;

(b) admits the allegations pleaded in paragraphs 94(b) and (c); and

(c) pleads, in relation to the allegations pleaded in paragraph 94(d), that:

(i) by clause 2.3 of the Flood Mitigation Manual, a function of the Senior Flood Operations Engineer when on duty was to apply reasonable discretion in managing a Flood Event as described in section 2.8 of the Flood Mitigation Manual;

(ii) section 2.8 required that if the Senior Flood Operations Engineer was of the opinion that it was necessary to depart from the procedures set out in the Flood Mitigation Manual to meet the flood mitigation objectives set out in section 3 of the Flood Mitigation Manual, the Senior Flood Operations Engineer was authorised to adopt such procedure as considered necessary subject to:

(A) making a reasonable attempt within a reasonable period of time to consult with both the chairperson of Seqwater and the chief executive of DERM; and

(B) complying with departures from the Flood Mitigation Manual authorised by the chief executive of DERM or the chairperson of Seqwater, if they could be contacted within a reasonable time; and

(iii) subject to paragraphs (c)(i) and (ii) above, otherwise admits the allegations pleaded in paragraph 94(d).

153 Seqwater admits the allegations pleaded in paragraph 95 of the FASOC.

154 In relation to paragraph 96 of the FASOC, Seqwater:

(a) admits that Terrence Malone and John Tibaldi were authorised to perform the function of "Flood Operations Engineer", as defined in section 1.2 of the Flood Mitigation Manual, during December 2010 and January 2011;

(b) pleads that except for the period from on or about 10 December 2010 to 19 December 2010 during which period Mr Ruffini acted as the Senior Flood Operations Engineer as pleaded in paragraph 149(c) above, Mr Ruffini also acted as a Flood Operations Engineer during December 2010 and January 2011; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 96.

155 Seqwater admits the allegations pleaded in paragraph 97 of the FASOC.

156 In relation to paragraph 98 of the FASOC, Seqwater:

(a) admits the allegations pleaded in paragraphs 98(a) and (c); and

(b) denies paragraph 98(b) and pleads that by section 2.4 of the Flood Mitigation Manual:

(i) a function of a Flood Operations Engineer when on duty was to follow any direction from the Senior Flood Operations Engineer in relation to applying the Senior Flood Operations Engineer's reasonable discretion in managing a Flood Event as described in section 2.8 of the Flood Mitigation Manual; and

(ii) unless otherwise directed, a Flood Operations Engineer was to follow the Flood Mitigation Manual in managing Flood Events and was not to apply reasonable discretion unless directed by the Senior Flood Operations Engineer or the chief executive of DERM.

157 In relation to paragraph 99 of the FASOC, Seqwater:

(a) repeats paragraph 152(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 99.

158 Seqwater admits the allegations pleaded in paragraph 100 of the FASOC.

159 Seqwater admits the allegations pleaded in paragraph 101 of the FASOC.

Definition of "Flood Event"

160 In relation to paragraph 102 of the FASOC, Seqwater admits the allegations pleaded and repeats paragraph 147(a) above.

161 In relation to paragraph 103 of the FASOC, Seqwater:

(a) repeats paragraphs 43(b)(i) and 147(a) above;

(b) pleads by reason of the matters pleaded in paragraph (a) above, a Flood Event pursuant to the Flood Mitigation Manual would commence in relation to Wivenhoe Dam at the time when the Duty Flood Operations Engineer expected the level of Lake Wivenhoe to exceed 67.0m AHD;

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 103.

162 In relation to paragraph 104 of the FASOC, Seqwater:

(a) repeats paragraphs 16(a)(i) and 147(a) above;

(b) pleads by reason of the matters pleaded in paragraph (a) above, a Flood Event pursuant to the Flood Mitigation Manual would commence in relation to Somerset Dam at the time when the Duty Flood Operations Engineer expected the level of Lake Somerset to exceed 99.0m AHD; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 104.

Wivenhoe Dam Flood Operations Strategies

163 In relation to paragraph 105 of the FASOC, Seqwater:

(a) pleads that section 8.4 of the Flood Mitigation Manual specified four strategies to be used when operating Wivenhoe Dam during a flood event based on the flood objectives of the Flood Mitigation Manual pleaded in paragraph 88 of the FASOC, being:

(i) Strategy W1;

(ii) Strategy W2;

(iii) Strategy W3; and

(iv) Strategy W4,

(collectively, the "**Wivenhoe Flood Strategies**");

(b) pleads that Strategy W1 was itself comprised of five strategies being:

(i) Strategy W1A;

(ii) Strategy W1B;

(iii) Strategy W1C;

(iv) Strategy W1D; and

(v) Strategy W1E;

(c) pleads that Strategy W4 was itself comprised of two strategies being:

(i) Strategy W4A; and

(ii) Strategy W4B;

(d) repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 55 of the FASOC;

(e) denies that the Wivenhoe Flood Strategies pleaded in paragraph (a) above were “Flood Operations” strategies as that expression is pleaded in paragraph 55 of the FASOC; and

(f) subject to the matters pleaded in paragraphs (a) to (e) above, otherwise admits the allegations pleaded in paragraph 105.

164 Seqwater admits the allegations pleaded in paragraph 106 of the FASOC.

165 Seqwater denies the allegations pleaded in paragraph 106A of the FASOC and pleads, further, that:

(a) not all forecast or observed rainfall will result in runoff;

(b) whether runoff results from observed and/or forecast rainfall will depend upon:

(i) the initial Loss in millimetres, which is dependent upon catchment conditions at the event start time;

(ii) the continuing Loss rate in millimetres per hour, which is the depth of rainfall which is not converted to runoff;

Particulars

A. The term “Loss” is used to describe all of the factors involved in reducting the runoff during a flood event, including moisture intercepted by vegetation (“interception loss”), infiltration into the soil (“infiltration”), retention on the surface (“depression storage”), evaporation and loss through the streambed and banks.

B. Initial Loss is the depth of rainfall at the commencement of a flood event which is lost into the ground before runoff commences. The initial Loss value is generally estimated from the Antecedent Precipitation Index model at the start of a flood event and adjusted during the early stages of the flood event to match the recorded rises at gauging stations.

C. The continuing Loss rate is the water which is not converted to runoff even after the initial Loss is satisfied. The contining Loss rate is adjusted for each model during the flood event to match the rated flows and water level data.

(iii) the temporal pattern of the rainfall;

(iv) the spatial pattern of the rainfall; and

(v) whether the forecast rainfall actually occurs.

(c) for the purposes of this defence, the term "**Significant Rainfall**" is used to refer to a situation where the Flood Engineers considered that there would be sufficient rainfall to produce runoff that would have a measurable or quantifiable impact upon the water levels in Somerset Dam, Wivenhoe Dam or gauging stations.

166 Seqwater denies the allegations pleaded in paragraph 106B of the FASOC.

167 In relation to paragraph 107 of the FASOC, Seqwater pleads that:

(a) pursuant to section 8.4 of the Flood Mitigation Manual, the following factors were to be taken into account by the Flood Engineers when considering whether to change the use of one Wivenhoe Flood Strategy to another:

(i) the actual water level of Somerset Dam and Wivenhoe Dam;

(ii) the following predictions, based on the best forecast rainfall and stream flow information available at the time:

(A) the maximum storage levels in Wivenhoe and Somerset Dams; and

(B) the peak flow rates at the Lowood gauge and the Moggill gauge respectively, excluding Wivenhoe Dam releases;

(b) pursuant to section 8.4 of the Flood Mitigation Manual, the Flood Engineers were to change from one Wivenhoe Flood Strategy to another in order to maximise the flood mitigation benefits and protect the structural safety of Wivenhoe Dam and Somerset Dam;

(c) further to (a) and (b) above, pursuant to section 3.3 of the Flood Mitigation Manual:

(i) the primary purpose of incorporating flood mitigation measures into Somerset Dam and Wivenhoe Dam was to reduce flooding in the urban areas of the floodplains below Wivenhoe Dam; and

(ii) accordingly, the peak flows of floods emanating from the upper catchments of the Brisbane River and Stanley River could be reduced by managing flood releases from Somerset Dam and Wivenhoe Dam, while taking into account flows emanating from the Downstream Catchments;

(d) pursuant to section 8.4 of the Flood Mitigation Manual, when determining dam outflows within all strategies, peak outflow should generally not exceed peak inflow; and

(e) subject to the matters pleaded in paragraph (a) to (d) above, Seqwater otherwise denies the allegations pleaded in paragraph 107.

168 Seqwater denies the allegations pleaded in paragraph 108 of the FASOC and, further:

(a) repeats paragraphs 32(a) to (h) and 33 above;

(b) pleads that the operation of the Wivenhoe Power Station is, and was during December 2010 and January 2011, outside the control of Seqwater, the Flood Engineers or any of the Defendants; and

(c) pleads that pursuant to section 8.1 of the Flood Mitigation Manual, the operation of the Wivenhoe Power Station and related releases or extractions made from the reservoir behind Splityard Creek Dam into Lake Wivenhoe were matters to be considered by the Flood Engineers in assessing the various trigger levels of Wivenhoe Dam.

169 Seqwater denies the allegations pleaded in paragraph 109 of the FASOC and pleads, further, that:

(a) pursuant to section 8.4 of the Flood Mitigation Manual:

(i) the primary consideration when operating Wivenhoe Dam in Strategy W1 was minimising disruption to rural life downstream of Wivenhoe Dam and the intent of Strategy W1 was not to submerge the bridges downstream of Wivenhoe Dam unnecessarily or prematurely;

(ii) Strategy W1 applied when:

(A) the level of Lake Wivenhoe was less than 68.5m AHD;

(B) the maximum allowable rate of release was 1,900 m^3/s; and

(C) in determining the rate of release, the Flood Engineers were to take into account downstream flows;

(iii) if implementing Strategies W1A to W1E, consideration had to be given to the current level of Lake Wivenhoe and any releases from Wivenhoe Dam were, in general, to be selected such that the combined flow from Lockyer Creek and Wivenhoe Dam releases was less than the limiting values of

Strategies W1A to W1E, in order to avoid the submergence of the particular bridges identified in section 8.4 of the Flood Mitigation Manual; and

(iv) the Flood Engineers could continue to apply Strategy W1 until the level of Lake Wivenhoe reached 68.5m AHD, at which time they were obliged to switch to Strategy W2 or W3, as appropriate;

(b) pursuant to section 8.3 of the Flood Mitigation Manual, the Wivenhoe Dam Radial Gates could not be opened for flood mitigation purposes prior to the level of Lake Wivenhoe exceeding 67.25m AHD (the "**Gate Trigger Level**"); and

(c) further to (b) above, the decision as to when, and in what circumstances, the Wivenhoe Dam Radial Gates were to be opened for flood mitigation purposes once Lake Wivenhoe exceeded Gate Trigger Level was within the discretion of the Duty Flood Operations Engineer.

170 In relation to paragraph 110 of the FASOC, Seqwater:

(a) repeats paragraph 169(a) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 110.

171 Seqwater denies the allegations pleaded in paragraph 111 of the FASOC and pleads, further, that pursuant to section 8.4 of the Flood Mitigation Manual:

(a) under Strategy W2 the primary consideration changed from disruption to rural life downstream of Wivenhoe Dam to protecting urban areas downstream of Wivenhoe Dam from inundation with a focus on the areas of Lowood and Fernvale;

(b) the lower level objectives pleaded in paragraph 88 of the FASOC were to be considered in assessing whether and in what manner to implement Strategy W2, with the objectives to be considered in order of their respective importance;

(c) Strategy W2 applied when:

(i) the level of Lake Wivenhoe was predicted to be between 68.5 and 74.0m AHD; and

(ii) the maximum release from Wivenhoe Dam was predicted to be less than 3,500m^3/s;

(d) further to (c) above, the Flood Engineers were required to transition to Strategy W2 or W3, as appropriate, once the level of Lake Wivenhoe reached 68.5m AHD;

(e) the intention in implementing Strategy W2 was limiting the flow in the Brisbane River downstream of Wivenhoe Dam to less than the naturally occurring peaks at Lowood and Moggill, while remaining within the upper limit of non-damaging floods at Lowood (being 3,500m^3/s); and

(f) further to paragraphs (c) to (e) above, when implementing Strategy W2, the combined peak flows in the Brisbane River, including flows from Lockyer Creek and the Bremer River, should not exceed:

(i) at Lowood, the lesser of:

(A) the natural peak flow in the Brisbane River at Lowood, including flows from Lockyer Creek but excluding releases from Wivenhoe Dam; and

(B) 3,500m^3/s; and

(ii) at Moggill, the lesser of:

(A) the natural peak flow in the Brisbane River at Moggill, including flows from Lockyer Creek and the Bremer River but excluding releases from Wivenhoe Dam; and

(B) 4,000m^3/s,

otherwise Strategy W2 should not be implemented; and

(g) if the combined peak flows specified in (f) above could not be met, Strategy W2 could not be applied and Strategy W3 should be implemented.

172 In relation to paragraph 112 of the FASOC, Seqwater:

(a) repeats paragraphs 171(a), (b), (c) and (g) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 112.

173 In relation to paragraph 113 of the FASOC, Seqwater:

(a) repeats paragraph 171 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 113.

174 Seqwater denies the allegations pleaded in paragraph 114 of the FASOC and pleads, further, that pursuant to section 8.4 of the Flood Mitigation Manual:

(a) similar to Strategy W2, the primary consideration when operating Wivenhoe Dam in Strategy W3 was protecting urban areas downstream of Wivenhoe Dam from inundation, except with the focus on Moggill and areas downstream of Moggill;

(b) further to (a) above, the lower level objectives pleaded in paragraph 88 of the FASOC were to be considered in assessing whether and in what manner to implement Strategy W3, with the objectives to be considered in order of their respective importance;

(c) Strategy W3 applied when:

(i) the level of Lake Wivenhoe was predicted to be between 68.5 and 74.0m AHD; and

(ii) the maximum flow at Moggill, including releases from Wivenhoe Dam and flows from the Lockyer Creek and Bremer River, was likely to exceed 4,000m^3/s;

(d) subject to (e) below, in implementing Strategy W3, the maximum release from Wivenhoe Dam should not exceed 4,000m^3/s;

(e) the intent in implementing Strategy W3 was limiting the flow in the Brisbane River, including flows from Lockyer Creek and the Bremer River, at Moggill to less than 4,000m^3/s;

(f) further to paragraph (e) above however, if due to flows from the Lockyer Creek and the Bremer River catchments the flow in the Brisbane River at Moggill exceeded 4,000m^3/s, the flow at Moggill was to be kept as low as possible; and

(g) further to paragraphs (d) to (f) above, when implementing Strategy W3, the maximum combined peak flows in the Brisbane River, including flows from Lockyer Creek and the Bremer River:

(i) prior to the natural peak flow in the Brisbane River at Moggill, including flows from Lockyer Creek and the Bremer River but excluding releases from Wivenhoe Dam, should be minimised; and

(ii) after the natural peak flow in the Brisbane River at Moggill, including flows from Lockyer Creek and the Bremer River but excluding releases from Wivenhoe Dam, should be lowered to 4,000m^3/s as soon as possible.

175 In relation to paragraph 115 of the FASOC, Seqwater:

(a) repeats paragraphs 174(a) to (g) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 115.

176 Seqwater denies the allegations pleaded in paragraph 116 of the FASOC and, further, pleads that pursuant to section 8.4 of the Flood Mitigation Manual:

(a) the primary consideration when operating Wivenhoe Dam in Strategy W4 was protecting the structural safety of Wivenhoe Dam;

(b) further to (a) above, the lower level objectives pleaded in paragraph 88 of the FASOC were to be considered in assessing whether and in what manner to implement Strategy W4, with the objectives to be considered in order of their respective importance;

(c) Strategy W4 applied when the level of Lake Wivenhoe was predicted to exceed 74.0m AHD;

(d) in operating Wivenhoe Dam in Strategy W4, there was no limit on the maximum release rate from Wivenhoe Dam, however the opening of the Wivenhoe Dam Radial Gates was to occur, generally, in accordance with section 8.6 of the Flood Mitigation Manual until the storage level of Wivenhoe Dam began to fall;

(e) the intent in implementing Strategy W4 was to ensure the safety of Wivenhoe Dam while limiting impacts downstream of Wivenhoe Dam as much as possible; and

(f) further to paragraphs (a) to (e) above, the impact of rapidly increasing discharge from Wivenhoe Dam on areas downstream of Wivenhoe Dam was to be considered in determining whether and in what manner Strategy W4 should be implemented.

177 In relation to paragraph 117 of the FASOC, Seqwater:

(a) repeats paragraphs 176(a) to (f) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 117.

178 Seqwater denies the allegations pleaded in paragraph 118 of the FASOC and, further, pleads that:

(a) pursuant to section 8.5 of the Flood Mitigation Manual, in general, the closure of the Wivenhoe Dam Radial Gates was to occur in the reverse order to the opening of the Wivenhoe Dam Radial Gates;

(b) pursuant to section 8.5 of the Flood Mitigation Manual, subject to the provisions of the Flood Mitigation Manual, the closure of all of the Wivenhoe Dam Radial Gates

should occur when the level of Lake Wivenhoe had reached the FSL for Wivenhoe Dam (67.0m AHD);

(c) pursuant to section 8.5 of the Flood Mitigation Manual, the following matters were to be considered in determining whether and in what sequence to close the Wivenhoe Dam Radial Gates:

(i) where possible, the total releases during the closing of the Wivenhoe Dam Radial Gates should not produce greater flood levels downstream of Wivenhoe Dam than occurred during the flood event;

(ii) the maximum discharge from Wivenhoe Dam during the closure of the Wivenhoe Dam Radial Gates should generally be less than the peak inflow into Lake Wivenhoe experienced during the flood event;

(iii) if, at the time the level of Lake Wivenhoe begins to fall, the combined flow at Lowood was in excess of 3,500m^3/s, then the combined flow at Lowood was to be reduced to 3,500m^3/s as quickly as practicable;

(iv) the aim of emptying floodwaters stored above the FSL for Wivenhoe Dam (67.0m AHD) within seven days after the flood peak has passed, however, if there were a favourable weather outlook, this could be relaxed for the volume of water between the FSL and 67.5m AHD in order to obtain positive environmental outcomes;

(v) if the flood storage capacities of Somerset Dam and Wivenhoe Dam could be emptied within seven days, the maximum flow in the Brisbane River at Lowood should not exceed 3,500m^3/s; and

(vi) to minimise the stranding of fish downstream of Wivenhoe Dam, the final closure sequences should consider Seqwater's policies relating to fish protection at Wivenhoe Dam;

(d) further to paragraph (c) above, pursuant to section 8.5 of the Flood Mitigation Manual there may be a need to take into account base flow when determining final gate closure; and

(e) further to paragraphs (c) and (d) above, if base flow was taken into account in determining final gate closure, it was possible that the level of Lake Wivenhoe would temporarily fall below FSL to allow for Wivenhoe Dam to be at FSL at the end of the Flood Event.

Somerset Dam Flood Operations Strategies

179 In relation to paragraph 119 of the FASOC, Seqwater:

(a) pleads that by sections 1.1, 9.1 and 9.3 of the Flood Mitigation Manual, Somerset Dam and Wivenhoe Dam were to be operated in conjunction so as to:

(i) ensure the structural safety of the dam;

(ii) maximise the overall flood mitigation capabilities of Somerset Dam and Wivenhoe Dam; and

(iii) optimise the flood mitigation benefits downstream of Wivenhoe Dam; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 119.

180 Seqwater admits the allegations pleaded in paragraph 120 of the FASOC and pleads, further that the three strategies to be used when operating Somerset Dam during a flood event as specified in section 9.3 of the Flood Mitigation Manual (the "**Somerset Flood Strategies**"), were based on the flood objectives of the Flood Mitigation Manual pleaded in paragraph 88 of the FASOC.

181 Seqwater admits the allegations pleaded in paragraph 121 of the FASOC.

182 In relation to paragraph 122 of the FASOC, Seqwater pleads that pursuant to section 9.3 of the Flood Mitigation Manual:

(a) in considering whether to change the use of one Somerset Flood Strategy to another, the Flood Engineers were to take into account predictions of the maximum storage levels in Somerset Dam and Wivenhoe Dam, taking into account the best forecast rainfall and stream flow information available at the time;

(b) the Flood Engineers were to change the use of one Somerset Flood Strategy to another in order to maximise the flood mitigation benefits of Somerset Dam and Wivenhoe Dam and to protect the structural safety of both dams; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, Seqwater otherwise denies the allegations pleaded in paragraph 122.

183 Seqwater denies the allegations pleaded in paragraph 123 of the FASOC and pleads, further, that pursuant to section 9.3 of the Flood Mitigation Manual:

(a) in operating Somerset Dam in Strategy S1, the objective was to return Lake Somerset to the FSL for Somerset Dam with the intent of minimising the impact on rural life upstream of Somerset Dam;

(b) in addition to paragraph (a) above, a further consideration in operating Somerset Dam in Strategy S1 was minimising the downstream environmental impacts from any releases made from Somerset Dam;

(c) Strategy S1 applied when:

(i) the level of Lake Somerset was expected to exceed the FSL for Somerset Dam (99.0m AHD); and

(ii) the level of Lake Wivenhoe was not expected to exceed the FSL for Wivenhoe Dam (67.0m AHD),

during the course of the Flood Event;

(d) in implementing Strategy S1:

(i) the Sluice Gates and Somerset Dam Regulators were to be used to maintain the level of Lake Somerset below 102.0m AHD, being the deck level of Mary Smokes Bridge; and

(ii) the release rate from Somerset Dam was not to exceed the peak inflow into the dam; and

(e) while Strategy S1 was in place, the Somerset Dam crest gates were to be raised to enable uncontrolled discharge.

184 In relation to paragraph 124 of the FASOC, Seqwater:

(a) repeats paragraph 183 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 124.

185 In relation to paragraph 125 of the FASOC, Seqwater:

(a) repeats paragraph 183 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 125.

186 In relation to paragraph 126 of the FASOC, Seqwater:

(a) repeats paragraph 183 above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 126.

187 Seqwater denies the allegations pleaded in paragraph 127 of the FASOC and, further, pleads that pursuant to section 9.3 of the Flood Mitigation Manual:

(a) the intent in implementing Strategy S2 was to maximise the benefits of the flood storage capabilities of Somerset Dam while protecting the structural safety of both Somerset Dam and Wivenhoe Dam;

(b) Strategy S2 applied when:

(i) the level of Lake Somerset was expected to exceed the FSL for Somerset Dam (99.0m AHD); and

(ii) the level of Lake Wivenhoe:

(A) was expected to exceed the FSL for Wivenhoe Dam (67.0m AHD); but

(B) not expected to exceed 75.5m AHD, being the trigger level for the first (i.e. lowest) Auxiliary Spillway Fuse Plug,

during the course of the Flood Event;

(c) in operating Somerset Dam in Strategy S2:

(i) if the level of Lake Wivenhoe was rising and the level of Lake Somerset was below 100.45m AHD, the Somerset Dam Regulators and Sluice Gates were generally to be kept closed; and

(ii) if the level of Lake Wivenhoe was rising and the level of Lake Somerset was above 100.45m AHD, then:

(A) flood operations were to follow the Operating Target Line as the flood event progressed;

(B) the release rate from Somerset Dam generally was not to exceed the peak inflow into the dam; and

(iii) if the level of Lake Wivenhoe was falling and the level of Lake Somerset was above 100.45m AHD, then:

(A) the opening of the Somerset Dam Regulators and Sluice Gates should generally not cause the level of Lake Wivenhoe to rise significantly; and

(B) the release rate from Somerset Dam generally was not to exceed the peak inflow into the dam; and

(iv) if the flood event emanated mainly from the Stanley River catchment without significant runoff in the Upper Brisbane River catchment, then:

(A) the Somerset Dam Regulators and Sluice Gates were to be used to maintain the level of Lake Somerset below 102.0m AHD, being the deck level of Mary Smokes Bridge; and

(B) the release rate from Somerset Dam generally was not to exceed the peak inflow into the dam;

(d) while Strategy S2 was in place, the Somerset Dam Crest Gates were raised to enable uncontrolled discharge; and

(e) the Operating Target Line was based on:

(i) equal minimisation of the risk of failure based on peak levels in Lake Wivenhoe and Lake Somerset in relation to the associated failure levels of Somerset Dam and Wivenhoe Dam;

(ii) the minimisation of flows in the Brisbane River downstream of Wivenhoe Dam; and

(iii) consideration of the time needed at the onset of a Flood Event to assess properly the magnitude of the event and its likely impacts, so that the likely optimal strategy to maximise the flood mitigation benefits of Lake Wivenhoe and Lake Somerset could be selected.

188 In relation to paragraph 128 of the FASOC, Seqwater:

(a) repeats paragraph 187 above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 128.

189 In relation to paragraph 129 of the FASOC, Seqwater:

(a) repeats paragraph 187 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 129.

190 Seqwater denies the allegations pleaded in paragraph 130 of the FASOC and, further, pleads that pursuant to section 9.3 of the Flood Mitigation Manual:

(a) subject to paragraph (c) below, the intent in implementing Strategy S3 was to maximise the benefits of the flood storage capabilities of Somerset Dam while protecting the structural safety of both Somerset Dam and Wivenhoe Dam;

(b) Strategy S3 applied when:

(i) the level of Lake Somerset was expected to exceed the FSL for Somerset Dam (99.0m AHD); and

(ii) the level of Lake Wivenhoe was expected to exceed 75.5m AHD, being the level of the lowest Auxiliary Spillway Fuse Plug,

during the course of the Flood Event; and

(c) in implementing Strategy S3, in order to prevent the trigger of the first Auxiliary Spillway Fuse Plug at 75.5m AHD, consideration could be given to the temporary departure from the matters pleaded in paragraphs 187(c) to (e) above in relation to the operation of Strategy S2, subject to the following conditions:

(i) the safety of Somerset Dam was the primary concern and could not be compromised; and

(ii) the peak level in Lake Somerset could not exceed 109.7m AHD.

191 In relation to paragraph 131 of the FASOC, Seqwater:

(a) repeats paragraph 190 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 131.

192 In relation to paragraph 131A of the FASOC, Seqwater:

(a) repeats paragraph 190 above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 131A.

193 Seqwater denies the allegations pleaded in paragraph 132 of the FASOC and, further, pleads that pursuant to section 9.4 of the Flood Mitigation Manual:

(a) in general, the closure of the Somerset Dam Gates was:

(i) to commence when the level of Lake Somerset began to fall; and

(ii) to occur in the reverse order to the opening of the Somerset Dam Gates;

(b) subject to the provisions of the Flood Mitigation Manual, the final closure of the Somerset Dam Gates should occur when the level of Lake Somerset had reached the FSL for Somerset Dam (99.0m AHD);

(c) the following matters were to be considered in determining whether and in what sequence to close the Somerset Dam Gates:

(i) unless determined otherwise by the Senior Flood Operations Engineer in accordance with section 2.8 of the Flood Mitigation Manual, the aim was to empty stored floodwaters within seven days after the flood peak has passed through Somerset Dam and Wivenhoe Dam; and

(ii) to minimise the stranding of fish downstream of Somerset Dam, the final closure sequences should consider Seqwater's policies relating to fish protection at Somerset Dam; and

(d) taking into account base flow when determining the final closing of the Somerset Dam Gates, which may result in Lake Somerset temporarily falling below the FSL so that Lake Somerset was at the FSL at the end of the Flood Event.

K The Real Time Flood Model

194 Seqwater admits the allegations pleaded in paragraph 133 of the FASOC.

195 Seqwater admits the allegations pleaded in paragraph 134 of the FASOC.

196 Seqwater admits the allegations pleaded in paragraph 135 of the FASOC.

197 Seqwater denies the allegations in paragraph 136 of the FASOC and, further, pleads that:

(a) the Real Time Flood Model provided an estimation of flows throughout the Brisbane River Basin based on the observed rainfall (which was the default) and predicted rainfall if included;

(b) the Real Time Flood Model was comprised of the following modules:

(i) Flood-Col, which:

(A) was the data collection software used in the Flood Operations Centre to collect and display the received rainfall and water level data;

(B) processed the data for input into Flood-Ops (as described in (ii) below);

(C) could be used to assess whether the data from the field (gauging) stations (which may house multiple rainfall and/or water level sensors) appeared to be recorded correctly; and

(D) if particular sensors did not appear to be recording the data correctly, the relevant sensor could be marked as "Out of Action" so that the data would not be taken into account in the Flood Engineers' hydrologic modelling in Flood-Ops (as described in (ii) below); and

(ii) Flood-Ops, which:

(A) contained a number of individual WT42 event-based hydrologic models that provided coverage over the Somerset Dam Catchment, Wivenhoe Dam Catchment, the Downstream Catchments and the catchment for the Pine River;

(B) processed the rainfall data from Flood-Col to estimate stream flow hydrographs using these hydrologic models;

(C) could be used to process the rainfall and river height data from Flood-Col to provide an estimate of likely flows into, *inter alia*, the following sub-catchment areas:

(1) the Somerset Dam Catchment;

(2) the Wivenhoe Dam Catchment;

(3) the Lockyer Creek Catchment;

(4) the Bremer River Catchment; and

(5) other catchments within the Brisbane River basin; and

(D) was used by the Flood Engineers during the period 1 December 2010 to 19 January 2011, to run models at discrete times to assess whether Significant Rainfall was occurring or was likely to occur in the Brisbane River basin;

(c) the estimation of flows referred to in (b)(ii) above could be undertaken using a range of inputs, including:

(i) actual rainfall recorded in the Somerset Dam Catchment, Wivenhoe Dam Catchment, Lockyer Creek Catchment and Bremer River Catchment; and

(ii) forecast rainfall predicted in the Somerset Dam Catchment, Wivenhoe Dam Catchment, Lockyer Creek Catchment and Bremer River Catchment;

(d) the Flood Engineers would export the modelled flows from Flood-Ops into a gate operations spreadsheet, which was used to, *inter alia*:

(i) further calibrate the flow hydrographs from Flood-Ops to match actual lake levels;

(ii) predict water levels based on future dam inflows determined from the Flood-Ops models;

(iii) evaluate a broad range of gate operations strategies at each of Somerset Dam and Wivenhoe Dam;

(iv) allow the Flood Engineers to investigate a range of gate operating strategies to determine the most appropriate strategy at any point in time in accordance with the Flood Mitigation Manual; and

(v) to support the process described in (iv) above, by providing a broad range of outputs that were used to evaluate potential dam gate operations strategies including:

(A) graphical outputs showing inflows into Somerset Dam and Wivenhoe Dam and the flows generated from the Lockyer Creek Catchment and the Bremer River Catchment;

(B) graphical outputs showing inflows and outflows to and from Somerset Dam and Wivenhoe Dam and modelled Brisbane River flows at Lowood and Moggill;

(C) graphical outputs showing actual and modelled lake levels in Somerset Dam and Wivenhoe Dam; and

(D) a graphical output comparing lake levels in Somerset Dam to those in Wivenhoe Dam (to illustrate how the previous and proposed gate operations strategies are plotting against the Operating Target Line); and

(e) during the period 1 December 2010 to 19 January 2011, the Flood Engineers would validate and adjust iteratively the calibration of hydrologic and gate operations model results against the actual data received in Flood-Col and the manual gauge board readings for the water levels in Somerset Dam and Wivenhoe Dam respectively, as recorded in the Dam Levels Email Readings (as that expression is defined in paragraph 218(e) below).

198 In relation to paragraph 136A of the FASOC, Seqwater:

(a) repeats paragraph 197(b) to (e) above;

(b) pleads that an individual WT42 hydrologic model generated a hydrograph to the outlet of the area represented by that model, which was then frequently used as input to the next linked model;

(c) pleads that the WT42 models only generated surface runoff hydrographs, which did not include an estimate of the predicted base flow calculation;

(d) pleads that estimates of base flow were prepared as part of the gate operations spreadsheet; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, otherwise denies the allegations pleaded in paragraph 136A.

199 In relation to paragraph 136B of the FASOC, Seqwater:

(a) pleads that in order to generate the surface runoff hydrographs in Flood-Ops, it was necessary for the Flood Engineer to undertake a number of processes and specify a number of parameters or assumptions, including:

(i) checking the veracity and validity of the observed raw rainfall and streamflow data in FloodCol;

(ii) completing an infilling process in the FloodCol module to import the processed rainfall and stream flow data into Flood-Ops;

(iii) setting a rainfall extension pattern;

(iv) setting a start time and “time now” for the flood event;

(v) setting a storm duration;

(vi) setting a time step for the surface runoff hydrograph at the start of the flood event;

(vii) setting the non-linear routing coefficient m;

(viii) setting routing parameter K for each sub-region;

(ix) setting initial Loss parameters; and

(x) setting continuing Loss parameters;

(b) pleads that some of the processeses and selection of parameters outlined in paragraph (a) above were iteratively modified during the flood event to match observed data; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 136B.

200 Seqwater denies the allegations pleaded in paragraph 137 of the FASOC and pleads, further, that:

(a) the following forecasts were received in the Flood Operations Centre during December 2010 and January 2011:

(i) quantitative precipitation forecasts, IDQ10003 ("**QPFs**") which were a specific forecast product provided twice per day by the Bureau of Meteorology (the "**BOM**") to Seqwater and SunWater;

(ii) ad hoc severe thunderstorm warnings;

(iii) ad hoc severe weather warnings;

(iv) ad hoc flood warnings;

(v) ad hoc telephone briefings and email communications; and

(vi) ad hoc forecast scenario requests; and

(b) the following forecasts were generally available to be accessed in the Flood Operations Centre during December 2010 and January 2011 (by way of use of the Internet or otherwise):

(i) the Probability Matched Ensemble forecasts (colloquially known as the Poor Man's Ensemble forecast) ("**PME**") which were:

(A) publicly available on the BOM's Internet site and updated twice daily and which comprised:

(1) 24-hour forecasts of rainfall for the current day and the four following days;

(2) a 4-day forecast of rainfall for the current day and the three following days and a further 4-day forecast for the fifth to eighth days; and

(3) an 8-day forecast of rainfall;

(B) low resolution images produced by the BOM from computer runs commenced at or about 00 UTC (10.00 Australian Eastern Standard Time) (the "**00 UTC Run**") and 12 UTC (22.00 Australian Eastern Standard Time) (the "**12 UTC Run**") respectively;

(C) published on the BOM's "Water and the Land" ("**WATL**") website at http://www.bom.gov.au/jsp/watl/rainfall/pme.jsp at or around 08.00 UTC (18.00 Australian Eastern Standard Time) for the 00 UTC Run or 19.50 UTC (05.50 Australian Eastern Standard Time) for the 12 UTC Run; and

Particulars of (A) to (C)

Australian Government Bureau of Meteorology, NMOC Operations Bulletin No. 85, Operational Upgrades to the Gridded OCF and PME Systems, 30 November 2010 [SEQ.013.006.0001], sections 3.3 and 5;

(ii) SILO meteograms, which were available via a registered user service on the BOM's Internet site;

(iii) Southeast Coast District Forecasts, which were available on the BoM's Internet site; and

(iv) the Interactive Weather and Wave Forecast Maps which were available on the BOM's Internet site;

(c) further to paragraph (b)(i) above, the Flood Engineers did not have access to the high resolution PME system under development by the BOM in or about 2010 as the WATL website could not handle high resolution PME data during December 2010 and January 2011; and

Particulars of (c)

Australian Government Bureau of Meteorology, NMOC Operations Bulletin No. 85, Operational Upgrades to the Gridded OCF and PME Systems, 30 November 2010 [SEQ.013.006.0001], sections 3.3.

(d) in addition to the forecast products referred to in paragraphs (a) and (b) above, during the period 1 December 2010 to 19 January 2011, the Flood Engineers were generally able to access:

(i) a radar service, which provided images of current rainfall, which was available on the BOM's Internet site; and

(ii) the BOM's hydrologic model results, which were available via a registered user service on the BOM's Internet site.

201 Seqwater admits the allegations pleaded in paragraph 138 of the FASOC.

202 Seqwater denies the allegations pleaded in paragraph 139 of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) pleads that the expression "multi-day rainfall forecasts" is devoid of meaning and that a range of forecast products providing rainfall forecasts for more than one day were issued by the BOM during the period 1 December 2010 to 19 January 2011.

203 Seqwater denies the allegations pleaded in paragraph 139A of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) pleads that at all material times, rainfall forecasts were uncertain.

Particulars of (b)

(i) B. Roux and A. Seed, WIRADA Technical Report: Assessment of the Accuracy of NWP Forecasts for Significant Rainfall Events at the Scales Needed for Hydrological Prediction, September 2011, [SEQ.015.001.0003].

(ii) Email from Peter Baddiley of the BOM to Rob Drury of Seqwater dated 1 December 2010 re Forecasting Rainfall in Wivenhoe Dam Catchment [SEC = UNCLASSIFIED] and attached report entitled "Rainfall Forecasting for the Wivenhoe Dam Catchment" [SEQ.001.018.9372] and [SEQ.001.018.9373].

(iii) Mike Bergin and Peter Baddiley, "Rainfall Forecasting for the Wivenhoe Dam Catchment", 24 July 2006 [SEQ.001.018.9373].

204 Seqwater denies the allegations pleaded in paragraph 140 of the FASOC and, further:

(a) repeats paragraph 197 above; and

(b) pleads that:

(i) the RTFM only produces estimates of surface runoff flows at selected locations in the Brisbane River basin;

(ii) levels can be generated from the modelled flows and compared with level observations at some water level sensors which have a rating;

(iii) the RTFM does not model lake levels at Somerset Dam or Wivenhoe Dam (which can be done in the gate operations spreadsheets); and

(iv) forecast rainfall must be manually inserted into the RTFM (normally depth over duration and uniform in time and space).

205 Seqwater denies the allegations pleaded in paragraph 141 of the FASOC and repeats paragraphs 197, 202(a) and 204(b) above.

206 Seqwater admits the allegations pleaded in paragraph 142 of the FASOC.

L Duties of Care

Risk of Harm

207 In relation to paragraph 142A of the FASOC, Seqwater:

(a) denies the allegations pleaded in paragraph 142A;

(b) denies further that during December 2010 and January 2011 or at any other time, there existed the "Risk of Harm to Property" as alleged in paragraph 142A(a) or at all; and

(c) denies further that during December 2010 and January 2011 or at any other time, there existed the "Risk of Interference with Use and Enjoyment" as alleged in paragraph 142A(b) or at all;

(d) denies further that during December 2010 and January 2011 or at any other time, there existed the "Risk of Harm to Businesses" as alleged in paragraph 142A(c) or at all;

(e) pleads that in December 2010 and January 2011, the failure of Wivenhoe Dam or Somerset Dam would have caused catastrophic consequences on populations downstream of Wivenhoe Dam, including the likely loss of life and loss and damage to property;

(f) pleads, further, that in December 2010 and January 2011, there was a risk that if Wivenhoe Dam and Somerset Dam were not operated in accordance with defined procedures, the operation of Wivenhoe Dam and Somerset Dam during flood events might impact the life and in addition, or in the alternative, the property of populations located downstream of Wivenhoe Dam in ways which cause harm to or loss and damage to such life and property, which harm or loss and damage might not otherwise have occurred (the "**Flood Risk**");

(g) pleads, further, that in December 2010 and January 2011, the ability of the Flood Engineers to take steps to minimise the Flood Risk was limited by:

(i) limitations on the Flood Engineers' ability to obtain accurate forecasts of rainfall during flood events;

(ii) limitations on the Flood Engineers' ability to estimate accurately flood run-off within the Somerset Dam Catchment, the Wivenhoe Dam Catchment and the Downstream Catchments;

(iii) limitations on the Flood Engineers' ability to identify all potential flood hazards and the likelihood of their occurrence;

(iv) limitations on the Flood Engineers' ability to remove or reduce community vulnerability to flood hazards;

(v) limitations on the Flood Engineers' ability to respond effectively to flooding; and

(vi) limitations on the Flood Engineers' ability to provide resources in a cost-effective manner; and

(h) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 142A.

208 Seqwater denies the allegations pleaded in paragraph 142B of the FASOC and repeats paragraphs 207(a) to (e) above.

Seqwater's Duty of Care as Owner and Occupier

209 In relation to paragraph 143 of the FASOC, Seqwater:

(a) admits that during December 2010 and January 2011, the Plaintiff could not direct or control the operation of Wivenhoe Dam and Somerset Dam;

(b) repeats paragraphs 207(a) to (e) above;

(c) repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 143; and

(d) otherwise denies the allegations pleaded in paragraph 143.

210 Seqwater denies the allegations pleaded in paragraph 144 of the FASOC and repeats paragraphs 207 to 209 above.

Seqwater's Direct Duty of Care as Sole Licensee under the Water Act

211 Seqwater denies the allegations pleaded in paragraph 145 of the FASOC and repeats paragraphs 134 and 207 to 209 above.

212 Seqwater denies the allegations pleaded in paragraph 146 of the FASOC and:

(a) repeats paragraph 211 above;

(b) denies that during December 2010 and January 2011 or at any other time, Seqwater owed the "Seqwater's Duty as Licensee" as alleged in paragraph 145 of the FASOC or at all; and

(c) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 146.

SunWater's Direct Duty of Care

213 Seqwater does not plead to paragraph 147 of the FASOC as it contains no allegations against Seqwater.

214 Seqwater does not plead to paragraph 148 of the FASOC as it contains no allegations against Seqwater.

Flood Engineers' Duty of Care

215 In relation to paragraph 149 of the FASOC, Seqwater:

(a) admits that during December 2010 and January 2011, the Plaintiff could not direct or control the operation of Wivenhoe Dam and Somerset Dam;

(b) repeats paragraphs 207(a) to (e) above;

(c) repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 149; and

(d) otherwise denies the allegations pleaded in paragraph 149.

216 Seqwater denies the allegations pleaded in paragraph 150 of the FASOC and repeats paragraph 215 above.

M Events of 1 December to 16 December 2010

Rainfall and Inflows

217 Seqwater denies paragraph 151 of the FASOC and pleads further, that the minimum and maximum rainfall recorded in the Automated Local Evaluation in Real Time ("**ALERT**") rainfall sensors in the Brisbane River basin and available in Flood-Col and the average catchment rainfall derived from all available rainfall sensors for the Somerset Dam Catchment, the Wivenhoe Dam Catchment and the Downstream Catchments during the period 1 December 2010 to 19 January 2011 was, approximately, as follows:

24 hour period ending 09:00	Somerset Dam Catchment (mm)			Wivenhoe Dam Catchment (mm)			Lockyer Creek Catchment (mm)			Bremer River Catchment (mm)			Lower Brisbane River Catchment (mm)		
	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max
2/12/2010	5	17	37	1	2	37	1	4	12	4	21	40	7	19	39
3/12/2010	0	0	2	0	0	5	0	0	18	0	1	18	0	0	3
4/12/2010	2	0	14	0	0	12	0	0	20	0	0	20	0	0	12
5/12/2010	12	17	28	0	17	34	21	33	72	11	26	72	10	16	36
6/12/2010	0	9	34	0	0	13	0	2	33	0	3	33	0	0	19
7/12/2010	1	8	39	0	0	70	0	3	32	0	3	32	0	3	70
8/12/2010	10	12	38	0	0	27	0	0	10	0	0	10	0	2	15
9/12/2010	1	0	4	0	0	6	0	0	0	0	0	0	0	0	0
10/12/2010	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
11/12/2010	0	0	0	0	0	4	0	1	14	0	0	1	0	0	0
12/12/2010	0	34	84	0	5	42	1	12	35	1	7	28	1	10	54
13/12/2010	4	11	18	0	0	14	0	0	4	0	0	4	0	0	1
14/12/2010	0	0	0	0	0	0	0	0	18	0	2	18	0	0	0
15/12/2010	0	0	2	0	0	4	0	2	13	0	4	11	0	1	11
16/12/2010	0	0	1	0	1	17	0	0	1	0	1	9	0	2	6
17/12/2010	21	33	45	17	21	46	8	21	37	16	31	48	10	32	59
18/12/2010	3	19	33	0	10	20	0	0	3	0	2	7	0	0	2
19/12/2010	0	1	4	0	3	29	1	5	15	2	4	16	0	0	6
20/12/2010	52	68	91	36	53	92	26	35	41	26	30	37	33	36	62
21/12/2010	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
22/12/2010	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
23/12/2010	1	0	16	0	4	25	4	21	49	4	12	49	3	2	28
24/12/2010	0	0	6	0	5	21	0	0	6	0	4	23	0	0	1
25/12/2010	4	4	20	0	0	58	0	0	15	8	13	47	6	20	58
26/12/2010	1	1	5	0	1	15	0	0	17	0	0	17	1	0	15
27/12/2010	8	12	21	4	15	42	40	46	74	46	58	74	28	35	46
28/12/2010	16	21	33	4	13	30	4	27	71	10	34	71	9	17	34
29/12/2010	3	9	35	0	2	11	0	0	1	0	0	0	0	0	8
30/12/2010	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
31/12/2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/01/2011	0	0	3	0	0	1	0	0	0	0	0	0	0	0	1
2/01/2011	3	7	24	0	0	44	0	0	23	0	0	23	0	0	44
3/01/2011	0	0	0	0	0	3	0	0	4	0	0	0	0	0	0
4/01/2011	0	7	29	0	1	8	0	0	6	0	1	6	0	1	4
5/01/2011	0	0	0	0	0	0	0	3	47	0	2	47	0	0	0
6/01/2011	0	18	47	6	21	41	9	25	46	9	23	46	0	16	47
7/01/2011	11	28	50	11	25	50	14	18	51	8	17	51	20	23	46
8/01/2011	13	29	42	10	22	65	7	12	24	6	8	16	2	6	15
9/01/2011	17	38	103	1	10	50	0	0	7	0	0	5	0	2	11

24 hour period ending 09:00	Somerset Dam Catchment (mm)			Wivenhoe Dam Catchment (mm)			Lockyer Creek Catchment (mm)			Bremer River Catchment (mm)			Lower Brisbane River Catchment (mm)		
	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max	Min	Ave	Max
10/01/2011	155	211	306	29	118	216	27	59	84	17	36	84	56	77	200
11/01/2011	72	97	134	47	102	201	59	88	188	26	62	188	12	58	255
12/01/2011	58	120	219	0	28	220	12	80	131	34	82	117	35	84	220
13/01/2011	0	0	6	0	0	2	0	0	15	0	0	15	0	0	0
14/01/2011	0	0	2	0	0	0	0	0	1	0	0	1	0	0	0
15/01/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/01/2011	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
17/01/2011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/01/2011	0	0	0	0	1	14	0	0	0	0	1	6	0	0	0
19/01/2011	0	1	5	0	8	33	0	5	17	0	2	15	0	4	12

Particulars

A. The minimum rainfall recorded value is the minimum which was recorded at any station in the relevant catchment on that day.

B. The maximum rainfall recorded value is the maximum which was recorded at any station in the relevant catchment on that day.

C. The average catchment rainfall was derived by inverse weighting of available stations.

Water Level

218 In relation to paragraph 152 of the FASOC, Seqwater pleads that:

(a) during the period 1 December 2010 to 19 January 2011, the dam operators at Somerset Dam and Wivenhoe Dam would record manually the water levels at Somerset Dam and Wivenhoe Dam by taking readings from a staff gauge board located at each dam;

Particulars of (a)

(i) Wivenhoe Dam staff gauge unique BOM reference number 040763 (the "**Wivenhoe Dam Staff Gauge**").

(ii) Somerset Dam staff gauge unique BOM reference number 040189 (the "**Somerset Dam Staff Gauge**").

(b) during the period 1 December 2010 to 19 January 2011, the dam operators at Somerset Dam and Wivenhoe Dam would email (and on occasion, send by facsimile) the water level readings to personnel at the Flood Operations Centre (the "**Dam Levels Emails**");

(c) the Flood Engineers had regard to the water level recorded in the Dam Levels Emails during flood operations in the period 1 December 2010 to 19 January 2011;

(d) in April 2011, Seqwater carried out a check survey of a number of water level gauges, including the Wivenhoe Dam Staff Gauge and the Somerset Dam Staff Gauge which showed that due to the location and placement of the Wivenhoe Dam Staff Gauge, it had produced readings (including those taken during the period 1 December 2010 to 19 January 2011) which required minor adjustment (the "**Corrected Water Level Readings**");

(e) the approximate water level of Lake Wivenhoe recorded in the Dam Levels Emails sent in the period 1 December 2010 to 13 December 2010 (the "**Dam Levels Email Readings**") and the Corrected Water Level Readings were as follows:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
01/12/2010 06.30	67.010	SEQ.001.019.3163	67.01
02/12/2010 06.30	67.000	SEQ.001.019.3162	67.00
02/12/2010 10.15	67.000	SEQ.001.019.3161	67.00
03/12/2010 06.30	67.000	SEQ.001.019.3160	67.00
04/12/2010 06.30	67.030	SEQ.001.019.3159	67.02
05/12/2010 08.30	67.060	SEQ.001.019.3158	67.04
06/12/2010 06.30	67.060	SEQ.001.019.3157	67.04
07/12/2010 06.30	67.100	SEQ.001.019.3156	67.07
07/12/2010 08.45	67.100	SEQ.001.019.3155	67.07
08/12/2010 06.30	67.150	SEQ.001.019.3154	67.12
09/12/2010 06.30	67.190	SEQ.001.019.3153	67.16
10/12/2010 06.30	67.220	SEQ.001.019.3152	67.19
11/12/2010 06.30	67.230	SEQ.001.019.3151	67.20
12/12/2010 06.30	67.200	SEQ.001.019.3150	67.17
13/12/2010 06.30	67.300	SEQ.001.019.3149	67.27
13/12/2010 12.30	67.320	SEQ.001.019.3148	67.29
13/12/2010 13.00	67.320	SEQ.001.019.3147	67.29
13/12/2010 13.30	67.320	SEQ.001.019.3146	67.29
13/12/2010 14.00	67.325	SEQ.001.019.3145	67.30
13/12/2010 14.30	67.325	SEQ.001.019.3144	67.30
13/12/2010 15.00	67.325	SEQ.001.019.3143	67.30
13/12/2010 15.30	67.325	SEQ.001.019.3142	67.30
13/12/2010 17.00	67.325	SEQ.001.019.3141	67.30
13/12/2010 19.30	67.310	SEQ.001.019.3140	67.28

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
13/12/2010 22.30	67.310	SEQ.001.019.3139	67.28

Particulars of (e)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(f) the approximate water level of Lake Somerset in the period 1 December 2010 to 13 December 2010 was as follows:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
01/12/2010 06.30	99.06	SEQ.001.019.4643
02/12/2010 06.30	99.09	SEQ.001.019.4642
02/12/2010 10.50	99.10	SEQ.001.019.4641
03/12/2010 07.00	99.10	SEQ.001.019.4640
06/12/2010 06.30	99.23	SEQ.001.019.4639
07/12/2010 06.30	99.29	SEQ.001.019.4637
08/12/2010 06.30	99.36	SEQ.001.019.4636
09/12/2010 06.30	99.43	SEQ.001.019.4635
10/12/2010 06.30	99.41	SEQ.001.019.4634
10/12/2010 01.00	99.39	SEQ.001.019.4632
11/12/2010 06.00	99.37	SEQ.001.019.4631
11/12/2010 06.50	99.37	SEQ.001.019.4629
12/12/2010 06.50	99.52	SEQ.001.019.4627
12/12/2010 10.30	99.56	SEQ.001.019.4623
13/12/2010 05.40	99.68	SEQ.001.019.4622

(g) the levels of Lake Wivenhoe and Lake Somerset rose and fell over the period 1 to 13 December 2010; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, Seqwater otherwise:

(i) denies the allegations pleaded in paragraph 152(a); and

(ii) admits the allegations pleaded in paragraph 152(b).

Flood Operations

219 In relation to paragraph 153 of the FASOC, Seqwater:

(a) pleads that regular monitoring of weather predictions, rainfall and water levels was a key responsibility of the Duty Flood Operations Engineer, including in the months preceding December 2010;

(b) pleads that the Flood Engineer in charge of monitoring the Flood Operations Centre at any particular time, as referred to in paragraph (a) above, was known as the "**Duty Engineer**";

(c) pleads that the term "mobilisation" referred to a situation where:

(i) the Duty Engineer had determined that there was a high likelihood that one or more of the Somerset Dam Sluice Gates, Somerset Dam Crest Gates or Wivenhoe Dam Radial Gates, or the radial gates at North Pine Dam, which dam also was controlled from the Flood Operations Centre, would need to be operated in order to provide flood mitigation;

(ii) the Flood Operations Centre was staffed by Flood Engineers and flood officers 24 hours per day; and

(iii) any one or more of Wivenhoe Dam, Somerset Dam or North Pine Dam was staffed by operators 24 hours per day;

(d) pleads that the Flood Operations Centre was mobilised prior to 07.00 on 11 December 2010 as flood releases were being made from North Pine Dam;

Particulars of (d)

(i) Mr Tibaldi attended at the Flood Operations Centre from on or about 17.30 on 4 December 2010 to about 07.15 on 5 December 2010;

(ii) Mr Malone attended at the Flood Operations Centre from on or about 10.30 on 6 December 2010 to about 17.00 on 6 December 2010;

(iii) Mr Tibaldi attended at the Flood Operations Centre from on or about 18.30 on 6 December 2010 to about 07.30 on 7 December 2010;

(iv) Mr Ayre attended at the Flood Operations Centre from about 06.45 on 7 December 2010 to about 16.00 on 7 December 2010;

(v) Mr Ayre attended at the Flood Operations Centre from about 18.30 on 9 December 2010 to around 08.30 on 10 December 2010; and

(vi) Flood Event Sign-On Sheet, [SEQ.018.002.0366].

(e) further to paragraph (d) above, pleads that Mr Tibaldi was the Duty Engineer during the period 1 December 2010 to 5 December 2010, including being available "on-call" and responsible for remote monitoring of Somerset Dam and Wivenhoe Dam;

(f) further to paragraphs (d) and (e) above, pleads that the Flood Engineers worked the following approximate shifts in the period 6 to 12 December 2010, including being available "on-call" and responsible for remote monitoring of Somerset Dam and Wivenhoe Dam:

Date and time: commence	Date and time: finish	Name
6 December 2010 at 07.00	6 December 2010 at 19.00	Mr Malone
6 December 2010 at 19.00	7 December 2010 at 07.00	Mr Tibaldi
7 December 2010 at 07.00	7 December 2010 at 16.00	Mr Ayre
7 December 2010 at 16.00	8 December 2010 at 07.00	Mr Malone
8 December 2010 at 07.00	8 December 2010 at 19.00	Mr Ayre
8 December 2010 at 19.00	9 December 2010 at 07.00	Mr Malone
9 December 2010 at 07.00	9 December 2010 at 19.00	Mr Malone
9 December 2010 at 19.00	10 December 2010 at 05.20	Mr Ayre
10 December 2010 at 05.20	10 December 2010 at 19.00	Mr Malone
10 December 2010 at 19.00	11 December 2010 at 07.00	Mr Malone
11 December 2010 at 07.00	11 December 2010 at 19.00	Mr Malone
11 December 2010 at 19.00	12 December 2010 at 07.00	Mr Ruffini
12 December 2010 at 07.00	12 December 2010 at 19.00	Mr Malone

(g) repeats paragraph 169(b) above;

(h) pleads that as at or about 06.30 on 11 December 2010, the approximate Dam Levels Email Reading for Lake Wivenhoe was 67.23m AHD;

Particulars of (h)

Email from Dam Levels to various persons at or about 07.09 on 11 December 2010 re FW: Wivenhoe Dam [SEQ.001.019.3151].

(i) pleads that at or about 06.30 on 11 December 2010, the approximate Corrected Water Level for Lake Wivenhoe was 67.20m AHD; and

Particulars of (i)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in

Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(j) subject to the matters pleaded in paragraphs (a) to (i) above, otherwise admits the allegations pleaded in paragraph 153.

220 In relation to paragraph 154 of the FASOC, Seqwater:

(a) pleads that Mr Ruffini also worked in the period 13 December 2010 at 19.00 to 14 December 2010 at 07.00;

(b) denies that Mr Tibaldi worked in the period 13 December 2010 at 19.00 to 14 December 2010 at 07.00; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 154.

221 In relation to paragraph 155 of the FASOC, Seqwater:

(a) pleads that:

(i) by around 06.50 on 11 December 2010, all of the Somerset Dam Crest Gates were opened and Regulator Valve No. 12 opened 50%;

Particulars of (a)(i)

Email from Dam Levels to various dated 11 December 2010 at 06.45 re FW: Somerset Dam [SEQ.001.019.4629]

(ii) at or about 10.00 on 12 December 2010:

(A) it was expected that there would be a peak flow of about 150m^3/s in the mid-Brisbane River downstream of Wivenhoe Dam during 13 December 2010 emanating primarily from the Lockyer Creek;

(B) releases from Wivenhoe Dam were expected to commence on the afternoon of 13 December 2010 after the runoff from the Lockyer Creek and local areas had passed Savages Crossing so as not to exacerbate local flooding; and

(C) the releases from Wivenhoe Dam were expected to be up to 300m^3/s which, when combined with runoff from the Downstream Catchments, were expected to impact on Twin Bridges, Savages Crossing and Colleges Crossing;

Particulars of (a)(ii)

Situation Report sent by Mr Malone to various persons at or about 10.07 on 12 December 2010 [SEQ.001.011.4655].

(iii) at or about 10.12 on 12 December 2010, Mr Malone instructed the dam operators at Somerset Dam to open two of the Somerset Dam Regulators 100% by 11.00 on 12 December 2010;

Particulars of (a)(iii)

Email from Mr Malone to various persons at or about 10.12 on 12 December 2010 re Somerset Regulators [SEQ.001.018.5240]

(iv) at or about 10.30 on 12 December 2010, the Somerset Dam operators confirmed that:

(A) all of the Somerset Dam Crest Gates had already been opened; and

(B) Regulator Valves No. 3 and 12 were 100% open;

Particulars of (a)(iv)

Email from Dam Levels to various persons dated 12 December 2010 at 10.33 re FW: Somerset Dam [SEQ.001.019.4625].

(v) at or about 10.45 on 13 December 2010:

(A) Lockyer Creek had peaked at O'Reilly's Weir at approximately 8.4metres at 04.00 on 13 December 2010 and was falling;

(B) it was expected that approximately 40,000ML would be released from Lake Somerset into Lake Wivenhoe in the period that the Somerset Dam Regulators were open with a further 20,000ML flowing into Wivenhoe Dam from the upper Brisbane River over the following week;

(C) it was expected that releases from Wivenhoe Dam would commence at noon on 13 December 2010, with the Wivenhoe Dam Regulator Valve to be closed and Wivenhoe Dam Radial Gate No. 3 progressively opened to 3 metres, with the release rate ramping up from the current $50m^3/s$ to $300m^3/s$, until the afternoon of 16 December 2010 when the release rate was expected to be reduced back to $50m^3/s$ through the Wivenhoe Dam Mini-Hydro

and Wivenhoe Dam Regulator Valve, these releases being made in accordance with Strategy W1; and

(D) the releases from Wivenhoe Dam coupled with local downstream runoff were expected to impact on Twin Bridges, Savages Crossing and Colleges Crossing;

Particulars of (a)(v)

Situation Report sent by Mr Malone to various persons at or about 10.46 on 13 December 2010 [SEQ.001.018.5239].

(vi) at or about 13 December 2010 at 11.25, Mr Malone directed the Wivenhoe Dam operators to undertake the following gate operations:

(A) at 12.30 on 13 December 2010, close the regulator;

(B) at 13.00 on 13 December 2010, open gate 3 to 0.5m;

(C) at 13.30 on 13 December 2010, open gate 3 to 1.0m;

(D) at 14.00 on 13 December 2010, open gate 3 to 1.5m;

(E) at 14.30 on 13 December 2010, open gate 3 to 2.0m;

(F) at 15.00 on 13 December 2010, open gate 3 to 2.5m;

(G) at 15.30 on 13 December 2010, open gate 3 to 3.0m;

(H) continue releases of 13m^3/s from the Wivenhoe Dam Mini-Hydro; and

(I) it was expected that this gate setting would be maintained until at least the afternoon of 16 December 2010;

Particulars of (a)(vi)

Wivenhoe Directive #1 sent by Mr Malone to various persons at or about 11.25 on 13 December 2010 [SEQ.001.018.5236 and SEQ.001.018.5237].

(vii) by about 15.30 on 13 December 2010, Radial Gate No. 3 at Wivenhoe Dam was open 3.0m with an additional 1,200ML/d (13m^3/s) being released through the Wivenhoe Dam Mini-Hydro; and

Particulars of (a)(vii)

Email from Dam Levels to various persons at or about 15.27 on 13 December 2010 [SEQ.001.019.3142].

(viii) by about 06.45 on 14 December 2010:

(A) since 1 December 2010, approximately 60,000ML had been released from Somerset Dam into Lake Wivenhoe; and

(B) since 1 December 2010, approximately 70,000ML had been released from Wivenhoe Dam; and

Particulars of (a)(viii)

Situation Report sent by Mr Ruffini to various persons at or about 06.58 on 14 December 2010 [SEQ.001.011.4697].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 155.

222 In relation to paragraph 156 of the FASOC, Seqwater:

(a) denies the allegations pleaded;

(b) repeats paragraph 221(a) above;

(c) pleads that:

(i) at around 05.12 on 15 December 2010:

(A) a decision was expected to be made at around 10.00 on 15 December 2010 as to when the releases from Wivenhoe Dam Radial Gate No. 3 would cease;

(B) the current QPF for the Combined Dam Catchments was 2-5mm, with “no significant rainfall currently forecast” before 19 December 2010;

(ii) at around 11.12 on 15 December 2010 the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 16 December 2010 was 5-10mm of rain;

(iii) the following considerations were assessed in particular in determining to close Wivenhoe Dam Radial Gate No. 3:

(A) reducing Wivenhoe Dam to as close to FSL as possible without inundating Burtons Bridge;

(B) balancing the objective of avoiding inundating Burtons Bridge with opening Colleges Crossing as soon as possible; and

(C) the forecasts issued around the time the decision was made to proceed with closure on 16 December 2010, which indicated a low chance of any significant rainfall until 19 December 2010;

(iv) at or about 06.00 on 16 December 2010:

(A) the inflow into Lake Somerset was approximately 400ML/d (4m^3/s) and falling;

(B) the release rate from Somerset Dam was approximately 12,000ML/d (140m^3/s);

(C) the water level of Lake Somerset was approximately 99.2m AHD, being approximately 8,500ML above the FSL for Somerset Dam; and

(D) the releases from Somerset Dam from the two Somerset Dam Regulators were expected to remain open until the water level in Lake Somerset neared the FSL;

(v) at or about 06.30 on 16 December 2010:

(A) the inflow into Lake Wivenhoe (excluding Somerset Dam releases) was approximately 500ML/d (6m^3/s) and falling;

(B) the release rate from Wivenhoe Dam was approximately 27,000ML/d (310m^3/s);

(C) the water level of Lake Wivenhoe was approximately 67.13m AHD, being approximately 14,000ML above the FSL for Wivenhoe Dam;

(D) the releases from Wivenhoe Dam were expected to cease at 10.00 so that a fish recovery operation could be undertaken over the subsequent hours, following which further releases from the Wivenhoe Dam Mini-Hydro and Wivenhoe Dam Regulator Valve were expected to commence at a combined release rate of 4,000ML/d (46 m^3/s) until the water level in Lake Wivenhoe neared the FSL; and

(E) the reduced release rate would allow the opening of the currently closed bridges downstream of Wivenhoe Dam;

(vi) at or about 10.00 on 16 December 2010:

(A) the gates at Wivenhoe Dam were closed and a fish recovery operation commenced;

(B) releases from Wivenhoe Dam were expected to recommence via the Wivenhoe Dam Mini-Hydro and Wivenhoe Dam Regulator Valve at a combined release rate of 4,000ML/d (46m^3/s) until the water level in Lake Wivenhoe neared the FSL;

(C) the level of Lake Wivenhoe was approximately 67.07m AHD;

(D) the releases from Somerset Dam via the two Somerset Dam Regulators were continuing with one Somerset Dam Regulator expected to be closed on the afternoon of 16 December 2010 and the other on the afternoon of 17 December 2010; and

(E) the level of Lake Somerset was approximately 99.20m AHD;

(vii) after 10.00 on 16 December 2010 routine monitoring by the Duty Engineer of the Somerset Dam Catchment, Wivenhoe Dam Catchment and North Pine Dam catchment continued; and

(viii) further to (vii) above, Mr Malone attended at the Flood Operations Centre from at or about 17.30 on 16 December 2010 to about 06.00 on 17 December 2010 as flood releases were continuing from North Pine Dam;

Particulars of (c)

(i) Situation Report sent by Mr Tibaldi to various persons at about 05.12 on 15 December 2010 [SEQ.001.018.5202].

(ii) Email sent at 11.12 on 15 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.018.8874].

(iii) Situation Report sent by Mr Tibaldi to various persons at or about 06.38 on 16 December 2010 [SEQ.001.018.5194].

(iv) Situation Report sent by Mr Malone to various persons at or about 10.39 on 16 December 2010 [SEQ.001.018.5193].

(v) Level of Lake Somerset at 10.00: Somerset gauge board reading at 06.00 on 16 December 2010 [SEQ.001.019.4619].

(vi) Level of Lake Wivenhoe at 10.00: Wivenhoe gauge board readings at 10.00 on 16 December 2010 [SEQ.001.019.3108] as adjusted as

set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(vii) Flood event sign on sheet commencing on 16 December 2010 [SEQ.004.025.0181].

(viii) Email sent by Mr Tibaldi to Mr Drury, Mr Ruffini and Mr Malone at about 12.51 on 17 December 2010 re Urgent [SEQ.001.020.3303].

(d) at or about 10.03 on 16 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 17 December 2010 was 10-20mm of rain; and

Particulars of (d)

Email sent at 10.03 on 16 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8853].

(e) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 156.

223 In relation to paragraph 157 of the FASOC, Seqwater:

(a) repeats paragraphs 221(a) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 157.

224 In relation to paragraph 158 of the FASOC, Seqwater:

(a) repeats paragraphs 221(a) above;

(b) pleads that at or about 10.03 on 16 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 17 December 2010 was 10-20mm of rain with isolated falls of up to 40mm;

Particulars of (b)

Email sent at 10.03 on 16 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8853].

(c) denies that the BOM PME forecasts relied upon by the plaintiff in paragraphs 158(d) to (f), predicted rainfall specifically for the Brisbane River Basin or for the Lake Somerset and Lake Wivenhoe catchment areas as alleged;

(d) further, repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 158; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, otherwise denies the allegations pleaded in paragraph 158.

16 December Breaches

225 Seqwater denies the allegations pleaded in paragraph 158A of the FASOC.

226 In relation to paragraph 160 of the FASOC, Seqwater:

(a) repeats paragraphs 221(a) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 160 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual; and

(ii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers’ acts and omissions were not so unreasonable that no public authority having Seqwater’s functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act* 2003 (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act* 2003 (Qld), the Flood Engineers did not breach any duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as;

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 160;

(h) pleads that the water levels of Lake Somerset and Lake Wivenhoe on 16 December 2010 (as pleaded in paragraph 229(a) below) were materially similar to those alleged in paragraphs 160(f) and (g) of the FASOC; and

(i) subject to the matters pleaded in paragraphs (a) to (h) above, otherwise denies the allegations pleaded in paragraph 160.

227 Seqwater denies the allegations pleaded in paragraph 161 of the FASOC and, further, repeats paragraphs 226(b) to (h) above.

228 Seqwater denies the allegations pleaded in paragraph 162 of the FASOC.

229 Seqwater denies the allegations pleaded in paragraph 163 of the FASOC and, further:

(a) pleads that at or about 10.00 on 16 December 2010, the:

(i) Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.10m AHD; and

(ii) Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.07m AHD;

(b) pleads that at or about 11.00 on 16 December 2010, the:

(i) Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.10m AHD; and

(ii) Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.07m AHD; and

(c) further to paragraphs (a) and (b) above, pleads that immediately after the closure of the last Wivenhoe Dam Radial Gate on 16 December 2010, the water level of Lake Wivenhoe was steady.

Particulars

(ii) Level of Lake Wivenhoe at 10.00: Wivenhoe gauge board readings at 10.00 on 16 December 2010 [SEQ.001.019.3108] as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(ii) Level of Lake Wivenhoe at 11.00: Wivenhoe gauge board readings at 11.00 on 16 December 2010 [SEQ.001.019.3107] as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

N Events of 17 December to 24 December 2010

Weather Forecasts

230 Seqwater denies the allegations pleaded in paragraph 163A of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 11.26 on 17 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 18 December 2010 was 20-50mm of rain; and

Particulars of (c)

Email sent at 11.26 on 17 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8817].

(d) pleads that at or about 16.00 on 17 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 18 December 2010 was 20-50mm of rain.

Particulars of (d)

Email sent at 16.00 on 17 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8808].

231 Seqwater denies the allegations pleaded in paragraph 163B of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 18 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 19 December 2010 was 10-15mm of rain; and

Particulars of (c)

Email sent at 10.03 on 18 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8791].

(d) pleads that at or about 16.00 on 18 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 19 December 2010 was 25-35mm of rain.

Particulars of (d)

Email sent at 16.00 on 18 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8785].

232 Seqwater denies the allegations pleaded in paragraph 163C of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 19 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 20 December 2010 was 40-50mm of rain; and

Particulars of (c)

Email sent at 10.03 on 19 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8783].

(d) pleads that at or about 16.00 on 19 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 20 December 2010 was 10-15mm of rain.

Particulars of (d)

Email sent at 16.00 on 19 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8782].

233 Seqwater denies the allegations pleaded in paragraph 163D of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.07 on 20 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 21 December 2010 was nil; and

Particulars of (c)

Email sent at 10.07 on 20 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8774].

(d) pleads that at or about 16.00 on 20 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 21 December 2010 was nil.

Particulars of (d)

Email sent at 16.00 on 20 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8768].

234 Seqwater denies the allegations pleaded in paragraph 163E of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 21 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 22 December 2010 was 0-2mm of rain; and

Particulars of (c)

Email sent at 10.03 on 21 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6207].

(d) pleads that at or about 16.00 on 21 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 22 December 2010 was 10-20mm of rain.

Particulars of (d)

Email sent at 16.00 on 21 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6195].

235 Seqwater denies the allegations pleaded in paragraph 163F of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 22 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 23 December 2010 was 15-30mm of rain; and

Particulars of (c)

Email sent at 10.03 on 22 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6448].

(d) pleads that at or about 16.00 on 22 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 23 December 2010 was 15-30mm of rain.

Particulars of (d)

Email sent at 16.00 on 22 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6452].

236 Seqwater denies the allegations pleaded in paragraph 163G of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 23 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 24 December 2010 was 10-20mm of rain; and

Particulars of (c)

Email sent at 10.03 on 23 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6485].

(d) pleads that at or about 16.00 on 23 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 24 December 2010 was 5-10mm of rain.

Particulars of (d)

Email sent at 16.00 on 23 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6494].

237 Seqwater denies the allegations pleaded in paragraph 163H of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 24 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 25 December 2010 was 25-35mm of rain; and

Particulars of (c)

Email sent at 10.03 on 24 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6525].

(d) pleads that at or about 16.00 on 24 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 25 December 2010 was 20-30mm of rain.

Particulars of (d)

Email sent at 16.00 on 24 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6526].

Rainfall and Inflows

238 In relation to paragraph 164 of the FASOC, Seqwater:

(a) admits that rainfall fell in the Somerset Dam Catchment and the Wivenhoe Dam Catchment during the period 17 December 2010 to 24 December 2010;

(b) repeats paragraph 217 above; and

(c) subject to those matters, otherwise denies the allegations pleaded in paragraph 164.

239 In relation to paragraph 165 of the FASOC, Seqwater:

(a) repeats paragraph 238 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 165.

Water Level

240 In relation to paragraph 166 of the FASOC, Seqwater:

(a) pleads that the approximate Dam Levels Email Readings and Corrected Water Level Readings for Lake Wivenhoe in the period 17 to 24 December 2010 were:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
17/12/2010 06.30	67.200	SEQ.001.019.3106	67.17
17/12/2010 18.00	67.290	SEQ.001.019.3105	67.26
17/12/2010 19.00	69.270	SEQ.001.019.3104	67.24
17/12/2010 20.00	67.300	SEQ.001.019.3103	67.27
17/12/2010 21.00	67.300	SEQ.001.019.3102	67.27
17/12/2010 22.00	67.310	SEQ.001.019.3101	67.28
17/12/2010 23.00	67.310	SEQ.001.019.3100	67.28
18/12/2010 00.00	67.310	SEQ.001.019.3099	67.28

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
18/12/2010 01.00	67.320	SEQ.001.019.3098	67.29
18/12/2010 02.00	67.320	SEQ.001.019.3097	67.29
18/12/2010 02.15	67.320	SEQ.001.019.3096	67.29
18/12/2010 03.00	67.320	SEQ.001.019.3095	67.29
18/12/2010 04.00	67.320	SEQ.001.019.3094	67.29
18/12/2010 05.00	67.320	SEQ.001.019.3093	67.29
18/12/2010 06.00	67.320	SEQ.001.019.3092	67.29
18/12/2010 09.00	67.330	SEQ.001.019.3091	67.30
18/12/2010 09.30	67.330	SEQ.001.019.3090	67.30
18/12/2010 12.00	67.330	SEQ.001.019.3089	67.30
18/12/2010 13.00	67.330	SEQ.001.019.3088	67.30
18/12/2010 15.00	67.320	SEQ.001.019.3087	67.29
18/12/2010 18.00	67.335	SEQ.001.019.3086	67.31
18/12/2010 19.00	67.340	SEQ.001.019.3085	67.31
18/12/2010 21.00	67.340	SEQ.001.019.3084	67.31
19/12/2010 01.00	67.330	SEQ.001.019.3082	67.30
19/12/2010 03.00	67.320	SEQ.001.019.3081	67.29
19/12/2010 05.00	67.310	SEQ.001.019.3080	67.28
19/12/2010 06.00	67.300	SEQ.001.019.3079	67.27
19/12/2010 08.00	67.290	SEQ.001.019.3078	67.26
19/12/2010 09.00	67.290	SEQ.001.019.3077	67.26
19/12/2010 11.00	67.280	SEQ.001.019.3076	67.25
19/12/2010 12.00	67.290	SEQ.001.019.3075	67.26
19/12/2010 13.00	67.290	SEQ.001.019.3074	67.26
19/12/2010 14.00	67.290	SEQ.001.019.3073	67.26
19/12/2010 15.00	67.290	SEQ.001.019.3072	67.26
19/12/2010 17.00	67.310	SEQ.001.019.3071	67.28
19/12/2010 19.00	67.330	SEQ.001.019.3070	67.30
19/12/2010 20.00	67.370	SEQ.001.019.3069	67.34
19/12/2010 21.00	67.380	SEQ.001.019.3068	67.37
19/12/2010 22.00	67.390	SEQ.001.019.3067	67.36
19/12/2010 23.00	67.400	SEQ.001.019.3066	
20/12/2010 00.00	67.430	SEQ.001.019.3065	67.40
20/12/2010 01.00	67.440	SEQ.001.019.3064	67.41
20/12/2010 03.00	67.480	SEQ.001.019.3063	67.45
20/12/2010 04.00	67.510	SEQ.001.019.3062	67.48

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
20/12/2010 06.00	67.560	SEQ.001.019.3061	67.53
20/12/2010 07.00	67.590	SEQ.001.019.3060	67.56
20/12/2010 08.00	67.630	SEQ.001.019.3059	67.60
20/12/2010 08.45	67.680	SEQ.001.019.3058	67.65
20/12/2010 10.00	67.725	SEQ.001.019.3057	67.70
20/12/2010 10.15	67.725	SEQ.001.019.3056	67.70
20/12/2010 11.00	67.770	SEQ.001.019.3055	67.74
20/12/2010 12.00	67.800	SEQ.001.019.3054	67.77
20/12/2010 13.00	67.840	SEQ.001.019.3053	67.81
20/12/2010 14.00	67.890	SEQ.001.019.3052	67.86
20/12/2010 15.00	67.940	SEQ.001.019.3051	67.91
20/12/2010 16.00	67.985	SEQ.001.019.3050	67.96
20/12/2010 17.00	68.030	SEQ.001.019.3049	68.01
20/12/2010 18.00	68.070	SEQ.001.019.3048	68.05
20/12/2010 19.00	68.100	SEQ.001.019.3047	68.08
20/12/2010 20.00	68.140	SEQ.001.019.3045	68.12
20/12/2010 21.00	68.160	SEQ.001.019.3043	68.14
20/12/2010 22.30	68.020	SEQ.001.019.3041	68.18
20/12/2010 23.00	68.210	SEQ.001.019.3040	68.19
21/12/2010 00.00	68.220	SEQ.001.019.3038	68.20
21/12/2010 01.00	68.230	SEQ.001.019.3036	68.21
21/12/2010 02.00	68.230	SEQ.001.019.3034	68.21
21/12/2010 03.00	68.240	SEQ.001.019.3032	68.22
21/12/2010 04.00	68.240	SEQ.001.019.3030	68.22
21/12/2010 05.00	68.220	SEQ.001.019.3029	68.20
21/12/2010 06.46	68.210	SEQ.001.019.3028	68.19
21/12/2010 08.00	68.195	SEQ.001.019.3027	68.18
21/12/2010 09.00	68.180	SEQ.001.019.3026	68.16
21/12/2010 10.00	68.175	SEQ.001.019.3025	68.16
21/12/2010 11.00	68.165	SEQ.001.019.3024	68.15
21/12/2010 12.00	68.150	SEQ.001.019.3023	68.13
21/12/2010 13.00	68.130	SEQ.001.019.3022	68.11
21/12/2010 14.00	68.110	SEQ.001.019.3021	68.09
21/12/2010 15.00	68.090	SEQ.001.019.3020	68.07
21/12/2010 16.00	68.070	SEQ.001.019.3019	68.05
21/12/2010 17.00	68.060	SEQ.001.019.3018	68.04

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
21/12/2010 18.00	68.040	SEQ.001.019.3016	68.02
21/12/2010 19.00	68.010	SEQ.001.019.3014	67.99
21/12/2010 21.00	67.980	SEQ.001.019.3013	67.95
21/12/2010 23.00	67.910	SEQ.001.019.3012	67.88
22/12/2010 01.00	67.850	SEQ.001.019.3011	67.82
22/12/2010 03.00	67.800	SEQ.001.019.3010	67.77
22/12/2010 05.00	67.740	SEQ.001.019.3009	67.71
22/12/2010 06.30	67.710	SEQ.001.019.3008	67.68
22/12/2010 08.00	67.680	SEQ.001.019.3007	67.65
22/12/2010 09.00	67.660	SEQ.001.019.3006	67.63
22/12/2010 10.00	67.630	SEQ.001.019.3005	67.60
22/12/2010 11.00	67.605	SEQ.001.019.3004	67.58
22/12/2010 12.00	67.570	SEQ.001.019.3003	67.54
22/12/2010 13.00	67.550	SEQ.001.019.3002	67.52
22/12/2010 14.00	67.520	SEQ.001.019.3001	67.49
22/12/2010 15.00	67.500	SEQ.001.019.3000	67.77
22/12/2010 16.00	67.480	SEQ.001.019.2999	67.45
22/12/2010 17.00	67.465	SEQ.001.019.2997	67.44
22/12/2010 18.00	67.440	SEQ.001.019.2995	67.41
22/12/2010 19.00	67.430	SEQ.001.019.2993	67.40
22/12/2010 20.00	67.400	SEQ.001.019.2991	67.37
22/12/2010 22.00	67.360	SEQ.001.019.2988	67.33
22/12/2010 23.00	67.350	SEQ.001.019.2986	67.32
23/12/2010 00.00	67.350	SEQ.001.019.2984	67.32
23/12/2010 01.00	67.330	SEQ.001.019.2983	67.30
23/12/2010 02.00	67.330	SEQ.001.019.2982	67.30
23/12/2010 03.00	67.320	SEQ.001.019.2981	67.29
23/12/2010 04.00	67.320	SEQ.001.019.2979	67.29
23/12/2010 05.00	67.310	SEQ.001.019.2977	67.28
23/12/2010 06.00	67.280	SEQ.001.019.2975	67.25
23/12/2010 07.15	67.270	SEQ.001.019.2974	67.24
23/12/2010 08.00	67.270	SEQ.001.019.2973	67.24
23/12/2010 09.00	67.270	SEQ.001.019.2971	67.24
23/12/2010 10.00	67.255	SEQ.001.019.2969	67.17
23/12/2010 11.00	67.250	SEQ.001.019.2967	67.22
23/12/2010 11.45	67.250	SEQ.001.019.2966	67.22

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
23/12/2010 12.00	67.230	SEQ.001.019.2965	67.20
23/12/2010 13.00	67.230	SEQ.001.019.2964	67.20
23/12/2010 15.00	67.230	SEQ.001.019.2963	67.20
23/12/2010 16.00	67.230	SEQ.001.019.2962	67.20
23/12/2010 17.00	67.230	SEQ.001.019.2961	67.20
23/12/2010 18.00	67.230	SEQ.001.019.2960	67.20
23/12/2010 19.00	67.220	SEQ.001.019.2959	67.19
23/12/2010 21.00	67.210	SEQ.001.019.2958	67.18
23/12/2010 23.00	67.180	SEQ.001.019.2957	67.15
24/12/2010 02.00	67.150	SEQ.001.019.2956	67.12
24/12/2010 05.00	67.140	SEQ.001.019.2954	67.11
24/12/2010 07.00	67.130	SEQ.001.019.2953	67.10
24/12/2010 08.00	67.120	SEQ.001.019.2952	67.09
24/12/2010 09.00	67.115	SEQ.001.019.2951	67.09
24/12/2010 10.00	67.100	SEQ.001.019.2950	67.07
24/12/2010 11.00	67.100	SEQ.001.019.2949	67.07
24/12/2010 12.00	67.110	SEQ.001.019.2948	67.08
24/12/2010 12.30	67.110	SEQ.001.019.2947	67.08
24/12/2010 13.00	67.110	SEQ.001.019.2946	67.08
24/12/2010 13.45	67.12+	SEQ.001.019.2945	67.09

Particulars of (a)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(b) pleads that the approximate water level of Lake Somerset in the period 17 to 24 December 2010 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
17/12/2010 06.30	99.32	SEQ.001.019.4617
18/12/2010 07.30	99.67	SEQ.001.019.4615
19/12/2010 07.00	99.56	SEQ.001.019.4613
20/12/2010 06.00	100.20	SEQ.001.019.4611
20/12/2010 07.00	100.26	SEQ.001.019.4610

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
20/12/2010 08.00	100.31	SEQ.001.019.4609
20/12/2010 09.00	100.34	SEQ.001.019.4608
20/12/2010 10.00	100.38	SEQ.001.019.4607
20/12/2010 11.00	100.41	SEQ.001.019.4606
20/12/2010 12.00	100.42	SEQ.001.019.4605
20/12/2010 13.00	100.43	SEQ.001.019.4604
20/12/2010 14.00	100.42	SEQ.001.019.4603
20/12/2010 15.00	100.42	SEQ.001.019.4602
20/12/2010 16.00	100.42	SEQ.001.019.4601
20/12/2010 17.00	100.40	SEQ.001.019.4600
20/12/2010 18.00	100.40	SEQ.001.019.4599
20/12/2010 19.00	100.39	SEQ.001.019.4597
20/12/2010 20.00	100.39	SEQ.001.019.4595
20/12/2010 21.00	100.37	SEQ.001.019.4594
20/12/2010 22.00	100.35	SEQ.001.019.4593
21/12/2010 12.15	100.32	SEQ.001.019.4592
21/12/2010 01.00	100.31	SEQ.001.019.4591
21/12/2010 02.00	100.29	SEQ.001.019.4590
21/12/2010 03.00	100.28	SEQ.001.019.4589
21/12/2010 04.00	100.26	SEQ.001.019.4588
21/12/2010 05.00	100.24	SEQ.001.019.4587
21/12/2010 06.00	100.23	SEQ.001.019.4586
21/12/2010 07.00	100.20	SEQ.001.019.4585
21/12/2010 08.00	100.180	SEQ.004.025.0063
21/12/2010 09.00	100.16	SEQ.001.019.4584
21/12/2010 10.00	100.14	SEQ.001.019.4583
21/12/2010 11.00	100.13	SEQ.001.019.4582
21/12/2010 12.00	100.11	SEQ.001.019.4581
21/12/2010 13.00	100.09	SEQ.001.019.4580
21/12/2010 14.00	100.07	SEQ.001.019.4579
21/12/2010 15.00	100.05	SEQ.001.019.4577
21/12/2010 16.00	100.02	SEQ.001.019.4575
21/12/2010 17.00	100.00	SEQ.001.019.4574
21/12/2010 18.00	99.98	SEQ.001.019.4573
21/12/2010 19.00	99.95	SEQ.001.019.4572
21/12/2010 20.00	99.93	SEQ.001.019.4571
21/12/2010 22.00	99.89	SEQ.001.019.4570

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
21/12/2010 23.00	99.86	SEQ.001.019.4569
22/12/2010 00.00	99.84	SEQ.001.019.4568
22/12/2010 01.15	99.81	SEQ.001.019.4567
22/12/2010 02.00	99.79	SEQ.001.019.4566
22/12/2010 03.00	99.770	SEQ.004.025.0076
22/12/2010 03.20	99.76	SEQ.001.019.4565
22/12/2010 04.00	99.73	SEQ.001.019.4564
22/12/2010 06.00	99.68	SEQ.001.019.4563
22/12/2010 07.00	99.66	SEQ.001.019.4562
22/12/2010 08.00	99.64	SEQ.001.019.4561
22/12/2010 09.00	99.61	SEQ.001.019.4560
22/12/2010 10.00	99.58	SEQ.001.019.4558
22/12/2010 11.00	99.56	SEQ.001.019.4557
22/12/2010 12.00	99.53	SEQ.001.019.4556
22/12/2010 13.00	99.50	SEQ.001.019.4554
22/12/2010 14.00	99.48	SEQ.001.019.4553
22/12/2010 15.00	99.46	SEQ.001.019.4552
22/12/2010 16.00	99.43	SEQ.001.019.4551
22/12/2010 17.00	99.41	SEQ.001.019.4549
22/12/2010 18.00	99.38	SEQ.001.019.4548
22/12/2010 19.00	99.35	SEQ.001.019.4547
22/12/2010 20.00	99.32	SEQ.001.019.4546
22/12/2010 22.00	99.26	SEQ.001.019.4545
22/12/2010 23.00	99.24	SEQ.001.019.4544
23/12/2010 00.00	99.21	SEQ.001.019.4543
23/12/2010 00.10	99.21	SEQ.001.019.4543
23/12/2010 01.00	99.18	SEQ.001.019.4542
23/12/2010 02.00	99.150	SEQ.004.025.0096
23/12/2010 02.45	99.14	SEQ.001.019.4541
23/12/2010 03.15	99.13	SEQ.001.019.4540
23/12/2010 04.00	99.12	SEQ.001.019.4539
23/12/2010 05.00	99.10	SEQ.001.019.4538
23/12/2010 06.00	99.12	SEQ.001.019.4537
23/12/2010 07.00	99.10	SEQ.001.019.4536
23/12/2010 08.00	99.09	SEQ.001.019.4534
23/12/2010 09.00	99.10	SEQ.001.019.4533
24/12/2010 06.30	99.18	SEQ.001.019.4532

(c) pleads that the levels of Lake Wivenhoe and Lake Somerset rose and fell over the period 17 to 24 December 2010;

(d) pleads that the net levels of Lake Wivenhoe and Lake Somerset fell over the period 17 to 24 December 2010 as follows:

(i) based on the Dam Levels Email Readings, from approximately 67.20m AHD to approximately 67.12m AHD for Lake Wivenhoe;

(ii) based on the Corrected Water Level Readings, from approximately 67.17m AHD to approximately 67.09m AHD for Lake Wivenhoe; and

(iii) from approximately 99.32m AHD to approximately 99.18m AHD for Lake Somerset;

(e) the levels of Lake Wivenhoe and Lake Somerset rose and fell over the period 17 to 21 December 2010;

(f) pleads that the net levels of Lake Wivenhoe and Lake Somerset rose over the period 17 to 21 December 2010 as follows:

(i) based on the Dam Levels Email Readings, from approximately 67.20m AHD to approximately 67.91m AHD for Lake Wivenhoe;

(ii) based on the Corrected Water Level Readings, from approximately 67.17m AHD to approximately 67.88m AHD for Lake Wivenhoe; and

(iii) from approximately 99.32m AHD to approximately 99.86m AHD for Lake Somerset; and

(g) subject the matters pleaded in paragraphs (a) to (f) above, otherwise denies the allegations pleaded in paragraph 166.

Flood Operations

241 Seqwater denies the allegations pleaded in paragraph 167 of the FASOC and:

(a) repeats paragraphs 219(a) and (b) above;

(b) pleads that Mr Malone worked between about 07.00 on 16 December 2010 to about 07.00 on 17 December 2010, including:

(i) attending at the Flood Operations Centre from about 17.30 on 16 December 2010 to 06.00 on 17 December 2010; and

(ii) being available "on-call" and responsible for remote monitoring of, Somerset Dam and Wivenhoe Dam;

(c) pleads that Mr Ruffini worked between about 07.00 on 17 December 2010 to about 07.00 on 18 December 2010, including:

(i) attending at the Flood Operations Centre from about 16.00 on 17 December 2010 to 07.00 on 18 December 2010; and

(ii) being available "on-call" and responsible for remote monitoring of, Somerset Dam and Wivenhoe Dam; and

Particulars of (b) and (c)

Flood Event Sign-On Sheet, [SEQ.004.025.0181].

(d) subject to paragraphs (a) to (c) above, otherwise admits that page 8 of the Seqwater Report on the operation of Somerset and Wivenhoe Dam – October to December 2010 suggests that the Flood Operations Centre was mobilised at 10.00 on 17 December 2010.

242 In relation to paragraph 168 of the FASOC, Seqwater:

(a) repeats paragraph 241 above;

(b) pleads that Mr Tibaldi worked between about 15.00 on 24 December 2010 to about 07.00 on 25 December 2010, including being available "on-call" and responsible for remote monitoring of, Somerset Dam and Wivenhoe Dam; and

(c) subject to (a) and (b) above, otherwise admits the allegations pleaded in paragraph 168.

243 In relation to paragraph 169 of the FASOC, Seqwater:

(a) repeats paragraph 221(a) above;

(b) repeats paragraphs 240(a) to (e) above;

(c) pleads that:

(i) between 16 December 2010 and 17 December 2010, one of the Somerset Dam Regulators was open 100%;

Particulars of (c)(i)

Email from Dam Levels to various persons on 17 December 2010 at about 06.41 re FW: Somerset Dam [SEQ.001.019.4617].

(ii) at or around 10.00 on 16 December 2010, releases were being made from the Wivenhoe Dam Mini-Hydro at a rate of approximately 1,200ML/d (14m^3/s);

Particulars of (c)(ii)

Email from Dam Levels to various persons on 16 December 2010 at about 10.04 re FW: Wivenhoe Dam [SEQ.001.019.3108].

(iii) at or around 11.00 on 16 December 2010, releases were being made from the Wivenhoe Dam Mini-Hydro (at a rate of approximately 1,200ML/d or 14m^3/s) and the Wivenhoe Dam Regulator Valve (at a rate of approximately 3,176ML/d or 37m^3/s);

Particulars of (c)(iii)

Email from Dam Levels to various persons on 17 December 2010 at about 11.07 re FW: Wivenhoe Dam [SEQ.001.019.3107].

(iv) at or about 06.00 on 17 December 2010:

(A) since about 09.00 on 16 December 2010, rainfalls of between 25 and 50mm were recorded in the Somerset Dam Catchment;

(B) inflows of about 30,000ML were expected into Lake Somerset over the ensuing days;

(C) since about 09.00 on 16 December 2010, rainfall of between 5 and 55mm was recorded in the upper Brisbane River catchment; and

(D) inflows of up to approximately 20,000-30,000ML into Lake Wivenhoe were possible over the following days;

(E) the Flood Engineers considered that the inflows into Lake Wivenhoe might be adequately managed by releases from the Wivenhoe Dam Regulator Valve and Wivenhoe Dam Mini-Hydro, which were releasing 4,300ML/d (50m^3/s); and

Particulars of (c)(iv)

Situation Report sent by Mr Malone to various persons on 17 December 2010 at about 05.59 [SEQ.001.011.4614].

(v) at or about 07.00 on 18 December 2010:

(A) it was estimated that an inflow volume from the Somerset Dam Catchment and Wivenhoe Dam Catchment of approximately 100,000ML would need to be drained over the next four days;

(B) the peak flows in the Brisbane River were to be limited to between 300-350m^3/s, which Mr Ruffini indicated "will best meet the [Flood Mitigation Manual] objectives of emptying the flood storage and minimizing disruption to downstream bridges";

(C) Somerset Dam was releasing water into Lake Wivenhoe through two of the Somerset Dam Regulators, these releases being made in accordance with Strategy S2;

(D) releases from Wivenhoe Dam had increased over the night of 17/18 December 2010 to 150m^3/s and were expected to be increased to 300m^3/s as flows from Lockyer Creek subsided over the next 24 hours, these releases being made in accordance with Strategy W1; and

(E) outflows from the Lockyer Creek were peaking at approximately 130m^3/s; and

Particulars of (c)(v)

Situation Report sent by Mr Ruffini to various persons on 18 December 2010 at around 07.05 [SEQ.001.011.4615].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 169.

244 Seqwater denies the allegations pleaded in paragraph 170 of the FASOC and:

(a) admits that on or about 24 December 2010, the Chief Executive Officer of the SEQ Water Grid Manager sent a letter to the Chief Executive Officer of Seqwater (the "**24 December Letter**");

Particulars of (a)

Letter from Barry Dennien of SEQ Water Grid Manager to Peter Borrows of Seqwater dated 24 December 2010 [SEQ.016.002.7938].

(b) denies that the 24 December 2010 letter constituted an authority to Seqwater that Seqwater could draw down Lake Somerset and Lake Wivenhoe to 95% of their combined FSL as is alleged or at all;

(c) pleads that Mr Malone and Mr Tibaldi were not made aware of the 24 December Letter or its contents prior to the conclusion of the January 2011 Flood Event;

(d) denies that the SEQ Water Grid Manager could authorise releases from Somerset Dam and Wivenhoe Dam to below the FSL for each dam for the purposes of flood mitigation;

(e) pleads that:

(i) at all times during the period December 2010 to January 2011, the decision to authorise releases from Somerset Dam and Wivenhoe Dam to below the FSL for each dam for the purposes of flood mitigation could be made only by the Queensland Government; and

(ii) the Queensland Government had not made any such determination;

Particulars of (d)

(A) Transcript, the Honourable Stephen Robertson MP, Queensland Floods Commission of Inquiry, 11 April 2011, pages 29-31 [SEQ.010.028.0009 at .0029 to .0031]

(B) Queensland Floods Commission of Inquiry, Interim Report, August 2011, paragraph 2.4.6 [SEQ.010.019.0001].

(f) pleads that by the 24 December Letter:

(i) the SEQ Water Grid Manager informed Seqwater that from a water security perspective, the SEQ Water Grid Manager and the Queensland Water Commission had no in principle objection to Lake Somerset and Lake Wivenhoe being drawn down to 95% of their combined FSL;

(ii) the SEQ Water Grid Manager noted that, in its opinion, any such releases would have a negligible impact on the extent and duration of flooding during a major flood event;

(iii) the SEQ Water Grid Manager informed Seqwater than any specific releases to below FSL should be managed in accordance with any statutory and regulatory obligations, such as the Flood Mitigation Manual and the Moreton ROP; and

(iv) recommended that Seqwater consult with DERM to confirm any conditions that apply;

(g) pleads that on or about 24 December 2010, the Chair of the SEQ Water Grid Manager wrote to the Minister for Natural Resources, Mines and Energy and Minister for Trade, in response to a letter from the Minister dated 25 October 2010 which is referred to in the Chair's letter;

Particulars of (g)

Letter from Gary Humphrys of SEQ Water Grid Manager to the Hon Stephen Robertson MP dated 24 December 2010 [SEQ.001.019.0099].

(h) repeats paragraphs 55 to 113 above; and

(i) denies that at any time during the period December 2010 to January 2011 releases for the purposes of flood mitigation were authorised to be made from Somerset Dam and Wivenhoe Dam below the FSL for each dam.

245 In relation to paragraph 170A of the FASOC, Seqwater:

(a) denies the allegations pleaded; and

(b) repeats paragraph 244 above.

246 In relation to paragraph 171 of the FASOC, Seqwater:

(a) repeats paragraph 244 above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 171.

247 In relation to paragraph 172 of the FASOC, Seqwater:

(a) denies the allegations pleaded;

(b) repeats paragraphs 240(a) to (e) and 243(c) above;

(c) pleads that:

(i) at or about 09.00 on 23 December 2010, sluice gate operations at Somerset Dam ceased, however, two of the Somerset Dam Regulators were expected to be opened on 25 December 2010;

(ii) releases from the Wivenhoe Dam Radial Gates ceased at 13.00 on 24 December 2010 to allow the passage of the peak flow in Lockyer Creek; and

(iii) at or about 13.45 on 24 December 2010:

(A) the Wivenhoe Dam Regulator Valve was open and releasing water at a rate of approximately 3,076ML/d (36 m^3/s);

(B) the Wivenhoe Dam Mini-Hydro was releasing water at a rate of approximately 1,200ML/d (14 m^3/s);

(C) it was expected that the operation of the Wivenhoe Dam Radial Gates would recommence on the morning of 25 December 2010;

(D) inflows of approximately 35,000ML was expected into Lake Wivenhoe from rainfall which fell in the upper Brisbane River in the previous 24 hours; and

(E) Twin Bridges, Savages Crossing and Colleges Crossing were closed and were expected to remain closed at least until 27 December 2010 due to flows into the Brisbane River from Lockyer Creek which was expected to peak at 200m^3/s late on 24 December 2010; and

Particulars of (c)

(i) Situation Report sent by Mr Ruffini to various persons at or about 14.41 on 24 December 2010 [SEQ.001.011.4643].

(ii) Email from Dam Levels to various persons at or about 14.05 on 24 December 2010 [SEQ.001.019.2945].

(d) further, repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 172.

248 In relation to paragraph 173 of the FASOC, Seqwater:

(a) pleads that Mr Tibaldi worked between about 15.00 on 24 December 2010 to about 07.00 on 25 December 2010, including being available “on-call” and responsible for remote monitoring of, Somerset Dam and Wivenhoe Dam;

Particulars of (a)

(i) Situation report issued by Mr Tibaldi to various persons at about 00.13 on 25 December 2010 [SEQ.001.020.3318].

(ii) Situation report issued by Mr Tibaldi to various persons at about 02.09 on 25 December 2010 [SEQ.001.020.3319].

(b) pleads that Mr Malone worked in the Flood Operations Centre between about 05.30 to about 10.30 on 25 December, then monitored remotely thereafter until about 13.00 on 25 December 2010;

Particulars of (b)

Flood event sign on sheet [SEQ.004.026.0009].

(c) pleads that Mr Ayre worked between about 13.00 to about 19.00 on 25 December 2010, including being available "on-call" and responsible for remote monitoring of Somerset Dam and Wivenhoe Dam;

Particulars of (c)

Email from Mr Tibaldi to various persons dated 23 December 2010 re Updated Flood Event Roster attaching duty roster commencing 2010-12-16 [SEQ.001.020.3783] and [SEQ.001.020.3784].

(d) pleads that Mr Tibaldi worked between about 19.00 on 25 December 2010 to 07.00 on 26 December 2010, including being available "on-call" and responsible for remote monitoring of Somerset Dam and Wivenhoe Dam;

Particulars of (d)

(i) Flood Event Operations Directive No 1 issued by Mr Tibaldi at about 18.45 on 25 December 2010 to the North Pine Dam Operators [SEQ.001.018.4495].

(ii) Flood Event Operations Directive No 2 issued by Mr Tibaldi at about 20.30 on 25 December 2010 to the North Pine Dam Operators [SEQ.001.010.8273].

(iii) Flood Event Operations Directive No 3 issued by Mr Tibaldi at about 01.15 on 26 December 2010 to the North Pine Dam Operators [SEQ.016.014.9802].

(iv) Flood Event Operations Directive No 4 issued by Mr Tibaldi at about 02.15 on 26 December 2010 to the North Pine Dam Operators [SEQ.001.018.4489].

(v) Flood Event Operations Directive No 5 issued by Mr Tibaldi at about 05.30 on 26 December 2010 to the North Pine Dam Operators [SEQ.001.018.4487].

(e) repeats paragraphs 219(a) and (b) and 247(c) above;

(f) subject to paragraphs (a) to (e) above, otherwise admits that page 12 of the Seqwater Report on the Operation of Somerset and Wivenhoe Dam – October to December 2010, May 2011 suggests that the Flood Operations Centre was demobilised for the purpose of Somerset Dam and Wivenhoe Dam at or around 15.00 on 24 December 2010; and

(g) subject to those matters, otherwise denies the allegations pleaded in paragraph 173.

249 In relation to paragraph 174 of the FASOC, Seqwater:

(a) repeats paragraphs 240(a) to (f) and 247(c) above;

(b) in relation to paragraphs 174(e) to (g):

(i) denies that the BOM PME forecasts relied upon by the plaintiff in paragraphs 174(e) to (g) predicted rainfall specifically for the Brisbane River Basin or for the Lake Somerset and Lake Wivenhoe catchment areas as alleged; and

(ii) repeats paragraph 237 above; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 174.

17-24 December Breaches

250 Seqwater denies the allegations pleaded in paragraph 174A of the FASOC.

251 In relation to paragraph 176 of the FASOC, Seqwater:

(a) repeats paragraphs 240(a) to (f), 244 and 247(c) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 176 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer

would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act* 2003 (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act* 2003 (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 176; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 176.

252 Seqwater denies the allegations pleaded in paragraph 177 of the FASOC and, further, repeats paragraphs 251(b) to (f) above.

253 Seqwater denies the allegations pleaded in paragraph 178 of the FASOC.

254 In relation to paragraph 179 of the FASOC, Seqwater:

(a) repeats paragraph 247 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 179.

O Events of 25 December 2010 to 1 January 2011

Weather Forecasts

255 Seqwater denies paragraph 179A of the FASOC and repeats paragraph 237 above.

256 Seqwater denies the allegations pleaded in paragraph 179B of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 25 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 26 December 2010 was 10-20mm of rain; and

Particulars of (c)

Email sent at 10.03 on 25 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6527].

(d) pleads that at or about 16.00 on 25 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 26 December 2010 was 40-60mm of rain.

Particulars of (d)

Email sent at 16.00 on 25 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6528].

257 Seqwater denies the allegations pleaded in paragraph 179C of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 11.16 on 26 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 27 December 2010 was 50-100mm of rain; and

Particulars of (c)

Email sent at 11.16 on 26 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6562].

(d) pleads that at or about 16.00 on 26 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 27 December 2010 was 50-100mm of rain.

Particulars of (d)

Email sent at 16.00 on 26 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6565].

258 Seqwater denies the allegations pleaded in paragraph 179D of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 27 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 28 December 2010 was 25-50mm of rain; and

Particulars of (c)

Email sent at 10.03 on 27 December 2010 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6576].

(d) pleads that at or about 16.00 on 27 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 28 December 2010 was 25-35mm of rain.

Particulars of (d)

Email sent at 16.00 on 27 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6587].

259 Seqwater denies the allegations pleaded in paragraph 179E of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 28 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 29 December 2010 was 3-5mm of rain; and

Particulars of (c)

Email sent at 10.03 on 28 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6608].

(d) pleads that at or about 16.00 on 28 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 29 December 2010 was 3-5mm of rain.

Particulars of (d)

Email sent at 16.00 on 28 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6615].

260 Seqwater denies the allegations pleaded in paragraph 179F of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 29 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined

Dam Catchments for the 24-hour period to 10.00 on 30 December 2010 was 3-5mm of rain; and

Particulars of (c)

Email sent at 10.03 on 29 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6735].

(d) pleads that at or about 16.12 on 29 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 16.00 on 30 December 2010 was less than 2mm of rain.

Particulars of (d)

Email sent at 16.12 on 29 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6766].

261 Seqwater denies the allegations pleaded in paragraph 179G of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 30 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 31 December 2010 was less than 2mm of rain; and

Particulars of (c)

Email sent at 10.03 on 30 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6773].

(d) pleads that at or about 16.46 on 30 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 16.00 on 31 December 2010 was less than 2mm of rain.

Particulars of (d)

Email sent at 16.46 on 30 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6777].

262 Seqwater denies the allegations pleaded in paragraph 179H of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.03 on 31 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 1 January 2011 was less than 5mm of rain; and

Particulars of (c)

Email sent at 10.03 on 31 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6802].

(d) pleads that at or about 16.00 on 31 December 2010, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 1 January 2011 was less than 5mm of rain.

Particulars of (d)

Email sent at 16.00 on 31 December 2010 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6803].

263 Seqwater denies the allegations pleaded in paragraph 179I of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above;

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

(c) pleads that at or about 10.23 on 1 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 2 January 2011 was less than 5mm of rain; and

Particulars of (c)

Email sent at 10.23 on 1 January 2011from "Aifs Operational Manager" to "weather" [SEQ.001.019.6806].

(d) pleads that at or about 16.00 on 1 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 2 January 2011 was less than 5mm of rain.

Particulars of (d)

Email sent at 16.00 on 1 January 2011from “Aifs Operational Manager” to “weather” [SEQ.001.019.6807].

Rainfall and Inflows

264 In relation to paragraph 180 of the FASOC, Seqwater:

(a) admits that rainfall fell in the Somerset Dam Catchment and the Wivenhoe Dam Catchment during the period 25 December 2010 to 31 December 2010;

(b) repeats paragraph 217 above; and

(c) subject to those matters, otherwise denies the allegations pleaded in paragraph 180.

265 In relation to paragraph 181 of the FASOC, Seqwater:

(a) repeats paragraphs 217 and 264 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 181.

266 In relation to paragraph 182 of the FASOC, Seqwater:

(a) repeats paragraphs 217 and 264 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 182.

Water Level

267 In relation to paragraph 183 of the FASOC, Seqwater:

(a) pleads that the approximate water level of Lake Somerset in the period 25 December 2010 to 1 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
25/12/2010 07.35	99.33	SEQ.001.019.4531
26/12/2010 07.05	99.54	SEQ.001.019.4530
26/12/2010 10.40	99.55	SEQ.001.019.4529
27/12/2010 05.45	99.67	SEQ.001.019.4528
27/12/2010 07.15	99.67	SEQ.001.019.4527
27/12/2010 13.30	99.70	SEQ.001.019.4526
27/12/2010 16.00	99.77	SEQ.001.019.4525

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
28/12/2010 00.00	99.99	SEQ.001.019.4509
28/12/2010 08.00	99.99	SEQ.001.019.4524
28/12/2010 08.15	99.99	SEQ.001.019.4523
28/12/2010 09.20	100.00	SEQ.001.019.4522
28/12/2010 10.00	100.00	SEQ.001.019.4521
28/12/2010 11.00	100.00	SEQ.001.019.4520
28/12/2010 12.00	100.00	SEQ.001.019.4519
28/12/2010 13.00	100.00	SEQ.001.019.4518
28/12/2010 14.00	99.99	SEQ.001.019.4517
28/12/2010 15.00	99.99	SEQ.001.019.4516
28/12/2010 16.00	99.99	SEQ.001.019.4515
28/12/2010 18.00	99.98	SEQ.001.019.4514
28/12/2010 19.10	99.99	SEQ.001.019.4498
28/12/2010 20.00	99.99	SEQ.001.019.4499
28/12/2010 20.00	99.99	SEQ.001.019.4513
28/12/2010 21.00	99.99	SEQ.001.019.4512
28/12/2010 22.00	99.99	SEQ.001.019.4511
28/12/2010 23.00	99.99	SEQ.001.019.4510
29/12/2010 00.40	99.98	SEQ.001.019.4508
29/12/2010 02.00	99.97	SEQ.001.019.4507
29/12/2010 03.00	99.94	SEQ.001.019.4506
29/12/2010 03.48	99.91	SEQ.001.019.4505
29/12/2010 05.00	99.86	SEQ.001.019.4504
29/12/2010 06.00	99.83	SEQ.001.019.4503
29/12/2010 07.30	99.77	SEQ.001.019.4502
29/12/2010 08.00	99.75	SEQ.001.019.4500
29/12/2010 09.00	99.72	SEQ.001.019.4497
29/12/2010 10.00	99.70	SEQ.001.019.4496
29/12/2010 11.00	99.67	SEQ.001.019.4495
29/12/2010 11.10	99.67	SEQ.001.019.4494
29/12/2010 12.00	99.66	SEQ.001.019.4493
29/12/2010 13.00	99.65	SEQ.001.019.4492
29/12/2010 14.00	99.65	SEQ.001.019.4491
29/12/2010 14.00	99.63	SEQ.001.019.4490
29/12/2010 15.00	99.60	SEQ.001.019.4489
29/12/2010 16.00	99.59	SEQ.001.019.4488
29/12/2010 17.00	99.57	SEQ.004.026.0057

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
29/12/2010 18.00	99.55	SEQ.004.026.0059
29/12/2010 19.00	99.53	SEQ.001.019.4487
29/12/2010 20.00	99.52	SEQ.001.019.4486
29/12/2010 21.00	99.50	SEQ.001.019.4484
29/12/2010 22.00	99.48	SEQ.001.019.4483
29/12/2010 23.00	99.46	SEQ.001.019.4482
30/12/2010 00.00	99.44	SEQ.001.019.4481
30/12/2010 01.00	99.42	SEQ.001.019.4480
30/12/2010 02.00	99.40	SEQ.001.019.4479
30/12/2010 03.00	99.38	SEQ.001.019.4478
30/12/2010 04.00	99.36	SEQ.001.019.4477
30/12/2010 05.00	99.34	SEQ.004.026.0080
30/12/2010 05.15	99.33	SEQ.001.019.4476
30/12/2010 06.00	99.32	SEQ.001.019.4475
30/12/2010 07.00	99.30	SEQ.001.019.4474
30/12/2010 08.00	99.28	SEQ.001.019.4473
30/12/2010 09.00	99.26	SEQ.001.019.4472
30/12/2010 10.00	99.24	SEQ.004.026.0088
30/12/2010 11.00	99.22	SEQ.004.026.0089
30/12/2010 12.00	99.20	SEQ.004.026.0090
30/12/2010 13.00	99.17	SEQ.004.026.0073
30/12/2010 14.00	99.15	SEQ.004.026.0075
30/12/2010 15.00	99.14	SEQ.004.026.0077
30/12/2010 16.00	99.11	SEQ.004.026.0079
30/12/2010 17.00	99.11	SEQ.004.026.0081
30/12/2010 18.00	99.11	SEQ.001.019.4450
30/12/2010 19.00	99.10	SEQ.001.019.4471
30/12/2010 20.00	99.10	SEQ.001.019.4470
30/12/2010 21.10	99.08	SEQ.001.019.4469
30/12/2010 22.00	99.07	SEQ.001.019.4468
30/12/2010 23.00	99.06	SEQ.001.019.4467
31/12/2010 00.13	99.05	SEQ.001.019.4466
31/12/2010 01.00	99.04	SEQ.001.019.4465
31/12/2010 02.00	99.03	SEQ.001.019.4464
31/12/2010 03.40	99.02	SEQ.001.019.4463
31/12/2010 04.00	99.02	SEQ.001.019.4462
31/12/2010 05.00	99.01	SEQ.001.019.4461

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
31/12/2010 06.00	99.01	SEQ.001.019.4460
31/12/2010 07.00	99.01	SEQ.001.019.4459
31/12/2010 08.00	99.00	SEQ.001.019.4458
31/12/2010 09.00	99.00	SEQ.001.019.4457
31/12/2010 10.00	99.00	SEQ.001.019.4456
31/12/2010 11.00	98.99	SEQ.001.019.4455
31/12/2010 12.00	98.98	SEQ.001.019.4454
31/12/2010 12.30	98.99	SEQ.001.019.4453
31/12/2010 12.30	98.99	SEQ.001.019.4452
01/01/2011 09.30	99.00	SEQ.001.019.4451

(b) pleads that the levels of Lake Somerset rose and fell over the period 25 December 2010 to 1 January 2011;

(c) pleads that the net level of Lake Somerset fell over the period 25 December 2010 to 1 January 2011 from approximately 99.33m AHD to approximately 99.00m AHD;

(d) pleads that the level of Lake Somerset rose and fell over the period 25 to 29 December 2010;

(e) pleads that the net level of Lake Somerset rose over the period 25 to 29 December 2010 from approximately 99.33m AHD to approximately 99.46m AHD; and

(f) subject to the matters pleaded in paragraphs (a) to (e) above, Seqwater otherwise denies the allegations pleaded in paragraph 183.

268 In relation to paragraph 184 of the FASOC, Seqwater:

(a) pleads that the approximate water level of Lake Wivenhoe in the period 25 December 2010 to 1 January 2011 was:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
25/12/2010 06.30	67.280	SEQ.001.019.2944	67.25
26/12/2010 06.30	67.350	SEQ.001.019.2943	67.32
26/12/2010 09.00	67.350	SEQ.001.019.2942	67.32
26/12/2010 09.15	67.350	SEQ.001.019.2941	67.32
26/12/2010 09.30	67.350	SEQ.001.019.2940	67.32
26/12/2010 09.45	67.350	SEQ.001.019.2939	67.32
26/12/2010 10.00	67.360	SEQ.001.019.2938	67.33

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
26/12/2010 10.15	67.360	SEQ.001.019.2937	67.33
26/12/2010 10.30	67.360	SEQ.001.019.2936	67.33
26/12/2010 12.00	67.360	SEQ.001.019.2935	67.33
26/12/2010 13.00	67.370	SEQ.001.019.2934	67.34
26/12/2010 14.00	67.370	SEQ.001.019.2933	67.34
26/12/2010 15.00	67.370	SEQ.001.019.2932	67.34
26/12/2010 16.00	67.370	SEQ.001.019.2931	67.34
26/12/2010 17.00	67.375	SEQ.001.019.2930	67.35
26/12/2010 18.00	67.380	SEQ.001.019.2929	67.35
26/12/2010 19.00	67.400	SEQ.001.019.2928	67.37
26/12/2010 20.00	67.420	SEQ.001.019.2926	67.39
26/12/2010 21.00	67.450	SEQ.001.019.2924	67.42
26/12/2010 22.00	67.470	SEQ.001.019.2923	67.44
27/12/2010 00.00	67.490	SEQ.001.019.2921	67.46
27/12/2010 01.00	67.510	SEQ.001.019.2920	67.48
27/12/2010 03.00	67.550	SEQ.001.019.2918	67.52
27/12/2010 05.00	67.570	SEQ.001.019.2917	67.54
27/12/2010 06.00	67.590	SEQ.001.019.2916	67.56
27/12/2010 07.00	67.610	SEQ.001.019.2914	67.58
27/12/2010 08.00	67.630	SEQ.001.019.2913	67.60
27/12/2010 09.00	67.660	SEQ.001.019.2912	67.63
27/12/2010 10.00	67.690	SEQ.001.019.2911	67.66
27/12/2010 11.00	67.720	SEQ.001.019.2910	67.69
27/12/2010 12.00	67.740	SEQ.001.019.2909	67.71
27/12/2010 13.00	67.780	SEQ.001.019.2908	67.75
27/12/2010 14.00	67.840	SEQ.001.019.2907	67.81
27/12/2010 15.00	67.840	SEQ.001.019.2906	67.81
27/12/2010 16.00	67.900	SEQ.001.019.2905	67.87
27/12/2010 17.00	67.960	SEQ.001.019.2904	67.93
27/12/2010 18.00	67.990	SEQ.001.019.2903	67.96
27/12/2010 19.00	68.040	SEQ.001.019.2902	68.02
27/12/2010 20.00	68.090	SEQ.001.019.2901	68.07
27/12/2010 22.00	68.190	SEQ.001.019.2900	68.17
28/12/2010 00.00	68.270	SEQ.001.019.2899	68.25
28/12/2010 02.00	67.380	SEQ.001.019.2897	68.36
28/12/2010 04.00	68.440	SEQ.001.019.2896	68.42

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
28/12/2010 06.00	68.530	SEQ.001.019.2895	68.52
28/12/2010 07.00	68.580	SEQ.001.019.2894	68.57
28/12/2010 08.00	68.620	SEQ.001.019.2893	68.61
28/12/2010 09.00	68.660	SEQ.001.019.2892	68.65
28/12/2010 10.00	68.700	SEQ.001.019.2891	68.69
28/12/2010 11.00	68.760	SEQ.001.019.2890	68.75
28/12/2010 12.00	68.800	SEQ.001.019.2889	68.79
28/12/2010 13.00	68.830	SEQ.001.019.2888	68.82
28/12/2010 14.00	68.880	SEQ.001.019.2887	68.87
28/12/2010 15.00	68.930	SEQ.001.019.2886	68.92
28/12/2010 16.00	68.960	SEQ.001.019.2885	68.96
28/12/2010 17.00	68.990	SEQ.001.019.2884	68.99
28/12/2010 18.00	69.030	SEQ.001.019.2883	69.03
28/12/2010 19.00	69.060	SEQ.001.019.2882	69.06
28/12/2010 20.00	69.090	SEQ.001.019.2881	69.09
28/12/2010 21.00	69.110	SEQ.001.019.2880	69.11
28/12/2010 22.00	69.130	SEQ.001.019.2879	69.13
28/12/2010 23.00	69.160	SEQ.001.019.2878	69.16
29/12/2010 01.00	69.190	SEQ.001.019.2877	69.19
29/12/2010 02.00	69.190	SEQ.001.019.2876	69.19
29/12/2010 03.00	69.220	SEQ.001.019.2874	69.23
29/12/2010 04.00	69.230	SEQ.001.019.2873	69.23
29/12/2010 05.00	69.230	SEQ.001.019.2872	69.23
29/12/2010 06.00	68.260	SEQ.001.019.2871	69.26
29/12/2010 07.00	69.290	SEQ.001.019.2870	69.29
29/12/2010 08.00	69.290	SEQ.001.019.2869	69.29
29/12/2010 09.00	69.305	SEQ.001.019.2868	69.31
29/12/2010 10.00	69.305	SEQ.001.019.2867	69.31
29/12/2010 11.00	69.305	SEQ.001.019.2866	69.31
29/12/2010 12.00	69.325	SEQ.001.019.2865	69.33
29/12/2010 13.00	69.330	SEQ.001.019.2864	69.33
29/12/2010 14.00	69.310	SEQ.001.019.2863	69.31
29/12/2010 15.00	69.310	SEQ.001.019.2862	69.31
29/12/2010 16.00	69.310	SEQ.001.019.2861	69.31
29/12/2010 17.00	69.300	SEQ.001.019.2860	69.30
29/12/2010 18.00	69.290	SEQ.001.019.2859	69.29

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
29/12/2010 19.00	69.280	SEQ.001.019.2858	69.28
29/12/2010 20.00	69.270	SEQ.001.019.2857	69.28
29/12/2010 21.00	69.260	SEQ.001.019.2856	69.26
29/12/2010 22.00	69.240	SEQ.001.019.2855	69.24
29/12/2010 23.00	69.230	SEQ.001.019.2853	69.23
30/12/2010 00.00	69.210	SEQ.001.019.2852	69.21
30/12/2010 01.00	69.190	SEQ.001.019.2851	69.19
30/12/2010 02.00	69.170	SEQ.001.019.2850	69.17
30/12/2010 03.00	69.140	SEQ.001.019.2849	69.14
30/12/2010 05.00	69.100	SEQ.001.019.2848	69.10
30/12/2010 07.00	69.050	SEQ.001.019.2847	69.05
30/12/2010 08.00	69.020	SEQ.001.019.2846	69.02
30/12/2010 09.00	69.000	SEQ.001.019.2845	69.00
30/12/2010 10.00	68.980	SEQ.001.019.2844	68.98
30/12/2010 11.00	68.960	SEQ.001.019.2843	68.96
30/12/2010 12.00	68.930	SEQ.001.019.2842	68.92
30/12/2010 13.00	68.910	SEQ.001.019.2841	68.90
30/12/2010 15.00	68.860	SEQ.001.019.2840	68.85
30/12/2010 16.00	68.830	SEQ.001.019.2839	68.82
30/12/2010 17.00	68.800	SEQ.001.019.2838	68.79
30/12/2010 18.00	68.760	SEQ.001.019.2837	68.75
30/12/2010 19.00	68.740	SEQ.001.019.2836	68.73
30/12/2010 21.00	68.670	SEQ.001.019.2835	68.66
30/12/2010 22.30	68.640	SEQ.001.019.2834	68.63
30/12/2010 23.00	68.630	SEQ.001.019.2833	68.62
31/12/2010 00.00	68.580	SEQ.001.019.2832	68.57
31/12/2010 01.00	68.540	SEQ.001.019.2831	68.53
31/12/2010 02.00	68.510	SEQ.001.019.2830	68.50
31/12/2010 03.00	68.480	SEQ.001.019.2829	68.47
31/12/2010 04.00	68.440	SEQ.001.019.2828	68.42
31/12/2010 05.00	68.400	SEQ.001.019.2827	68.38
31/12/2010 06.00	68.370	SEQ.001.019.2826	68.35
31/12/2010 07.00	68.330	SEQ.001.019.2825	68.31
31/12/2010 08.00	68.290	SEQ.001.019.2824	68.27
31/12/2010 09.00	68.260	SEQ.001.019.2823	68.24
31/12/2010 10.00	68.220	SEQ.001.019.2822	68.20

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
31/12/2010 11.00	68.180	SEQ.001.019.2821	68.16
31/12/2010 12.00	68.140	SEQ.001.019.2820	68.12
31/12/2010 13.00	68.120	SEQ.001.019.2819	68.10
31/12/2010 14.00	68.080	SEQ.001.019.2818	68.06
31/12/2010 15.00	68.030	SEQ.001.019.2817	68.01
31/12/2010 16.00	67.980	SEQ.001.019.2816	67.95
31/12/2010 17.00	67.950	SEQ.001.019.2815	67.92
31/12/2010 18.00	67.910	SEQ.001.019.2814	67.88
31/12/2010 19.00	67.870	SEQ.001.019.2813	67.84
31/12/2010 21.00	67.780	SEQ.001.019.2812	67.75
31/12/2010 22.00	67.750	SEQ.001.019.2811	
31/12/2010 23.00	67.700	SEQ.001.019.2810	67.72
01/01/2011 00.00	67.680	SEQ.001.019.2809	67.65
01/01/2011 02.00	67.600	SEQ.001.019.2807	67.57
01/01/2011 03.00	67.580	SEQ.001.019.2806	67.55
01/01/2011 04.00	67.540	SEQ.001.019.2805	67.51
01/01/2011 05.00	67.510	SEQ.001.019.2803	67.48
01/01/2011 07.00	67.460	SEQ.001.019.2802	67.43
01/01/2011 08.00	67.430	SEQ.001.019.2801	67.40
01/01/2011 09.00	67.400	SEQ.001.019.2800	67.37
01/01/2011 10.00	67.370	SEQ.001.019.2799	67.34
01/01/2011 11.00	67.350	SEQ.001.019.2798	67.32
01/01/2011 12.00	67.320	SEQ.001.019.2797	67.29
01/01/2011 13.00	67.300	SEQ.001.019.2796	67.27
01/01/2011 14.00	67.290	SEQ.001.019.2795	67.26
01/01/2011 15.00	67.270	SEQ.001.019.2794	67.24
01/01/2011 16.00	67.250	SEQ.001.019.2793	67.22
01/01/2011 17.00	67.230	SEQ.001.019.2792	67.20
01/01/2011 18.00	67.220	SEQ.001.019.2791	67.19
01/01/2011 19.00	67.205	SEQ.001.019.2790	67.18
01/01/2011 20.00	67.190	SEQ.001.019.2789	67.16
01/01/2011 21.00	67.170	SEQ.001.019.2788	67.14
01/01/2011 22.00	67.170	SEQ.001.019.2787	67.14
01/01/2011 23.00	67.150	SEQ.001.019.2786	67.12

Particulars of (a)

Corrected Water Level readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(b) pleads that the level of Lake Wivenhoe rose and fell over the period 25 December 2010 to 1 January 2011;

(c) pleads that the net level of Lake Wivenhoe:

(i) on the basis of the Corrected Water Level Readings, fell over the period 25 December 2010 to 1 January 2011 from approximately 67.25m AHD to approximately 67.12m AHD; and

(ii) on the basis of the Dam Levels Email Readings, fell over the period 25 December 2010 to 1 January 2011 from approximately 67.28m AHD to 67.15m AHD;

(d) pleads that the level of Lake Wivenhoe rose and fell over the period 25 to 31 December 2010;

(e) pleads that the net level of Lake Wivenhoe:

(i) on the basis of the Corrected Water Level Readings, rose over the period 25 December 2010 to 31 December 2010 from approximately 67.25m AHD to 67.72m AHD; and

(ii) on the basis of the Dam Levels Email Readings, rose over the period 25 December 2010 to 1 January 2011 from approximately 67.28m AHD to approximately 67.70m AHD; and

(f) subject the matters pleaded in paragraphs (a) to (e) above, Seqwater otherwise denies the allegations pleaded in paragraph 184.

Flood Operations

269 In relation to paragraph 184A of the FASOC, Seqwater:

(a) repeats paragraphs 247(c), 267 and 268 above;

(b) pleads that at or about 00.15 on 25 December 2010:

(i) the average rainfall in the previous 24 hours over the catchment for Somerset Dam was approximately 15mm and the average catchment rainfall in the previous three hours was less than 5mm;

(ii) it was expected that releases would not be required from Somerset Dam before 08.00 on 26 December 2010 however storage levels and the catchment conditions would continue to be monitored;

(iii) the average rainfall in the previous 24 hours over the catchment for Wivenhoe Dam was less than 10mm and the average catchment rainfall in the previous three hours was less than 2mm;

(iv) the level of Lake Wivenhoe was rising slowly towards a height of 67.25m AHD however, if the storage deficit in Splityard Creek Dam was considered, the level of Lake Wivenhoe was effectively well below 67.25m AHD;

(v) it was expected that releases from Lake Wivenhoe would not be required before 08.00 on 26 December 2010 with over 2,000,000ML of flood storage available however storage levels and the catchment conditions would continue to be monitored; and

(vi) the inflows from the Lockyer Creek into the Brisbane River were falling slowly having peaked at around 16.30 on 24 December 2010;

Particulars of (b)

Situation Report sent by Mr Tibaldi to Mr Malone, Mr Ayre, Mr Ruffini and Mr Drury at or about 00.13 on 25 December 2010 [SEQ.001.020.3318].

(c) pleads that at or about 02.00 on 25 December 2010:

(i) the average rainfall in the previous 24 hours over the catchment for Somerset Dam was approximately 20mm and the average catchment rainfall in the previous three hours was less than 5mm;

(ii) radar imagery suggested that further rainfall in the Wivenhoe Dam Catchment and the Somerset Dam Catchment was unlikely over the next three hours;

(iii) it was expected that releases would not be required from Somerset Dam before 08.00 on 26 December 2010;

(iv) the current average rainfall in the previous 24 hours over the catchment for Wivenhoe Dam was less than 10mm and the average catchment rainfall in the previous three hours was less than 2mm;

(v) the level of Lake Wivenhoe was rising slowly towards a height of 67.25m AHD however, if the storage deficit at Splityard Creek Dam was considered, the level of Lake Wivenhoe was well below 67.25m AHD;

(vi) it was expected that releases from Lake Wivenhoe would not be required before 08.00 on 26 December 2010 with over 2,000,000ML of flood storage available; and

(vii) the inflows from the Lockyer Creek into the Brisbane River were continuing to fall slowly;

Particulars of (c)

Situation Report sent by Mr Tibaldi to Mr Malone, Mr Ayre, Mr Ruffini and Mr Drury at or about 02.09 on 25 December 2010 [SEQ.001.020.3319].

(d) pleads that at or about 07.00 on 25 December 2010:

(i) the Somerset Dam Regulators and Sluices Gates were closed;

(ii) in the 24 hours to 06.00 on 25 December 2010, rainfall over the catchment for Somerset Dam varied from approximately 10-20mm;

(iii) an inflow volume of approximately 13,000ML was expected into Lake Somerset over the next few days;

(iv) Wivenhoe Dam was releasing approximately 4,200ML (49m^3/s) through the Wivenhoe Dam Mini-Hydro and the Wivenhoe Dam Regulator Valve;

(v) in the 24 hours to 06.00 on 25 December 2010, rainfall over the catchment for Wivenhoe Dam had varied from approximately 10-20mm;

(vi) approximately 15,000ML was expected to flow into Lake Wivenhoe from the upper Brisbane River over the next few days;

(vii) water levels were continuing to fall in Lockyer Creek but some small rises were expected in the Bremer River and Warrill Creek catchments during the day; and

(viii) Twin Bridges, Savages Crossing and Colleges Crossing remained impacted by Wivenhoe Dam releases, the Lockyer Creek flows and local runoff;

Particulars of (d)

Situation Report sent by Mr Malone to various persons at or about 08.21 on 25 December 2010 [SEQ.001.020.3758].

(e) pleads that at or about 06.00 on 26 December 2010:

(i) only minor rain had been reported in the catchments for Somerset Dam and Wivenhoe Dam in the previous 24 hours however the QPF issued at 16.00 on 25 December 2014 was for 40 to 60 mm of rainfall which was predicted to approach the catchments from the north;

(ii) it was expected that there was a high probability that the forecast rain will result in further releases from Somerset Dam and Wivenhoe Dam over the next week;

(iii) it was expected that at least two of the Somerset Dam Regulators would be opened later in the day to reduce the level of Lake Somerset to near FSL and it was expected further that additional gate operations may be expected in the coming days if forecast rainfall resulted in subsequent river rises;

(iv) it was expected that a radial gate at Wivenhoe Dam would be opened later in the day to reduce the level of Lake Wivenhoe to near FSL which was expect to continue until 28 December 2010 and it was expected further that additional gate operations may be expected in the coming days if forecast rainfall resulted in subsequent river rises; and

(v) the crossings downstream of Wivenhoe Dam were impacted primarily by flows emanating from the unregulated Downstream Catchments which were approximately 60m^3/s; and

Particulars of (e)

Situation Report sent by Mr Tibaldi to various persons at or about 05.53 on 26 December 2010 [SEQ.001.018.4484].

(f) subject to the matters pleaded in paragraphs (a) to (e) above, otherwise does not admit the allegations pleaded in paragraph 184A.

270 In relation to paragraph 184B of the FASOC, Seqwater:

(a) repeats paragraphs 248(a) to (d) and 269(b) to (e) above;

(b) pleads that Mr Ayre worked between about 07.00 on 26 December 2010 to about 19.00 on 26 December 2010;

(c) further, repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 184B; and

(d) subject the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 184B.

271 In relation to paragraph 185 of the FASOC, Seqwater:

(a) repeats paragraph 270 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 185.

272 In relation to paragraph 186 of the FASOC, Seqwater:

(a) repeats paragraph 248(d) above;

(b) pleads that Mr Malone worked until 19.00 on 2 January 2011; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 186.

273 In relation to paragraph 187 of the FASOC, Seqwater:

(a) repeats paragraphs 267(a), 268(a) and 269(b) to (e) above;

(b) pleads that:

(i) radial gate operations re-commenced at Wivenhoe Dam at or around 09.00 on 26 December 2010 with the objective to reduce the level of Lake Wivenhoe to near the FSL by 28 December 2010, assuming there were no further significant inflows, these releases being made in accordance with Strategy W1;

(ii) at or about 13.00 on 26 December 2010, the release rate from Wivenhoe Dam was 350m^3/s which was an operational strategy to maintain the trafficability of Burtons Bridge;

(iii) based on forecast rainfall, the release rate was expected to be increased such that the combined flows were above the 430m^3/s threshold at Burtons

Bridge and the flows were expected also to impact Kholo Bridge which was unserviceable due to damage sustained in an earlier flood;

(iv) on the current strategy, Twin Bridges, Savages Crossing and Colleges Crossing were expected to remain inundated until at least the evening of 28 December 2010;

(v) the Somerset Dam Regulators were opened at or about 10.00 on 26 December 2010 and it was expected to take at least until 28 December 2010 to reduce the level of Lake Somerset to near the FSL, however, it was expected also that further additional gate operations may be necessary in the coming days if forecast rainfall resulted in subsequent river rises; and

(vi) at or about 13.00 on 26 December 2010, the release rate from Somerset Dam was 138m^3/s, these releases being made in accordance with Strategy S2; and

Particulars of (b)

Situation Report sent by Mr Ayre to various persons at or about 12.58 on 26 December 2010 [SEQ.001.018.4474].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 187.

274 In relation to paragraph 188 of the FASOC, Seqwater:

(a) repeats paragraphs 267(a), 268(a), 269(b) to (e) and 273(b) above;

(b) pleads that:

(i) at or about 06.00 on 27 December 2010:

(A) the Somerset Dam Regulators opened at or about 10.00 on 26 December 2010 were releasing water at approximately 12,000ML/d (140 m^3/s);

(B) it was expected to take at least until 29 December 2010 to reduce the level of Lake Somerset to near the FSL, however, it was expected that additional gate operations may be necessary on 27 December 2010 if forecast rainfall resulted in subsequent river rises;

(C) due to outflows from Lockyer Creek, releases from Wivenhoe Dam which commenced at or around 09.00 on 26 December 2010 had been reduced to ensure that Burtons Bridge remained flood free;

(D) flow from the Lockyer Creek was expected to peak at 500m^3/s later on 27 December 2010, with the flow at Glenore Grove at around 600m^3/s, which, by itself, was expected to inundate Burtons Bridge;

(E) it was expected that when that occurred, releases from Wivenhoe Dam would be increased to reduce the level of Lake Wivenhoe to near the FSL, which was expected to take until at least 28 January 2010, and it was expected that additional gate operations may have been necessary if forecast rainfall resulted in subsequent river rises; and

(F) Twin Bridges, Savages Crossing and Colleges Creek were closed and were expected to remain closed until at least 30 December 2010 and Burtons Bridge was expected to be closed from later on 27 December 2010 to at least 29 December 2010, while Kholo Bridge remained unserviceable;

(ii) at or about 12.00 on 27 December 2010:

(A) the Somerset Dam Regulators were releasing water at approximately 18,000ML/d (208 m^3/s);

(B) it had been confirmed that Burtons Bridge would be closed later on 27 December 2010 which was expected to allow releases from Wivenhoe Dam to commence later on 27 December 2010 rather than on 28 December 2010;

(C) the releases from Wivenhoe Dam were expected to be increased so that the total combined flow in the mid-Brisbane River would be maintained at around 1,500m^3/s and, by the evening of 27 December 2010, were expected to be increased to about 900m^3/s with further increases to match the decrease in the flows from Lockyer Creek; and

(D) the flow from Lockyer Creek was expected to peak at around 650m^3/s at around 03.00 on 28 December 2010;

(iii) at or about 16.39 on 27 December 2010:

(A) particularly heavy rain had occurred in the headwaters in the Lockyer and Laidley Creeks in the 3 hours leading up to 15.00 on 27 December 2010;

(B) the Flood Engineers had earlier expected the Lockyer Creek to peak at around 600m^3/s in the evening of 27 December 2010, however, revised estimates suggested that the Lockyer Creek could reach as high as 1,000m^3/s by about 09.00 on 28 December 2010;

(C) Somerset Regional Council had expressed concerns that any significant release from Wivenhoe Dam on the evening of 27 December 2010 would exacerbate flood levels in the lower Lockyer region around Brightview Weir;

(D) the operating strategy was revised so that releases from Wivenhoe Dam would only be increased to 500m^3/s later on 27 December 2010 to minimise the risk that combined flows in the mid-Brisbane River would exceed 2,000m^3/s;

(iv) at or about 16.48 on 27 December 2010, Mr Ayre:

(A) indicated that he agreed with the suggested release strategy proposed by Mr Malone;

(B) suggested that the Flood Engineers should not exceed a combined flow of 1,500m^3/s in the mid-Brisbane River given the outlook for further rain on 28 and 29 December 2010 and the uncertainty of the Lockyer peak;

(C) suggested that releases from Wivenhoe Dam should be limited to a maximum of 500m^3/s;

(v) at or about 06.00 on 28 December 2010:

(A) the Somerset Dam Regulators were releasing water at approximately 18,000ML/d (208 m^3/s) and sluice gate operations were expected to commence during the morning;

(B) inflows into Lake Somerset were subsiding and, in the absence of further rainfall in the dam catchment, the level of Lake Somerset was expected to be near FSL by 30 December 2010;

(C) the total volume of water released from Lake Somerset since 26 December 2010 was approximately 37,000ML and the projected total release was approximately 64,000ML;

(D) the current release rate from Wivenhoe Dam was approximately 4,000ML/d (46 m^3/s) which was expected to be increased later in the day as the Lockyer Creek flows subsided;

(E) inflows into Lake Wivenhoe were subsiding and, in the absence of further rainfall in the dam catchment, the level of Lake Somerset was expected to be near FSL by around 2 January 2011; and

(F) the total volume of water released from Lake Wivenhoe since 26 December 2010 was approximately 28,000ML and the projected total release was 375,000ML; and

(vi) at or about 18.00 on 28 December 2010:

(A) two sluices opened at Somerset Dam were releasing water at approximately 35,000ML/d (405 m^3/s);

(B) the level of Lake Wivenhoe was falling;

(C) the total volume of water released from Lake Somerset since 26 December 2010 was approximately 42,000ML and the projected total release approaching approximately 100,000ML;

(D) it was intended to increase the release rate from Wivenhoe Dam during 28 and 29 December 2010 so that combined release and Lockyer flow was maintained at about 1,600m^3/s being approximately 140,000ML/d in the mid-Brisbane River;

(E) inflows into Lake Wivenhoe were subsiding and it was expected that the rate at which the level of Lake Wivenhoe would fall would increase once releases increased;

(F) the total volume of water released from Lake Wivenhoe since 26 December 2010 was approximately 32,000ML and the projected total release was 375,000ML; and

(G) Twin Bridges, Savages Crossing, Colleges Creek, Burtons Bridge and Kholo Bridge were closed but there was no expectation that either Mt Crosby Weir Bridge or Fernvale Bridge would be impacted by the current flows;

Particulars of (b)

(i) Situation Report sent by Mr Tibaldi to various persons at or about 06.07 on 27 December 2010 [SEQ.001.018.4448].

(ii) Email sent by Mr Malone to the Flood Engineers at or about 16.39 on 27 December 2010 [SEQ.001.018.4405].

(iii) Email sent by Mr Ayre to the Flood Engineers at or about 16.48 on 27 December 2010 [SEQ.001.018.5916].

(iv) Situation Report sent by Mr Malone to various persons at or about 12.57 on 27 December 2010 [SEQ.001.018.4421].

(v) Situation Report sent by Mr Tibaldi to various persons at or about 05.45 on 28 December 2010 [SEQ.001.018.4392].

(vi) Situation Report sent by Mr Malone to various persons at or about 18.39 on 28 December 2010 [SEQ.001.018.4346].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 188.

275 In relation to paragraph 189 of the FASOC, Seqwater:

(a) repeats paragraphs 268(a), 269(b) to (e), 273(b) and 274(b) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 189.

276 In relation to paragraph 190 of the FASOC, Seqwater:

(a) repeats paragraphs 268(a), 269(b) to (e), 273(b) and 274(b) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 190.

277 In relation to paragraph 191 of the FASOC, Seqwater:

(a) repeats paragraph 268 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 191.

25 December – 1 January Breaches

278 In relation to paragraph 191A of the FASOC, Seqwater:

(a) repeats paragraphs 244, 267, 268, 269(b) to (e), 273(b) and 274(b) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 191A of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above; and

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act* 2003 (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act* 2003 (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 191A; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 191A.

279 Seqwater denies the allegations pleaded in paragraph 191B of the FASOC and, further, repeats paragraphs 278(b) to (f) above.

280 Seqwater denies the allegations pleaded in paragraph 191C of the FASOC.

P Events of 2 January 2011

Weather Forecasts

281 Seqwater denies the allegations pleaded in paragraph 192 of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, including in the Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

282 In relation to paragraph 193 of the FASOC, Seqwater:

(a) pleads that at or about 10.03 on 2 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 3 January 2011 was less than 5-10mm of rain; and

Particulars of (a)

Email sent at 10.03 on 2 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6808].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 193.

283 In relation to paragraph 194 of the FASOC, Seqwater:

(a) pleads that at or about 16.04 on 2 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 3 January 2011 was 5-10mm of rain; and

Particulars of (a)

Email sent at or about 16.04 on 2 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6811].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 194.

284 Seqwater denies the allegations pleaded in paragraph 195 of the FASOC.

Rainfall and Inflows

285 In relation to paragraph 196 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 238 and 264 above; and

(b) subject to those matters, otherwise does not admit the allegations pleaded in paragraph 196.

286 In relation to paragraph 197 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that in the 24 hours to 06.00 on 2 January 2011, there had been light falls of up to 30mm in the North Pine and Somerset Dam catchments;

(c) pleads that rainfall in the Stanley River had produced minor inflows into Somerset Dam and Regulator No. 12 at Somerset Dam was 50% open to manage the small inflows;

(d) pleads at or about 06.30 on 2 January 2011, all of the Somerset Dam Crest Gates remained open; and

Particulars of (b) to (d)

(i) Situation Report sent by Mr Ayre to various persons at or about 05.58 on 2 January 2011 [SEQ.001.018.4207].

(ii) Situation Report sent by Mr Malone to various persons at or about 09.27 on 2 January 2011 [SEQ.001.018.4199].

(iii) Email from Dam Levels to various dated 2 January 2011 at 06.32 re FW: Somerset Dam [SEQ.001.019.4449].

(e) subject to the matters pleaded in paragraphs (a) to (d) above, otherwise denies the allegations pleaded in paragraph 197.

287 In relation to paragraph 198 of the FASOC, Seqwater:

(a) repeats paragraphs 217 and 286(b) to (d) above;

(b) pleads that at or about 06.30 on 2 January 2011, the level of Lake Somerset was approximately 99.10m AHD;

(c) pleads that at or about 09.00 on 2 January 2011:

(i) the Wivenhoe Dam Radial Gates were fully closed and fish recovery had commenced;

(ii) the Wivenhoe Dam Mini-Hydro was continuing to release 1,200 ML/d (13 m^3/s);

(iii) the level of Lake Wivenhoe was:

(A) approximately 67.1m AHD (in accordance with the Dam Levels Email Reading);

(B) approximately 67.07m AHD (in accordance with the Corrected Water Level Reading);

(d) pleads that upon completion of the fish recovery, the Wivenhoe Dam Regulator Valve was opened fully to manage continuing low inflows into the dam and to bring the water level of Wivenhoe Dam down to FSL; and

Particulars of (b) to (d)

(i) Email from Mr Malone to various persons dated 2 January 2011 at 08.50 re Wivenhoe Routine Operations [SEQ.001.020.3648].

(ii) Email from Dam Levels to various persons dated 2 January 2011 at 08.57 re FW Wivenhoe Dam [SEQ.001.019.2773].

(iii) Situation Report sent by Mr Malone to various persons at or about 09.27 on 2 January 2011 [SEQ.001.018.4199].

(iv) Email from Dam Levels to various persons dated 2 January 2011 at 06.32 re FW Somerset Dam [SEQ.001.019.4449].

(v) Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(e) subject to the matters pleaded in paragraphs (a) to (d) above, otherwise denies the allegations pleaded in paragraph 198.

288 Seqwater denies the allegations pleaded in paragraph 199 of the FASOC.

289 In relation to paragraph 200 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 286(b) to (d) and 287(b) to (d) above; and

(b) subject to those matters, otherwise does not admit the allegations pleaded in paragraph 200.

290 Seqwater denies the allegations pleaded in paragraph 201 of the FASOC.

291 In relation to paragraph 202 of the FASOC, Seqwater:

(a) denies the allegations pleaded in paragraph 202; and

(b) repeats paragraphs 165(b), 286(b) to (d) and 287(b) and (c) above.

Water Level

292 In relation to paragraph 203 of the FASOC, Seqwater:

(a) repeats paragraphs 286(b) to (d) and 287(b) to (d) above; and

(b) pleads that:

(i) at or about 06.30 on 2 January 2011, the water level of Lake Somerset was approximately 99.10m AHD; and

Particulars of (i)

Email from Dam Levels to various persons dated 2 January 2011 at 06.32 re FW: Somerset Dam [SEQ.001.019.4449].

(ii) at or about 09.00 on 2 January 2011:

(A) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.10m AHD; and

(B) the Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.07m AHD; and

Particulars of (ii)

(i) Email from Dam Levels to various persons dated 2 January 2011 at 08.57 re FW Wivenhoe Dam [SEQ.001.019.2773].

(ii) Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 203.

293 In relation to paragraph 204 of the FASOC, Seqwater:

(a) repeats paragraphs, 286(b) to (d) and 287(b) to (d) above;

(b) pleads that:

(i) at or about 08.00 on 3 January 2011, the water level of Lake Somerset was approximately 99.20m AHD; and

Particulars of (i)

Email from Dam Levels to various persons dated 3 January 2011 at 07.58 re FW Somerset Dam [SEQ.001.019.4448].

(ii) at or about 07.30 on 3 January 2011:

(A) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.15m AHD; and

(B) the Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.12m AHD.

Particulars of (ii)

(i) Email from Dam Levels to various persons dated 3 January 2011 at 07.52 re FW Wivenhoe Dam [SEQ.001.019.2772]

(ii) Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 204.

Flood Operations

294 In relation to paragraph 205 of the FASOC, Seqwater:

(a) pleads that Mr Malone continued as Duty Engineer, including being available "on-call" and responsible for remote monitoring, of Somerset Dam and Wivenhoe Dam from around 09.45 on 2 January 2011 until 6 January 2011; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 205.

295 In relation to paragraph 206 of the FASOC, Seqwater:

(a) repeats paragraphs 286(c) and (d) and 287(c) and (d) above;

(b) pleads that the gate openings and releases from Somerset Dam and Wivenhoe Dam referred to in those paragraphs pleaded in paragraph (a) above, continued throughout 2 January 2011 until at least 6 January 2011 except that on 5 January 2011 the releases from Somerset Dam Regulator Valve No. 12 (as referred to at paragraph 286(c) above) were stopped and releases of the same magnitude were instead made from Somerset Dam Regulator Valve No. 3;

Particulars of (b)

Emails from Dam Levels to various persons dated:

(i) 3 January 2011 at 07.52 re FW: Wivenhoe Dam [SEQ.001.019.2772];

(ii) 3 January 2011 at 07.58 re FW: Somerset Dam [SEQ.001.019.4448];

(iii) 4 January 2011 at 06.55 re FW: Wivenhoe Dam [SEQ.001.019.2771];

(iv) 4 January 2011 at 06.45 re FW: Somerset Dam [SEQ.001.019.4447];

(v) 5 January 2011 at 06.56 re FW: Wivenhoe Dam [SEQ.001.019.2770];

(vi) 5 January 2011 at 06.45 re FW: Somerset Dam [SEQ.001.019.4446];

(vii) 5 January 2011 at 07.02 re FW: Somerset Dam [SEQ.001.019.4445];

(viii) 6 January 2011 at 06.49 re FW: Wivenhoe Dam [SEQ.001.019.2769]; and

(ix) 6 January 2011 at 06.40 re FW: Somerset Dam [SEQ.001.019.4444].

(c) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 206; and

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 206.

296 In relation to paragraph 207 of the FASOC, Seqwater:

(a) repeats paragraphs 286(c) and (d), 287(b) to (d) and 294(a) above;

(b) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 207; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 207.

297 In relation to paragraph 208 of the FASOC, Seqwater:

(a) repeats paragraphs 286(c) and (d) and 287(b) to (d) above;

(b) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 208; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 208.

2 January 2011 Breaches

298 Seqwater denies the allegations pleaded in paragraph 209 of the FASOC.

299 In relation to paragraph 211 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 244, 286(a) to (d) and 287(b) to (d) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 211 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision that a reasonably prudent flood engineer would not make within the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act* 2003 (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act* 2003 (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 211; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 211.

300 Seqwater denies the allegations pleaded in paragraph 211A of the FASOC.

301 Seqwater denies the allegations pleaded in paragraph 211B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads, further, that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 211B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraphs 299(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 211B.

302 Seqwater denies the allegations pleaded in paragraph 212 of the FASOC and, further, repeats paragraphs 299(b) to (f) above.

303 Seqwater denies the allegations pleaded in paragraph 213 of the FASOC.

Q Events of 3 January to 5 January 2011

Weather Forecasts

304 Seqwater denies the allegations pleaded in paragraph 214 of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

305 Seqwater denies the allegations pleaded in paragraph 215 of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

306 Seqwater denies the allegations pleaded in paragraph 216 of the FASOC and, further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

307 In relation to paragraph 217 of the FASOC, Seqwater pleads that:

(a) at or about 11.36 on 3 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 4 January 2011 was 5-10mm of rain;

Particulars of (a)

Email sent at 11.36 on 3 January 2011 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6814].

(b) at or about 16.00 on 3 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 4 January 2011 was 10-20mm of rain;

Particulars of (b)

Email sent at or about 16.00 on 3 January 2011 from “Aifs Operational Manager” to “weather” [SEQ.001.019.6831].

(c) at or about 11.30 on 4 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 5 January 2011 was 10-20mm of rain;

Particulars of (c)

Email sent at 11.30 on 4 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6842].

(d) at or about 16.00 on 4 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 5 January 2011 was 5-15mm of rain;

Particulars of (d)

Email sent at or about 16.00 on 4 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6859].

(e) at or about 10.03 on 5 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 6 January 2011 was 20-30mm of rain;

Particulars of (e)

Email sent at 10.03 on 5 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6861].

(f) at or about 16.00 on 5 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 6 January 2011 was 30-50mm of rain; and

Particulars of (f)

Email sent at or about 16.00 on 5 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6889].

(g) subject to the matters pleaded in paragraphs (a) to (f) above, otherwise denies the allegations pleaded in paragraph 217.

Rainfall and Inflows

308 In relation to paragraph 218 of the FASOC, Seqwater:

(a) repeats paragraph 217 above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 218.

309 In relation to paragraph 219 of the FASOC, Seqwater:

(a) repeats paragraphs 165(b), 217 and 308 above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 219.

Water Level

310 In relation to paragraph 220 of the FASOC, Seqwater:

(a) pleads that the approximate level of Lake Wivenhoe in the period 2 to 6 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
02/01/2011 00.00	67.150	SEQ.001.019.2785	
02/01/2011 01.00	67.140	SEQ.001.019.2784	
02/01/2011 02.00	67.140	SEQ.001.019.2783	
02/01/2011 03.00	67.130	SEQ.001.019.2782	
02/01/2011 04.00	67.130	SEQ.001.019.2781	
02/01/2011 05.00	67.120	SEQ.001.019.2780	
02/01/2011 06.00	67.110	SEQ.001.019.2779	
02/01/2011 07.00	67.105	SEQ.001.019.2777	
02/01/2011 07.30	67.100	SEQ.001.019.2776	
02/01/2011 08.00	67.100	SEQ.001.019.2775	
02/01/2011 08.30	67.100	SEQ.001.019.2774	
02/01/2011 09.00	67.100	SEQ.001.019.2773	67.07
03/01/2011 08.00	67.150	SEQ.001.019.2772	67.12
04/01/2011 07.00	67.190	SEQ.001.019.2771	67.16
05/01/2011 07.00	67.230	SEQ.001.019.2770	67.20
06/01/2011 07.00	67.310	SEQ.001.019.2769	67.28
06/01/2011 16.00	67.370	SEQ.001.019.2768	67.34
06/01/2011 17.00	67.390	SEQ.001.019.2767	67.36
06/01/2011 18.00	67.400	SEQ.001.019.2766	67.37
06/01/2011 19.00	67.405	SEQ.001.019.2765	67.38
06/01/2011 20.00	67.420	SEQ.001.019.2764	67.39
06/01/2011 21.00	67.425	SEQ.001.019.2763	67.40
06/01/2011 22.00	67.440	SEQ.001.019.2762	67.41

Particulars of (a)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(b) pleads that the approximate water level of Lake Somerset in the period 2 to 6 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars
02/01/2011 06.30	99.10	SEQ.001.019.4449
03/01/2011 08.00	99.20	SEQ.001.019.4448
04/01/2011 06.30	99.26	SEQ.001.019.4447
05/01/2011 06.30	99.28	SEQ.001.019.4446
05/01/2011 07.00	99.28	SEQ.001.019.4445
06/01/2011 06.30	99.34	SEQ.001.019.4444
06/01/2011 16.00	99.44	SEQ.001.019.4443
06/01/2011 17.10	99.45	SEQ.001.019.4442
06/01/2011 18.00	99.46	SEQ.001.019.4441
06/01/2011 19.00	99.46	SEQ.001.019.4440
06/01/2011 20.00	99.46	SEQ.001.019.4439

(c) pleads that:

(i) at or about 06.30 on 6 January 2011, the water level of Lake Somerset was approximately 99.34m AHD;

Particulars of (i)

Email from Dam Levels to various persons dated 6 January 2011 at 06.40 re FW: Somerset Dam [SEQ.001.019.4444].

(ii) at or about 06.30 on 6 January 2011:

(A) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.31m AHD; and

(B) the Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.28m AHD.

Particulars of (ii)

(i) Email from Dam Levels to various persons dated 6 January 2011 at 06.49 re FW: Wivenhoe Dam [SEQ.001.019.2769]

(ii) Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(d) pleads that the net levels of Lake Wivenhoe and Lake Somerset rose over the period 2 January 2011 to approximately 07.00 on 6 January 2011 as follows:

(i) based on the Dam Levels Email Reading from approximately 67.15m AHD to approximately 67.31m AHD for Lake Wivenhoe;

(ii) based on the Corrected Water Level Reading, from approximately 67.07m AHD to approximately 67.28m AHD for Lake Wivenhoe; and

(iii) from approximately 99.10m AHD to approximately 99.34m AHD for Lake Somerset;

(e) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 220; and

(f) subject to the matters pleaded in paragraphs (a) to (e) above, otherwise denies the allegations pleaded in paragraph 220.

311 In relation to paragraph 221 of the FASOC, Seqwater:

(a) repeats paragraphs 293(b), 295(b) and 310(a) and (b) above;

(b) admits that the water levels pleaded in paragraphs 293(b) and 310(a) and (b) above are just above the FSLs for Lake Wivenhoe and Lake Somerset, respectively; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise does not admit the allegations pleaded in paragraph 221.

312 In relation to paragraph 222 of the FASOC, Seqwater:

(a) repeats paragraph 310(a) above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 222.

313 In relation to paragraph 223 of the Amended SOC, Seqwater:

(a) repeats paragraph 295(b) above; and

(b) denies the allegations pleaded in paragraph 223.

Flood Operations

314 In relation to paragraph 224 of the FASOC, Seqwater:

(a) pleads that Mr Malone worked between 2 to 5 January 2011, including being available "on-call" and responsible for remote monitoring of, Somerset Dam and Wivenhoe Dam;

(b) repeats paragraph 295(b) above;

(c) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 224; and

(d) denies the allegations pleaded in paragraph 224.

315 In relation to paragraph 224A of the FASOC, Seqwater:

(a) repeats paragraphs 314(a) to (c) above; and

(b) denies the allegations pleaded in paragraph 224A.

316 Seqwater denies the allegations pleaded in paragraph 225 of the FASOC.

3 – 5 January 2011 Breaches

317 Seqwater denies the allegations pleaded in paragraph 226 of the FASOC.

318 In relation to paragraph 228 of the FASOC, Seqwater:

(a) repeats paragraph 244 above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 228 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 228; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 228.

319 Seqwater denies the allegations pleaded in paragraph 228A of the FASOC.

320 Seqwater denies the allegations pleaded in paragraph 228B of the Flood Mitigation Manual and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 228B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraphs 318(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 228B.

321 Seqwater denies the allegations pleaded in paragraph 229 of the FASOC and, further, repeats paragraphs 318(b) to (f) above.

322 Seqwater denies the allegations pleaded in paragraph 230 of the FASOC.

R Events of 6 January 2011

Weather Forecasts

323 Seqwater denies the allegations pleaded in paragraph 231 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

324 In relation to paragraph 232 of the FASOC, Seqwater:

(a) admits that a situation report was issued on 6 January 2011 at about 8.13 on 6 January 2011 which indicated that the forecast for the next 24 to 48 hours was for totals up to 150mm of rain in south east Queensland;

Particulars of (a)

Situation report sent by Mr Malone to various persons at about 8.13 on 6 January 2011 [SEQ.001.011.4748].

(b) pleads that at or about 10.21 on 6 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 7 January 2011 was 30-50mm of rain;

Particulars of (b)

Email sent at 10.21 on 6 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6916].

(c) pleads that at or about 16.00 on 6 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 7 January 2011 was 20-30mm of rain; and

Particulars of (c)

Email sent at or about 16.00 on 6 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6977].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise does not admit paragraph 232.

325 In relation to paragraph 233 of the FASOC, Seqwater:

(a) repeats paragraph 324(b) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 233.

326 In relation to paragraph 234 of the FASOC, Seqwater:

(a) repeats paragraph 324(c) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 234.

Rainfall and Inflows

327 In relation to paragraph 235 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that as at approximately 08.00 on 6 January 2011:

(i) since 09.00 on 5 January 2011 there had been widespread rainfalls of 30mm over the Somerset Dam and Wivenhoe Dam catchments, with isolated rainfall of up to 50mm;

(ii) the Somerset Dam and Wivenhoe Dam catchments were wet and additional runoff was expected to be generated, but only in the event of sufficient rainfall occurring;

(iii) the rainfall in the Stanley River catchment had produced a small amount of runoff in the upper Stanley River and it was expected that further Somerset Dam Regulator operations at Somerset Dam would be required later in the day;

(iv) there had been rises recorded in rivers and streams upstream of Lake Wivenhoe and it was expected that the Wivenhoe Dam Radial Gates would be opened in the following 24 hours to manage the inflows from the upper Brisbane River and the outflow from Somerset Dam; and

(v) it was expected that the releases from Wivenhoe Dam would at least impact on Twin Bridges, Savages Crossing, Kholo Bridge and Colleges Crossing for several days;

Particulars of (b)

Situation Report sent by Mr Malone to various persons at or about 08.13 on 6 January 2011 [SEQ.001.011.4748].

(c) pleads further that, at or about 06.30 on 6 January 2011:

(i) all of the Somerset Dam Crest Gates remained open;

(ii) Regulator No.3 at Somerset Dam remained 50% open;

(iii) the Wivenhoe Dam Mini-Hydro was continuing to release 1,200 ML/d (14 m^3/s); and

(iv) the Wivenhoe Dam Regulator Valve was continuing to discharge 3,076 ML/d (36 m^3/s); and

Particulars of (c)

(i) Email from Dam Levels to various persons dated 6 January 2011 at 06.40 re FW: Somerset Dam [SEQ.001.019.4444].

(ii) Email from Dam Levels to various persons dated 6 January 2011 at 06.49 re FW: Wivenhoe Dam [SEQ.001.019.2769].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 235.

328 In relation to paragraph 236 of the FASOC, Seqwater:

(a) repeats paragraphs 327(a) to (c) above;

(b) pleads that at or about 18.00 on 6 January 2011:

(i) the rain in the Stanley River catchment had produced a small amount of runoff in the upper Stanley River catchment but there had been significant rises in Kilcoy Creek;

(ii) the estimated event inflow volume into Somerset Dam was expected to be approximately 50,000ML;

(iii) the estimated event inflow volume into Wivenhoe Dam including outflows from Somerset Dam was expected to be approximately 180,000ML;

(iv) there had been significant rainfalls in the Lockyer Creek catchment since 09.00 on 6 January 2011 and a peak of about 600m^3/s was expected from the Lockyer Creek late on 7 January 2011;

(v) it was expected that Wivenhoe Dam gates would be opened after the flood levels in the Lockyer Creek subsided and it was expected that releases from Wivenhoe Dam during 8 January 2011 may be as high as 1,500m^3/s and continue for a couple of days; and

(vi) it was expected that the flows in the Lockyer Creek would at least impact on Twin Bridges, Savages Crossing, Kholo Bridge, Colleges Crossing and may also impact Burtons Bridge; and

Particulars of (b)

(i) Situation Report sent by Mr Malone to various persons at or about 14.54 on 6 January 2011 [SEQ.001.011.4756].

(ii) Situation Report sent by Mr Malone to various persons at or about 17.33 on 6 January 2011 [SEQ.001.011.4766].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 236.

Water Level

329 In relation to paragraph 237 of the FASOC, Seqwater:

(a) pleads that:

(i) the approximate water level of Lake Somerset during 6 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
06/01/2011 06.30	99.34	SEQ.001.019.4444
06/01/2011 16.00	99.44	SEQ.001.019.4443
06/01/2011 17.10	99.45	SEQ.001.019.4442
06/01/2011 18.00	99.46	SEQ.001.019.4441
06/01/2011 19.00	99.46	SEQ.001.019.4440
06/01/2011 20.00	99.46	SEQ.001.019.4439

(ii) the approximate water level of Lake Wivenhoe during 6 January 2011 was:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
06/01/2011 07.00	67.310	SEQ.001.019.2769	67.28
06/01/2011 16.00	67.370	SEQ.001.019.2768	67.34
06/01/2011 17.00	67.390	SEQ.001.019.2767	67.36
06/01/2011 18.00	67.400	SEQ.001.019.2766	67.37
06/01/2011 19.00	67.405	SEQ.001.019.2765	67.38
06/01/2011 20.00	67.420	SEQ.001.019.2764	67.39
06/01/2011 21.00	67.425	SEQ.001.019.2763	67.40
06/01/2011 22.00	67.440	SEQ.001.019.2762	67.41

Particulars of (ii)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(b) pleads that the net levels of Lake Wivenhoe and Lake Somerset rose over 6 January 2011 as follows:

(i) based on the Dam Levels Email Readings, from approximately 67.31m AHD to approximately 67.44m AHD for Lake Wivenhoe;

(ii) based on the Corrected Water Level Readings, from approximately 67.28m AHD to approximately 67.41m AHD for Lake Wivenhoe; and

(iii) from approximately 99.34m AHD to 99.46m AHD for Lake Somerset; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 237.

330 In relation to paragraph 238 of the FASOC, Seqwater:

(a) repeats paragraphs 329(a) and (b) above;

(b) pleads that:

(i) at or about 20.00 on 6 January 2011, the water level of Lake Somerset was approximately 99.46m AHD; and

Particulars

Email from Dam Levels to various persons dated 6 January 2011 at 19.57 re FW: Somerset Dam [SEQ.001.019.4439].

(ii) at or about 22.00 on 6 January 2011:

(A) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.44m AHD; and

(B) the Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 67.41m AHD; and

Particulars

(i) Email from Dam Levels to various persons dated 6 January at 22.00 re FW: Wivenhoe Dam [SEQ.001.019.2762].

(ii) Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 238.

Flood Operations

331 In relation to paragraph 239 of the FASOC, Seqwater:

(a) pleads that Mr Malone worked from about 19.00 on 5 January 2011 to about 07.00 on 6 January 2011, including being available "on-call" and responsible for remote monitoring of Somerset Dam and Wivenhoe Dam; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise does not admit the allegations pleaded in paragraph 239.

332 In relation to paragraph 240 of the FASOC, Seqwater:

(a) repeats paragraph 331(a) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 240.

333 Seqwater denies the allegations pleaded in paragraph 240A of the FASOC and, further, pleads that in using the Flood-Ops module to estimate surface runoff hydrographs within the Somerset Dam Catchment and Wivenhoe Dam Catchment at rated gauging stations on 6 January 2011, the Flood Engineers selected and inputted initial Losses and continuing Loss rates as follows:

Region	**Initial Losses**	**Continuing Loss Rate**
CRE (Cressbrook Creek Region)	10mm	2.5mm/hr
COO (Cooyar Creek Region)	10mm	2.5mm/hr
LIN (Brisbane River at Linville Region)	15mm	2.5mm/hr
EMU (Emu Creek Region)	25 and 30mm	2.5mm/hr
GRE (Gregors Creek Region)	0 and 10mm	2.5mm/hr
SDI (Somerset Dam Inflow Region)	0mm	1mm/hr
WDI (Wivenhoe Dam Inflow Region)	0mm	2.5mm/hr

334 In relation to paragraph 241 of the FASOC, Seqwater:

(a) denies the allegations pleaded in paragraph 241;

(b) repeats paragraphs 295(b) above;

(c) pleads that the BOM issued a series of flood warnings on 6 January 2011 predicting:

(i) fast rises in the Lockyer and Warrill Creek catchments and along the Bremer River, with further rises expected while rainfall continued; and

(ii) a major flood level of 13 metres at Lyons Bridge was possible during 7 January 2011; and

Particulars of (c)

(i) Email from "Aifs Operational Manager" to "weather" dated 6 January 2011 at 10.47 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC=UNCLASSIFIED] [SEQ.001.018.8622].

(ii) Email from "Aifs Operational Manager" to "weather" dated 6 January 2011 at 14.27 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8620].

(iii) Email from "Aifs Operational Manager" to "weather" dated 6 January 2011 at 17.25 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8613].

(iv) Email from "Aifs Operational Manager" to "weather" dated 6 January 2011 at 21.33 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8608].

(d) pleads that, at or about 19.00 on 6 January 2011:

(i) all of the Somerset Dam Crest Gates remained open;

(ii) Regulator No.3 at Somerset Dam remained 50% open;

(iii) the Wivenhoe Dam Mini-Hydro was continuing to release 1,200ML/d (14m^3/s); and

(iv) the Wivenhoe Dam Regulator Valve was continuing to discharge 3,076ML/d (36m^3/s).

Particulars of (d)

(i) Email from Dam Levels to various dated 6 January 2011 at 18.59 re FW: Somerset Dam [SEQ.001.019.4440].

(ii) Email from Dam Levels to various dated 6 January 2011 at 19.19 re FW: Wivenhoe Dam [SEQ.001.019.2765].

335 In relation to paragraph 242 of the FASOC, Seqwater:

(a) repeats paragraphs 295(b) and 334(c) and (d) above; and

(b) denies the allegations pleaded in paragraph 242.

6 January 2011 Breaches

336 Seqwater denies the allegations pleaded in paragraph 243 of the FASOC.

337 In relation to paragraph 245 of the FASOC, Seqwater:

(a) repeats paragraphs 244, 327(b) to (c) and 328(b) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 245 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 245; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 245.

338 Seqwater denies the allegations pleaded in paragraph 245A of the FASOC.

339 Seqwater denies the allegations pleaded in paragraph 245B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 245B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraphs 337(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 245B.

340 Seqwater denies the allegations pleaded in paragraph 246 of the FASOC and, further, repeats paragraphs 337(b) to (f) above.

341 Seqwater denies the allegations pleaded in paragraph 247 of the FASOC.

S Events of 7 January 2011

Weather Forecasts

342 Seqwater denies the allegations pleaded in paragraph 248 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

343 In relation to paragraph 249 of the FASOC, Seqwater:

(a) pleads that at or about 10.03 on 7 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 8 January 2011 was 20-30mm of rain; and

Particulars of (a)

Email sent at 10.03 on 7 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6886].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 249.

344 In relation to paragraph 250 of the FASOC, Seqwater:

(a) pleads that at or about 16.04 on 7 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 16.00 on 8 January 2011 was 20-30mm of rain; and

Particulars of (a)

Email sent at or about 16.04 on 7 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.6994].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 250.

Rainfall and Inflows

345 In relation to paragraph 251 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that:

(i) between 5 January 2011 and about 06.00 on 7 January 2011, there had been approximately 30 to 50mm of rainfall in the Somerset Dam and Wivenhoe Dam catchments with some isolated rainfalls of up to approximately 75mm;

(ii) in the 72 hours prior to about 06.00 on 7 January 2011, there had been significant rainfall in the Lockyer Creek catchment with widespread rainfall of approximately 50mm and isolated rainfall of up to approximately 100mm;

(iii) at or about 06.00 on 7 January 2011:

(A) Somerset Dam was releasing water into Lake Wivenhoe at a rate of 35m^3/s;

(B) the estimated event inflow volume into Lake Somerset since 2 January 2011 was approximately 50,000ML; and

(C) the level of Lake Somerset was approximately 99.59m AHD and rising slowly;

(iv) at or about 06.00 on 7 January 2011:

(A) the estimated event inflow volume into Lake Wivenhoe since 2 January 2011 was approximately 230,000ML including releases from Somerset Dam;

(B) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 67.64m AHD and rising slowly;

(C) a peak of approximately 470m^3/s was expected from Lockyer Creek by mid-afternoon on 7 January 2011 which was considered sufficient to possibly inundate Burtons Bridge;

(D) releases from Wivenhoe Dam were expected to occur following the impact of Lockyer Creek flows on Burtons Bridge and once the water level in the lower Lockyer Creek basin had subsided, and were expected to commence late on 7 January 2011 (Friday) or early on 8 January 2011 (Saturday) and continue over the weekend through to 10 or 11 January 2011 and the releases were expected to be at a rate of up to 1,200m^3/s; and

(E) it was expected that the relatively high Lockyer Creek flows would adversely impact Twin Bridges, Savages Crossing and Colleges Crossing for several days and may impact Burtons Bridge from midday on 7 January 2011 and Kholo Bridge in the evening on 7 January 2011; and

Particulars of (i) to (iv)

(i) Situation Report sent by Mr Ayre to various persons at or about 06.06 on 7 January 2011 [SEQ.001.011.4623].

(ii) Email from Dam Levels to various persons dated 7 January 2011 at 05.53 re FW: Somerset Dam [SEQ.001.019.4437].

(iii) Email from Dam Levels to various persons dated 7 January 2011 at 05.59 re FW: Wivenhoe Dam [SEQ.001.019.2758].

(v) further to paragraph (iv)(B) above, at or about 06.00 on 7 January 2011, the Corrected Water Level Reading for the water level in Lake Wivenhoe was approximately 67.61m AHD; and

Particulars of (v)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 251.

346 In relation to paragraph 252 of the FASOC, Seqwater:

(a) repeats paragraphs 345(a) and (b) above; and

(b) pleads that:

(i) between about 09.00 and about 18.00 on 7 January 2011, there was widespread rainfall of approximately 20-40mm throughout the North Pine, Somerset Dam and Wivenhoe Dam catchments with some isolated rainfalls of up to approximately 70mm in the upper reaches of the Brisbane River;

(ii) at or about 17.00 on 7 January 2011:

(A) Somerset Dam was releasing water with Regulator No. 3 open 100%; and

(B) the estimated event inflow volume into Lake Somerset since 2 January 2011 was approximately 55,000ML, with approximately 25,000ML of further inflows expected based on the recorded rainfall to date, and approximately 16,000ML had been released into Lake Wivenhoe; and

(iii) at or about 16.30 on 7 January 2011, the level of Lake Somerset was approximately 100.04m AHD;

(iv) at or about 17.30 on 7 January 2011, the level of Lake Somerset was approximately 100.08m AHD; and

(v) at or about 17.00 on 7 January 2011:

(A) the estimated event inflow volume into Lake Wivenhoe since 2 January 2011 was approximately 140,000ML, including releases from Somerset Dam, with approximately 160,000ML of further inflows expected based on the recorded rainfall to date, and approximately 24,000ML had been released from Wivenhoe Dam;

(B) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 68.10m AHD and rising steadily;

(C) one of the Wivenhoe Dam Radial Gates was open to 1.5m and releasing water at a rate of approximately 168m^3/s and it was expect to increase the rate of release to about 1,200m^3/s during the next 18 hours;

(D) it was expected that the projected releases from Wivenhoe Dam of 1,200m^3/s combined with Lockyer Creek flows would mean that all crossings downstream of Wivenhoe Dam (Twin Bridges, Savages Crossing, Burtons Bridge, Kholo Bridge and Colleges Crossing) would be adversely affected for several days; and

(E) it was expected that tides in the lower Brisbane River would be 0.4m to 0.5m higher than predicted tides; and

Particulars of (b)

(i) Situation Report sent by Mr Malone to various persons at or about 17.56 on 7 January 2011 [SEQ.001.018.4122].

(ii) Email from Dam Levels to various persons dated 7 January 2011 at 16.35 re FW: Somerset Dam [SEQ.001.019.4429].

(iii) Email from Dam Levels to various persons dated 7 January 2011 at 17.23 re FW: Somerset Dam [SEQ.001.019.4428].

(iv) Email from Dam Levels to various persons dated 7 January 2011at 17.10 re FW: Wivenhoe Dam [SEQ.001.019.2752].

(c) subject to the matters pleaded in paragraph (a) and (b) above, otherwise denies the allegations pleaded in paragraph 252.

Water Level

347 In relation to paragraph 253 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(C), 345(b)(iv)(B) and 345(b)(v) above; and

(b) subject to those matters:

(i) otherwise admits the allegations pleaded in paragraph 253(a); and

(ii) otherwise denies the allegations pleaded in paragraph 253(b).

348 In relation to paragraph 254 of the FASOC, Seqwater:

(a) repeats paragraphs 334(c) and (d), 345(b)(iii)(C) and 345(b)(iv)(B) above;

(b) pleads that during the morning 7 January 2011, the water level in Lake Somerset was higher than the FSL for Somerset Dam and the water level in Lake Wivenhoe was higher than the FSL for Wivenhoe Dam;

(c) pleads that the approximate water level of Lake Wivenhoe during 7 January 2011 was as follows:

Time	**Dam Levels Email Reading (m AHD)**	**Particulars of Dam Levels Email Reading**	**Corrected Water Level (m AHD)**
07/01/2011 00.00	67.460	SEQ.001.019.2761	67.43
07/01/2011 02.00	67.520	SEQ.001.019.2760	67.49
07/01/2011 04.00	67.570	SEQ.001.019.2759	67.54
07/01/2011 06.00	67.640	SEQ.001.019.2758	67.61
07/01/2011 09.00	67.750	SEQ.001.019.2757	67.72
07/01/2011 11.00	67.810	SEQ.001.019.2756	67.78
07/01/2011 13.00	67.940	SEQ.001.019.2755	67.91
07/01/2011 15.00	68.030	SEQ.001.019.2754	68.01
07/01/2011 16.00	68.060	SEQ.001.019.2753	68.04
07/01/2011 17.00	68.100	SEQ.001.019.2752	

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
07/01/2011 18.00	68.10	SEQ.001.019.2751	68.10
07/01/2011 19.00	68.170	SEQ.001.019.2750	68.15
07/01/2011 20.00	68.190	SEQ.001.019.2749	68.17
07/01/2011 21.00	68.220	SEQ.001.019.2748	68.20
07/01/2011 22.00	68.260	SEQ.001.019.2747	68.24
07/01/2011 23.00	68.280	SEQ.001.019.2746	68.26

Particulars of (c)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(d) pleads that the approximate water level of Lake Somerset during 7 January 2011 was as follows:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
07/01/2011 02.00	99.55	SEQ.001.019.4438
07/01/2011 05.00	99.60	SEQ.001.019.4409
07/01/2011 06.00	99.59	SEQ.001.019.4437
07/01/2011 07.00	99.60	SEQ.001.019.4436
07/01/2011 08.00	99.63	SEQ.001.019.4435
07/01/2011 10.00	99.66	SEQ.001.019.4434
07/01/2011 12.00	99.76	SEQ.001.019.4433
07/01/2011 13.30	99.85	SEQ.001.019.4432
07/01/2011 14.15	99.90	SEQ.001.019.4431
07/01/2011 15.00	99.94	SEQ.001.019.4430
07/01/2011 16.30	100.04	SEQ.001.019.4429
07/01/2011 17.00	100.03	SEQ.004.024.0023
07/01/2011 17.30	100.08	SEQ.001.019.4428
07/01/2011 18.00	100.11	SEQ.001.019.4427
07/01/2011 19.00	100.15	SEQ.001.019.4426
07/01/2011 20.00	100.17	SEQ.001.019.4425
07/01/2011 21.00	100.21	SEQ.001.019.4424
07/01/2011 22.00	100.25	SEQ.001.019.4423

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
07/01/2011 23.00	100.28	SEQ.001.019.4422

(e) repeats paragraph 295(b) and pleads further that from the evening of 6 January 2011 through the morning of 7 January 2011:

(i) all of the Somerset Dam Crest Gates remained open;

(ii) Regulator No.3 at Somerset Dam remained 50% open;

(iii) the Wivenhoe Dam Mini-Hydro was continuing to release 1,200ML/d (14m^3/s); and

(iv) the Wivenhoe Dam Regulator Valve was continuing to discharge 3,076ML/d (36m^3/s);

Particulars of (e)

Emails from Dam Levels to various persons dated 7 January 2011:

(i) at 01.53 re FW: Somerset Dam [SEQ.001.019.4438];

(ii) at 05.53 re FW: Somerset Dam [SEQ.001.019.4437];

(iii) at 06.55 re FW: Somerset Dam [SEQ.001.019.4436];

(iv) at 08.07 re FW: Somerset Dam [SEQ.001.019.4435];

(v) at 09.46 re FW: Somerset Dam [SEQ.001.019.4434]; and

(vi) at 12.03 re FW: Somerset Dam [SEQ.001.019.4433].

Emails from Dam Levels to various persons dated 7 January 2011:

(i) at 02.01 re FW: Wivenhoe Dam [SEQ.001.019.2760];

(ii) at 03.57 re FW: Wivenhoe Dam [SEQ.001.019.2759];

(iii) at 05.59 re FW: Wivenhoe Dam [SEQ.001.019.2758];

(iv) at 09.16 re FW: Wivenhoe Dam [SEQ.001.019.2757]; and

(v) at 11.06 re FW: Wivenhoe Dam [SEQ.001.019.2756].

(f) denies that the Flood Mitigation Manual required releases from Wivenhoe Dam as alleged or at all; and

(g) subject to the matters pleaded in (a) to (f) above, otherwise denies the allegations pleaded in paragraph 254.

349 In relation to paragraph 255 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(C), 345(b)(iv)(B), 345(b)(v), 346(b)(iii), 346(b)(iv) and 346(b)(v) above;

(b) pleads that at or about 23.00 on 7 January 2011:

(i) the water level of Lake Somerset was approximately 100.28m AHD;

Particulars

Email from Dam Levels to various dated 7 January 2011 at 23.04 re FW: Somerset Dam [SEQ.001.019.4422].

(ii) the Dam Levels Email Reading for the water level of Lake Wivenhoe was approximately 68.28m AHD; and

(iii) the Corrected Water Level Reading for the water level of Lake Wivenhoe was approximately 68.26m AHD; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise does not admit the allegations pleaded in paragraph 255.

Flood Operations

350 Seqwater admits the allegations pleaded in paragraph 256 of the FASOC.

351 Seqwater denies the allegations pleaded in paragraph 256A of the FASOC and pleads further that in using the Flood-Ops module to estimate surface runoff hydrographs within the Somerset Dam Catchment and the Wivenhoe Dam Catchment at rated gauging stations on 7 January 2011, the Flood Engineers selected and input initial Losses and continuing Loss rates as follows:

Region	**Initial Losses**	**Continuing Loss Rate**
CRE (Cressbrook Creek Region)	10mm	2.5mm/hr
COO (Cooyar Creek Region)	10 and 30mm	0.5 and 2.5mm/hr
LIN (Brisbane River at Linville Region)	15 and 30mm	0.5 and 2.5mm/hr
EMU (Emu Creek Region)	30mm	0.5 and 2.5mm/hr
GRE (Gregors Creek Region)	10 and 40mm	0.5 and 2.5mm/hr
SDI (Somerset Dam Inflow Region)	0 and 15mm	0.5 and 1mm/hr

Region	Initial Losses	Continuing Loss Rate
WDI (Wivenhoe Dam Inflow Region)	0mm	2.5mm/hr

352 In relation to paragraph 257 of the FASOC, Seqwater:

(a) denies the allegations pleaded; and

(b) repeats paragraphs 345(b)(iii)(A) and 348(e) above.

353 In relation to paragraph 258 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(v)(C) and 348(e) above;

(b) pleads that the releases made from Wivenhoe Dam were in accordance with Strategy W1; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 258.

354 In relation to paragraph 259 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(v)(C) and 348(e) above;

(b) pleads that:

(i) through the course of 7 January 2011, releases from the Wivenhoe Dam Radial Gates had been increasing and by around 23.00 on 7 January 2011 Gate 2 was open 0.5m, Gate 3 was open 3.5m and Gate 4 was open 0.5m; and

(ii) the releases made were in accordance with Strategy W1; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 259.

355 In relation to paragraph 260 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(v)(C), 348(e) and 354(b)(i) above;

(b) pleads that when determining dam outflows within all strategies, peak outflow should generally not exceed peak inflow; and

Particulars

Flood Mitigation Manual, paragraph 8.4 [SEQ.011.001.1290].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise does not admit the allegations pleaded in paragraph 260.

356 In relation to paragraph 261 of the FASOC, Seqwater:

(a) denies the allegations pleaded; and

(b) repeats paragraphs 345(b)(iii)(A), 346(b)(ii) and 348(e) above.

357 In relation to paragraph 262 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(ii) and 348(e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 262.

358 In relation to paragraph 263 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(ii) and 348(e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 263.

359 In relation to paragraph 264 of the FASOC, Seqwater:

(a) repeats paragraphs 345(b)(iii)(A), 346(b)(ii) and 348(e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 264.

7 January 2011 Breaches

360 Seqwater denies the allegations pleaded in paragraph 265 of the FASOC.

361 In relation to paragraph 267 of the FASOC, Seqwater:

(a) repeats paragraphs 244, 345(b) and 346(b) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 267 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above; and

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 267; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 267.

362 Seqwater denies the allegations pleaded in paragraph 267A of the FASOC.

363 Seqwater denies the allegations pleaded in paragraph 267B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 227B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraphs 361(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 267B.

364 Seqwater denies the allegations pleaded in paragraph 268 of the FASOC and, further, repeats paragraphs 361(b) to (f) above.

365 Seqwater denies the allegations pleaded in paragraph 269 of the FASOC.

T Events of 8 January 2011

Weather Forecasts

366 Seqwater denies the allegations pleaded in paragraph 270 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

367 In relation to paragraph 271 of the FASOC, Seqwater:

(a) repeats paragraph 344(a) above; and

(b) subject to those matters, otherwise does not admit the allegations pleaded in paragraph 271.

368 In relation to paragraph 272 of the FASOC, Seqwater:

(a) pleads that at or about 10.03 on 8 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchment for the 24-hour period to 09.00 on 9 January 2011 was 30-50mm of rain; and

Particulars of (a)

Email sent at 10.03 on 8 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.7014].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 272.

369 In relation to paragraph 273 of the FASOC, Seqwater:

(a) pleads that at or about 16.00 on 8 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 9 January 2011 was 30-50mm of rain; and

Particulars of (a)

Email sent at or about 16.00 on 8 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.7021].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 273.

Rainfall and Inflows

370 In relation to paragraph 274 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that between about 09.00 on 7 January 2011 and about 06.00 on 8 January 2011 there had been rainfalls of 20-40mm over the North Pine, Somerset Dam and

Wivenhoe Dam catchments, with isolated rainfall of up to 70mm in the upper reaches of the Brisbane River;

(c) pleads that at or about 06.00 on 8 January 2011:

(i) no significant rain had fallen in the past 12 hours over the Somerset Dam and Wivenhoe Dam catchments;

(ii) Somerset Dam was releasing into Lake Wivenhoe through Sluice Gate L and it was proposed that water would be held temporarily in Somerset Dam to allow the inflow from the upper Brisbane River to pass through Lake Wivenhoe, however it was expected that that would be reviewed if significant runoff occurred in the Stanley River and Upper Brisbane River;

(iii) since 2 January 2011, approximately 85,000ML of water had flowed into Lake Somerset with a further approximately 20,000ML expected based on the recorded rainfall to date;

(iv) approximately 25,000ML had been released into Lake Wivenhoe from Somerset Dam;

(v) Wivenhoe Dam was rising steadily with all five Wivenhoe Dam Radial Gates open and releasing water at the rate of approximately 890m^3/s and it was intended to increase the rate of release to 1,200m^3/s by midday on 8 January 2011 and given the high likelihood of significant inflows in the following week, it was expected that that rate may increase further;

(vi) since 2 January 2011, approximately 200,000ML of water had flowed into Lake Wivenhoe (including releases from Somerset Dam) with a further approximately 180,000ML expected based on the recorded rainfall to date;

(vii) approximately 50,000ML had been released from Lake Wivenhoe; and

Particulars of (b) and (c)

Situation Report sent by Mr Ruffini to various persons at or about 06.31 on 8 January 2011 [SEQ.001.011.4739].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 274.

371 In relation to paragraph 275 of the FASOC, Seqwater:

(a) repeats paragraphs 370(a) to (c) above;

(b) pleads that at or about 18.00 on 8 January 2011:

(i) the Stanley River catchment had received 12mm of rainfall over the past 12 hours and the upper Brisbane River 4mm;

(ii) there were minor increases in runoff to Somerset Dam due to this rainfall;

(iii) Somerset Dam was falling having peaked at approximately 100.47m AHD at about 10.00 in the morning on 8 January 2011;

(iv) water was being released from Lake Somerset via Sluice Gate L and Sluice Gate M (the second Sluice Gate M had been opened from around 12.00 on 8 January 2011) and over the fixed crest at a rate of about 415m^3/s;

(v) since 2 January 2011, approximately 95,000ML of water had flowed into Lake Somerset with a further approximately 20,000ML expected based on the recorded rainfall to date and approximately 38,000ML had been released into Lake Wivenhoe;

(vi) Wivenhoe Dam was rising slowly with all five Wivenhoe Dam Radial Gates open and releasing water at the rate of approximately 1,250m^3/s and the current rate was expected to maintain flows of 1,600m^3/s in the mid-Brisbane River throughout the evening;

(vii) river levels upstream of Wivenhoe Dam had peaked and were receding;

(viii) since 2 January 2011, approximately 227,000ML of water had flowed into Lake Wivenhoe (including releases from Somerset Dam) with a further approximately 200,000ML expected based on the recorded rainfall to date and approximately 93,000ML had been released from Lake Wivenhoe; and

(ix) projections based on forecast rainfalls suggested flows of up to 1,200m^3/s would emanate from the Bremer River catchment; the interaction with runoff from the Bremer River and Warrill Creek catchment being an important consideration in terms of the event magnitude; and

Particulars of (b)

(i) Situation Report sent by Mr Ayre to various persons at or about 14.21 on 8 January 2011 [SEQ.001.018.4103].

(ii) Situation Report sent by Mr Ayre to various persons at or about 17.53 on 8 January 2011 [SEQ.001.011.4651].

(iii) Email from Dam Levels to various persons dated 8 January 2011 at 07.58 re FW: Somerset Dam [SEQ.001.019.4405].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 275.

Water Level

372 In relation to paragraph 276 of the FASOC, Seqwater pleads that:

(a) the approximate water level of Lake Somerset during 8 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
08/01/2011 00.00	100.31	SEQ.001.019.4420
08/01/2011 01.00	100.34	SEQ.001.019.4418
08/01/2011 02.00	100.36	SEQ.001.019.4416
08/01/2011 03.00	100.39	SEQ.001.019.4414
08/01/2011 04.00	100.41	SEQ.001.019.4412
08/01/2011 05.00	100.42	SEQ.001.019.4410
08/01/2011 06.00	100.43	SEQ.001.019.4407
08/01/2011 07.00	100.44	SEQ.001.019.4406
08/01/2011 08.00	100.46	SEQ.001.019.4405
08/01/2011 09.00	100.46	SEQ.001.019.4404
08/01/2011 10.00	100.47	SEQ.004.024.0027
08/01/2011 11.00	100.46	SEQ.004.024.0028
08/01/2011 12.00	100.45	SEQ.001.019.4403
08/01/2011 13.00	100.45	SEQ.001.019.4402
08/01/2011 14.00	100.44	SEQ.001.019.4401
08/01/2011 15.00	100.42	SEQ.004.024.0024
08/01/2011 16.15	100.41	SEQ.001.019.4400
08/01/2011 17.00	100.40	SEQ.001.019.4399
08/01/2011 18.25	100.38	SEQ.001.019.4398
08/01/2011 19.00	100.37	SEQ.001.019.4397
08/01/2011 20.00	100.36	SEQ.001.019.4396
08/01/2011 21.00	100.35	SEQ.001.019.4395
08/01/2011 22.00	100.34	SEQ.001.019.4394
08/01/2011 23.00	100.33	SEQ.001.019.4393

(b) the approximate water level of Lake Wivenhoe during 8 January 2011 was:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
08/01/2011 00.00	68.320	SEQ.001.019.2745	68.30
08/01/2011 01.00	68.34	SEQ.004.024.0247	

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
08/01/2011 02.00	68.35	SEQ.001.019.2744	
08/01/2011 03.00	68.410	SEQ.001.019.2743	68.39
08/01/2011 04.00	68.410	SEQ.001.019.2742	68.39
08/01/2011 05.00	68.450	SEQ.001.019.2741	68.43
08/01/2011 06.00	68.460	SEQ.001.019.2740	68.44
08/01/2011 07.00	68.480	SEQ.001.019.2739	68.47
08/01/2011 08.00	68.520	SEQ.001.019.2738	68.51
08/01/2011 09.00	68.550	SEQ.001.019.2737	68.54
08/01/2011 10.00	68.560	SEQ.001.019.2736	68.55
08/01/2011 11.00	68.590	SEQ.001.019.2735	68.58
08/01/2011 12.00	68.600	SEQ.001.019.2734	68.59
08/01/2011 13.00	68.610	SEQ.001.019.2733	68.60
08/01/2011 14.00	68.610	SEQ.001.019.2732	68.60
08/01/2011 15.00	68.630	SEQ.001.019.2731	68.62
08/01/2011 16.00	67.640	SEQ.001.019.2730	68.63
08/01/2011 17.00	68.650	SEQ.001.019.2729	68.64
08/01/2011 18.00	68.650	SEQ.001.019.2728	68.64
08/01/2011 21.00	68.650	SEQ.001.019.2727	68.64
08/01/2011 22.00	68.650	SEQ.001.019.2726	68.64
08/01/2011 23.00	68.650	SEQ.001.019.2725	68.64

Particulars of (b)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) the net levels of Lake Wivenhoe and Lake Somerset rose over 8 January 2011 as follows:

(i) for Lake Wivenhoe:

(A) based on the Dam Levels Email Readings, from approximately 68.32m AHD at about 00.00 to approximately 68.65m AHD at about 22.00; and

(B) based on the Corrected Water Level Readings, from approximately 68.3m AHD at about 00.00 to approximately 68.64m AHD at about 22.00; and

(ii) for Lake Somerset, from approximately 100.31m AHD at about 00.00 to approximately 100.46m AHD at about 08.00, after which the level then dropped to approximately 100.33m AHD; and

(d) subject to the matters pleaded in paragraph (a) to (c) above, otherwise denies the allegations pleaded in paragraph 276.

373 In relation to paragraph 277 of the FASOC, Seqwater:

(a) repeats paragraphs 372(b) above; and

(b) subject to those matters pleaded in paragraph (a) above, otherwise admits the allegations pleaded in paragraph 277.

374 In relation to paragraph 278 of the FASOC, Seqwater:

(a) repeats paragraphs 372(a) to (c) above;

(b) pleads that the Corrected Water Level Reading for the water level at Lake Wivenhoe:

(i) at 00.00 on 8 January 2011 was approximately 68.30m AHD; and

(ii) at 23.00 on 8 January 2011 was approximately 68.64m AHD; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 278.

Flood Operations

375 Seqwater admits the allegations pleaded in paragraph 279 of the FASOC.

376 Seqwater denies the allegations pleaded in paragraph 279A of the FASOC and pleads that in using the Flood-Ops module to estimate surface runoff hydrographs within the Somerset Dam Catchment and Wivenhoe Dam Catchment at rated gauging stations on 8 January 2011, the Flood Engineers selected and input initial Losses and continuing Loss rates as follows:

Region	Initial Losses	Continuing Loss Rate
CRE (Cressbrook Creek Region)	10mm	2.5mm/hr
COO (Cooyar Creek Region)	30mm	0.5mm/hr
LIN (Brisbane River at Linville Region)	30mm	0.5mm/hr

EMU (Emu Creek Region)	30mm	0.5mm/hr
GRE (Gregors Creek Region)	40mm	0.5mm/hr
SDI (Somerset Dam Inflow Region)	15mm	0.5mm/hr
WDI (Wivenhoe Dam Inflow Region)	0mm	2.5mm/hr

377 In relation to paragraph 280 of the FASOC, Seqwater:

(a) repeats paragraphs 370(c)(v), 371(b)(iv) and 371(b)(vi);

(b) pleads that:

(i) at the commencement of Mr Ruffini's shift at 19.00 on 7 January 2011:

(A) all of the Somerset Dam Crest Gates remained open;

(B) Sluice Gate L was open 100%;

(C) Wivenhoe Dam Radial Gate 3 was open 2.5 metres; and

(D) the Wivenhoe Dam Mini-Hydro was continuing to release 1,200ML/d (14m^3/s); and

(ii) at the end of Mr Ruffini's shift at 07.00 on 8 January 2011;

(A) all of the Somerset Dam Crest Gates remained open;

(B) Sluice Gate L was open 100%;

(C) Wivenhoe Dam Radial Gate 1 was open 1 metre;

(D) Wivenhoe Dam Radial Gate 2 was open 1.5 metres;

(E) Wivenhoe Dam Radial Gate 3 was open 3.5 metres;

(F) Wivenhoe Dam Radial Gate 4 was open 1.5 metres;

(G) Wivenhoe Dam Radial Gate 5 was open 1 metre; and

(H) Wivenhoe Dam Mini-Hydro was continuing to release 1,200ML/d (14m^3/s); and

Particulars of (b)

(i) Email from Dam Levels to various persons dated 7 January 2011 at 19.05 re FW: Somerset Dam [SEQ.001.019.4426].

(ii) Email from Dam Levels to various persons dated 7 January 2011 at 19.24 re FW: Wivenhoe Dam [SEQ.001.019.2750].

(iii) Email from Dam Levels to various persons dated 8 January 2011 at 06.54 re FW: Somerset Dam [SEQ.001.019.4406].

(iv) Email from Dam Levels to various persons dated 8 January 2011 at 06.57 re FW: Wivenhoe Dam [SEQ.001.019.2739].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 280.

378 In relation to paragraph 281 of the FASOC, Seqwater:

(a) repeats paragraph 371(b)(vi) above;

(b) pleads that the releases made were in accordance with Strategies W1 and W3; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 281.

379 In relation to paragraph 282 of the FASOC, Seqwater:

(a) pleads that at or about 11.30 on 8 January 2011, Mr Ayre sent an operations directive to the Somerset Dam Operators; and

(b) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise does not admit the allegations pleaded in paragraph 282.

380 Seqwater denies the allegations pleaded in paragraph 283 of the FASOC.

8 January 2011 Breaches

381 Seqwater denies the allegations pleaded in paragraph 285 of the FASOC.

382 Seqwater denies the allegations pleaded in paragraph 286 of the FASOC.

383 In relation to paragraph 288 of the FASOC, Seqwater:

(a) repeats paragraph 244 above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 288 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty; and

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases; and

(g) subject to the matters pleaded in paragraphs (a) to (f) above, otherwise denies the allegations pleaded in paragraph 288.

384 Seqwater denies the allegations pleaded in paragraph 288A of the FASOC.

385 Seqwater denies the allegations pleaded in paragraph 288B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 288B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraphs 383(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to “Flood Operations” as pleaded in paragraph 288B.

386 Seqwater denies the allegations pleaded in paragraph 289 of the FASOC and, further, repeats paragraphs 383(b) to (f) above.

387 Seqwater denies the allegations pleaded in paragraph 290 of the FASOC.

U Events of 9 January 2011

Weather Forecasts

388 Seqwater denies the allegations pleaded in paragraph 291 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

389 In relation to paragraph 292 of the FASOC, Seqwater:

(a) pleads that at or about 10.03 on 9 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 09.00 on 10 January 2011 was 40-60mm of rain; and

Particulars of (a)

Email sent at 10.03 on 9 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.5593].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 292.

390 In relation to paragraph 293 of the FASOC, Seqwater:

(a) pleads that at or about 16.00 on 9 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 15.00 on 10 January 2011 was 50-80mm of rain; and

Particulars of (a)

Email sent at or about 16.00 on 9 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.019.5605].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 293.

Rainfall and Inflows

391 In relation to paragraph 294 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that at or about 06.00 on 9 January 2011:

(i) the average rainfall over the past 12 hours over the Somerset Dam catchment was 40mm and over the Wivenhoe Dam catchment was less than 10mm;

(ii) the level of Lake Somerset was falling, however inflows were expected later in the day due to the recent rain which had fallen over the catchment;

(iii) Somerset Dam was releasing water into Lake Wivenhoe at a rate of approximately 35,000ML/d (405 m^3/s);

(iv) since 2 January 2011, approximately 56,000ML had been released into Lake Wivenhoe from Somerset Dam and the expected total release based on currently recorded rainfalls was at least approximately 150,000ML and releases were expected from Somerset Dam to continue at least until 11 January 2011;

(v) Wivenhoe Dam was falling and the river levels upstream of Wivenhoe Dam were receding, however, it was expected that further inflows would result from any additional rainfall;

(vi) Wivenhoe Dam was releasing water at a rate of approximately 116,000ML/d (1,340m^3/s) which was expected to maintain flows in the mid-Brisbane River of approximately 1,600m^3/s;

(vii) since 2 January 2011, 150,000ML had been released from Lake Wivenhoe with an expected total based on currently recorded rainfalls of at least approximately 450,000ML;

(viii) release rates were likely to increase over the next few days with releases expected to continue at least until 12 January 2011; and

(ix) the releases from Wivenhoe Dam combined with Lockyer Creek flows and local run-off were expected to result in Twin Bridges, Savages Crossing, Burtons Bridge, Kholo Bridge and Colleges Crossing being adversely impacted at least until 12 January 2011 and it was expected that Fernvale and Mt Crosby Weir Bridge could be affected if higher releases from Wivenhoe Dam were necessary; and

Particulars of (b)

Situation Report sent by Mr Tibaldi to various persons at or about 06.15 on 9 January 2011 [SEQ.001.011.4631].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 294.

392 In relation to paragraph 295 of the FASOC, Seqwater:

(a) repeats paragraphs 217 and 391(b) above;

(b) pleads that at or about 17.00 on 9 January 2011:

(i) the Somerset Dam catchment had received approximately 150mm of rainfall over the past 12 hours and the Wivenhoe Dam catchment approximately 80mm;

(ii) the level of Lake Somerset was rising quickly with an estimated peak inflow of about 3,000m^3/s and it was expected that the level would reach 101.50m AHD early on 11 January 2011;

(iii) water was being released from Lake Somerset via five Sluice Gates at a rate of approximately 1,100m^3/s being approximately 95,000ML/d;

(iv) since 2 January 2011, approximately 80,000ML had been released into Lake Wivenhoe from Somerset Dam and the expected total release based on currently recorded rainfalls was at least approximately 320,000ML and releases were expected from Somerset Dam to continue at least until 12 January 2011;

(v) the level of Lake Wivenhoe was rising with an estimated peak inflow solely from the upper Brisbane River of about 5,000m^3/s and it was expected to reach at least 72.5m AHD during 12 January 2011;

(vi) the current operating strategy was expected to maintain flows of 1,600m^3/s in the mid-Brisbane River for the next 24 hours which may have meant limiting releases from Wivenhoe Dam as the flows from Lockyer Creek increased, however releases may have needed to be increased significantly on 10 January 2011 depending on the rainfall levels in the next 12 to 24 hours;

(vii) the current release rate of Wivenhoe Dam was approximately 1,400m^3/s (120,000ML/d);

(viii) since 2 January 2011, approximately 210,000ML of water had been released from Lake Wivenhoe with an expected total (including releases from Somerset Dam) of approximately 1,000,000ML based on the recorded rainfall to date and releases were expected to continue until at least 15 January 2010;

(ix) there was a strong possibility that Fernvale and Mt Crosby Weir Bridge may be adversely impacted as early as 11 January 2011; and

(x) water levels in the lower Brisbane River were expected to be impacted by the combined flows from the Downstream Catchments as well as releases from Wivenhoe Dam;

Particulars of (b)

Situation Report sent by Mr Malone to various persons at or about 17.51 on 9 January 2011 [SEQ.001.011.4764].

(c) pleads that at or about 21.00 on 9 January 2011:

(i) the upper reaches of the Brisbane and Stanley Rivers had recorded up to 100-140mm of rainfall in the previous 6 hours and similar rainfall was expected in the next 12 to 24 hours particularly around the Bremer River and Warrill River catchments;

(ii) the level of Lake Somerset was rising quickly with an estimated peak inflow of about 4,000m^3/s based on observed rainfall and could be as high as 5,000m^3/s based on forecast rainfall and it was expected that the level would reach 103.50m AHD early on 11 January 2011;

(iii) water was being released from Lake Somerset via five Sluice Gates at a rate of approximately 1,100m^3/s (95,000ML/d);

(iv) since 2 January 2011, approximately 100,000ML had been released into Lake Wivenhoe from Somerset Dam and the expected total release based on currently recorded rainfalls was at least approximately 520,000ML and releases were expected from Somerset Dam to continue at least until 13 January 2011;

(v) river levels upstream of Wivenhoe Dam were rising quickly with significant inflows being generated;

(vi) the level of Lake Wivenhoe was rising with an estimated peak inflow solely from the upper Brisbane River of up to about 7,500m^3/s and it was expected to reach at least 73.5m AHD during the morning of 11 January 2011;

(vii) it was expected that releases from Wivenhoe Dam would need to be increased from the morning of 10 January 2010, however, the objective was to minimise the impact of urban flooding in areas downstream of Wivenhoe Dam and, therefore, releases were to be kept below 3,500m^3/s and the combined flows in the lower Brisbane River limited to 4,000m^3/s;

(viii) since 2 January 2011, approximately 220,000ML of water had been released from Lake Wivenhoe with an expected total (including releases from Somerset Dam) of approximately 1,000,000ML based on the recorded rainfall to date and as much as approximately 1,500,000ML with forecast rainfall, with releases expected to continue until at least 16 January 2010; and

(ix) all downstream crossings including Fernvale and Mt Crosby Weir Bridge were expected to be adversely impacted until at least 15 January 2011; and

Particulars of (c)

Situation Report sent by Mr Malone to various persons at or about 21.03 on 9 January 2011 [SEQ.001.011.4773].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 295.

Water Level

393 In relation to paragraph 296 of the FASOC, Seqwater pleads that:

(a) the approximate water level of Lake Somerset during 9 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
09/01/2011 00.00	100.32	SEQ.001.019.4392
09/01/2011 01.00	100.32	SEQ.001.019.4391
09/01/2011 03.00	100.30	SEQ.001.019.4390
09/01/2011 04.00	100.28	SEQ.001.019.4389
09/01/2011 05.00	100.28	SEQ.001.019.4388
09/01/2011 06.00	100.27	SEQ.001.019.4387
09/01/2011 07.00	100.27	SEQ.001.019.4386
09/01/2011 08.00	100.28	SEQ.001.019.4385
09/01/2011 09.00	100.28	SEQ.001.019.4384
09/01/2011 11.00	100.34	SEQ.001.019.4383
09/01/2011 12.00	100.39	SEQ.001.019.4382
09/01/2011 13.00	100.45	SEQ.004.024.0030
09/01/2011 14.00	100.47	SEQ.001.019.4381
09/01/2011 15.00	100.57	SEQ.001.019.4380
09/01/2011 16.00	100.75	SEQ.001.019.4379
09/01/2011 17.00	100.91	SEQ.001.019.4378

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
09/01/2011 17.00	101.14	SEQ.001.019.4377
09/01/2011 19.00	101.14	SEQ.001.019.4376
09/01/2011 19.00	101.43	SEQ.001.019.4375
09/01/2011 20.00	101.68	SEQ.001.019.4374
09/01/2011 21.00	101.89	SEQ.001.019.4373
09/01/2011 22.00	102.06	SEQ.001.019.4372
09/01/2011 23.00	102.22	SEQ.001.019.4371

(b) the approximate water level of Lake Wivenhoe during 9 January 2011 was:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
09/01/2011 00.00	68.640	SEQ.001.019.2724	68.63
09/01/2011 01.00	68.630	SEQ.001.019.2723	68.62
09/01/2011 01.30	68.630	SEQ.001.019.2722	
09/01/2011 02.00	68.620	SEQ.001.019.2721	68.61
09/01/2011 04.00	68.600	SEQ.001.019.2720	68.59
09/01/2011 05.00	68.600	SEQ.001.019.2719	68.59
09/01/2011 06.00	68.580	SEQ.001.019.2718	68.57
09/01/2011 09.00	68.550	SEQ.001.019.2717	68.54
09/01/2011 10.00	68.530	SEQ.001.019.2716	68.52
09/01/2011 11.00	68.540	SEQ.001.019.2715	68.53
09/01/2011 12.00	68.540	SEQ.001.019.2714	68.53
09/01/2011 14.00	68.580	SEQ.001.019.2713	68.57
09/01/2011 15.00	68.610	SEQ.001.019.2712	68.60
09/01/2011 16.00	68.700	SEQ.001.019.2711	68.69
09/01/2011 17.00	68.770	SEQ.001.019.2710	68.76
09/01/2011 18.00	68.860	SEQ.001.019.2709	68.85
09/01/2011 19.00	68.970	SEQ.001.019.2708	68.97
09/01/2011 20.00	69.100	SEQ.001.019.2707	69.10
09/01/2011 21.00	69.240	SEQ.001.019.2706	69.24
09/01/2011 22.00	69.440	SEQ.001.019.2705	69.45
09/01/2011 23.00	69.600	SEQ.001.019.2704	69.61

Particulars of (b)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as

set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) the levels of Lake Wivenhoe and Lake Somerset both rose and fell during 9 January 2011;

(d) the net levels of Lake Wivenhoe and Lake Somerset rose over 9 January 2011 as follows:

(i) for Lake Wivenhoe:

(A) based on the Dam Level Email Readings, from approximately 68.53m AHD at about 10.00 (having dropped from approximately 68.64m AHD at about 00.00) to approximately 69.6m AHD at about 23.00; and

(B) based on the Corrected Water Level Readings, from approximately 68.52m AHD at about 10.00 (having dropped from approximately 68.64m AHD at about 00.00) to approximately 69.61m AHD at about 23.00; and

(ii) for Lake Somerset, from approximately 100.27m AHD at about 06.00 (having dropped from approximately 100.32m AHD at 00.00) to approximately 102.22m AHD at about 23.00); and

(e) subject the matters pleaded in paragraphs (a) to (d) above, otherwise denies the allegations pleaded in paragraph 276.

394 In relation to paragraph 297 of the FASOC, Seqwater:

(a) repeats paragraphs 393(b) to (d) above; and

(b) subject to those matters, otherwise admits the allegations pleaded in paragraph 297.

395 In relation to paragraph 298 of the FASOC, Seqwater:

(a) repeats paragraphs 393(a) to (d) above; and

(b) pleads that the Corrected Water Level Reading for the water level at Lake Wivenhoe:

(i) at 00.00 on 9 January 2011 was approximately 68.63m AHD; and

(ii) at 23.00 on 9 January 2011 was approximately 69.61m AHD; and

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 298.

Flood Operations

396 Seqwater admits the allegations pleaded in paragraph 299 of the FASOC.

397 In relation to paragraph 299A of the FASOC, Seqwater:

(a) pleads that Mr Malone, Mr Ayre and Mr Ruffini attended a meeting in person at the Flood Operations Centre at around 15.30 on 9 January 2011, with Mr Tibaldi attending the meeting by telephone (the "**9 January Meeting**");

(b) at the 9 January Meeting, the Flood Engineers decided that two Flood Engineers would be required to attend the Flood Operations Centre for flood duty from that point on, given the potential seriousness of the situation;

(c) Mr Ayre and Mr Ruffini remained in the Flood Operations Centre after the 9 January Meeting to assist Mr Malone in conducting flood operations;

(d) admits the allegations pleaded in paragraph 299(b); and

(e) subject to the matters pleaded at paragraphs (a) to (d) above, otherwise denies the allegations in paragraph 299A of the FASOC.

398 In relation to paragraph 299B of the FASOC, Seqwater:

(a) pleads that the initial Loss and continuing Loss parameters pleaded in paragraph 299B of the FASOC were used by the Flood Engineers in using the Flood-Ops module to estimate surface runoff hydrographs within the Somerset Dam Catchment and the Wivenhoe Dam Catchment at rated gauging stations on 9 January 2011; and

(b) subject to the matters pleaded at paragraph (a), otherwise denies the allegations pleaded in paragraph 299B of the FASOC.

399 In relation to paragraph 300 of the FASOC, Seqwater:

(a) repeats paragraph 391(b) above;

(b) pleads that from around 01.00 on 9 January 2011, Mr Tibaldi issued a series of operations directives which had the effect of increasing the rate of release from Wivenhoe Dam;

Particulars of (b)

(i) Flood Event Operations Directive issued by Mr Tibaldi on 9 January 2011 at or about 01.00 [SEQ.004.024.0292].

(ii) Flood Event Operations Directive issued by Mr Tibaldi on 9January 2011 at or about 04.30 [SEQ.004.024.0293].

(c) pleads that at around 08.15 on 9 January 2011, Mr Malone issued two operations directives which had the effect of increasing the rate of release from Somerset Dam;

Particulars of (c)

(i) Flood Event Operations Directive issued by Mr Malone on 9 January 2011 at or about 08.15 [SEQ.004.024.0200].

(ii) Flood Event Operations Directive issued by Mr Malone on 9 January 2011 at or about 12.30 [SEQ.004.024.0201].

(d) pleads that from around 10.30 on 9 January 2011, Mr Malone issued a further operations directive to increase the rate of release from Wivenhoe Dam; and

Particulars of (d)

Flood Event Operations Directive issued by Mr Malone on 9 January 2011 at or about 10.30 [SEQ.004.024.0294].

(e) subject to the matters pleaded in paragraphs (a) to (d) above, otherwise does not admit the allegations pleaded in paragraph 300.

400 In relation to paragraph 301 of the FASOC, Seqwater:

(a) repeats paragraphs 399(a) to (d) above; and

(b) subject to the matters pleaded at paragraph (a) above, otherwise denies the allegations pleaded in paragraph 301.

401 In relation to paragraph 301A of the FASOC, Seqwater:

(a) repeats paragraph 399 above; and

(b) subject to the matters pleaded at paragraph (a) above, otherwise denies the allegations pleaded in paragraph 301A.

402 In relation to paragraph 302 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 391(b), 392(b) and 393(a) to (d) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 302.

403 In relation to paragraph 303 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 391(b), 392(b) and 393(a) to (d) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 303.

9 January 2011 Breaches

404 Seqwater denies the allegations pleaded in paragraph 304 of the FASOC.

405 Seqwater denies the allegations pleaded in paragraph 305 of the FASOC.

406 In relation to paragraph 307 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 244, 391(b) and 392(b) and (c) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 307 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 307; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 307.

407 Seqwater denies the allegations pleaded in paragraph 307A of the FASOC.

408 Seqwater denies the allegations pleaded in paragraph 307B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 307B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraph 406(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 307B.

409 Seqwater denies the allegations pleaded in paragraph 308 of the FASOC and, further, repeats paragraph 406(b) to (f) above.

410 Seqwater denies the allegations pleaded in paragraph 309 of the FASOC.

V Events of 10 January to 11 January 2011

Weather Forecasts

411 Seqwater denies the allegations pleaded in paragraph 310 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all.

412 Seqwater denies the allegations pleaded in paragraph 311 of the FASOC, and further:

(a) repeats paragraph 200(b)(i) above; and

(b) denies that the PMEs predicted rainfall specifically for the Brisbane River Basin, Lake Somerset or Lake Wivenhoe catchment areas as alleged or at all;

413 In relation to paragraph 312 of the FASOC, Seqwater:

(a) pleads that at or about 10.03 on 10 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 11 January 2011 was 50-100mm of rain; and

Particulars of (a)

Email sent at 10.03 on 10 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8509].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 312.

414 In relation to paragraph 313 of the FASOC, Seqwater:

(a) pleads that at or about 16.00 on 10 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 16.00 on 11 January 2011 was 25-50mm of rain and isolated rainfalls of up to 100mm; and

Particulars of (a)

Email sent at or about 16.00 on 10 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8496].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 313.

415 In relation to paragraph 314 of the FASOC, Seqwater:

(a) pleads that at or about 10.14 on 11 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 10.00 on 12 January 2011 was in excess of 100mm of rain; and

Particulars of (a)

Email sent at 10.14 on 11 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8452].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 314.

416 In relation to paragraph 315 of the FASOC, Seqwater:

(a) pleads that at or about 16.13 on 11 January 2011, the Flood Operations Centre received a QPF which stated that the forecast average rainfall for the Combined Dam Catchments for the 24-hour period to 16.00 on 12 January 2011 was 50-100mm of rain that evening, easing to less than 30mm during 12 January 2011; and

Particulars of (a)

Email sent at or about 16.13 on 11 January 2011 from "Aifs Operational Manager" to "weather" [SEQ.001.018.8438].

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 315.

Rainfall and Inflows

417 In relation to paragraph 316 of the FASOC, Seqwater pleads that:

(a) repeats paragraph 217 above;

(b) at or about 06.00 on 10 January 2011:

(i) very heavy rainfall had been recorded in the upper Brisbane River and Stanley River in the previous 12 hours with totals of between 100-240mm and totals for the previous 24 hours of between 100-325mm;

(ii) rainfall of a similar magnitude was expected in the next 12 to 24 hours in catchments downstream of Wivenhoe Dam;

(iii) peak inflow into Somerset Dam was approximately 4,200m^3/s and 5 Sluice Gates were open releasing about 1,100m^3/s (95,000ML/d) into Wivenhoe Dam;

(iv) the level of Lake Somerset was expected to reach at least 103.5m AHD by the afternoon of 10 January 2011;

(v) since 2 January 2011, approximately 115,000ML had been released into Lake Wivenhoe from Somerset Dam and the expected total release based on currently recorded rainfalls was at least approximately 520,000ML and releases from Somerset Dam were expected to continue at least until 13 January 2011;

(vi) river levels upstream of Wivenhoe Dam were rising quickly with significant inflows being generated;

(vii) Lake Wivenhoe was rising quickly with estimate peak flows to the dam, based only on the upper Brisbane River, of 8,800m^3/s and it was estimated the level of Lake Wivenhoe would reach 73.3m AHD by 11 January 2011;

(viii) since 2 January 2011, approximately 240,000ML had been released from Lake Wivenhoe with an expected total, without further rainfall, of approximately 1,500,000ML and up to approximately 2,100,000ML with

forecast rainfall and releases were expected to continue at least until 16 January 2011, while the current release rate was 1,753m^3/s (150,000ML/d);

(ix) the objective was to minimise the impact of urban flooding in areas downstream of Wivenhoe Dam and, therefore, releases were to be kept below 3,500m^3/s and the combined flows in the lower Brisbane River limited to 4,000m^3/s if possible; and

(x) Fernvale Bridge and Mt Crosby Weir Bridge were inundated and water levels in the lower Brisbane River were expected to be impacted by the combined flows from the Downstream Catchments as well as releases from Wivenhoe Dam and, as such, if the predicted rainfall eventuated downstream, the resultant combined flows were expected to possibly exceed the threshold of damaging discharge in urban areas within the next 24 to 48 hours; and

Particulars of (b)

(i) Situation Report sent by Mr Ruffini to various persons at or about 01.13 on 10 January 2011 [SEQ.001.011.4621].

(ii) Situation Report sent by Mr Ruffini to various persons at or about 06.29 on 10 January 2011 [SEQ.001.011.4629].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise admits the allegations pleaded in paragraph 316.

418 In relation to paragraph 317 of the FASOC, Seqwater:

(a) repeats paragraphs 217 and 417 (b) above;

(b) pleads that from around 16.16 on 10 January 2011, the BOM commenced issuing a series of flood warnings predicting:

(i) further rain to fall in the Lockyer Creek Catchment and Bremer River Catchments in the coming 24 hours;

(ii) further rises and flash flooding in the creeks and streams around Brisbane and Ipswich associated with the heaviest rainfall;

(iii) extreme rises in the upper Lockyer Creek at Helidon, with very fast and dangerous rises possible downstream at Gatton;

(iv) flood levels:

(A) of over 5 metres at Rosewood;

(B) at around 12.7 metres in the afternoon of 11 January 2011 at the Bremer River at Ipswich;

(C) of above 6 metres at the Warrill Creek at Amberley overnight;

Particulars of (b)

(i) Email from "Aifs Operational Manager" to "weather" at around 16.16 on 10 January 2011 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8494].

(ii) Email from "Aifs Operational Manager" to "weather" at around 17.01 on 10 January 2011 re BOM: FLDWARN Coastal Rs Maryborough south [SEC = UNCLASSIFIED] [SEQ.001.018.8493].

(iii) Email from "Aifs Operational Manager" to "weather" at around 18.12 on 10 January 2011 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8486].

(iv) Email from "Aifs Operational Manager" to "weather" at around 21.44 on 10 January 2011 re BOM: FLDWARN for Lower Brisbane and Bremer Rs [SEC = UNCLASSIFIED] [SEQ.001.018.8477].

(c) pleads that at or around 17.31 on 10 January 2011, the BOM issued an urgent flash flood warning noting that:

(i) there had been a rapid rise in the Lockyer Creek at Helidon between 14.00 to 15.00, with the automatic gauge indicating that it rose about 8 metres;

(ii) the flash flood was arriving in the Gatton area, with the Lockyer Creek rising 2 metres in one hour and continuing; and

(iii) fast rises were expected to extend along the Lockyer Creek from Gatton to Glenore Grove and Lyons Bridge in the evening of 10 January 2011, with the magnitude unknown at that stage;

Particulars of (c)

Email from Peter Baddiley of the BOM to various persons at around 17.31 on 10 January 2011 re URGENT ATTENTION: Helidon to Gatton FLASH FLOOD [SEC = UNCLASSIFIED] [SEQ.001.018.6433].

(d) pleads that at or about 18.00 on 10 January 2011:

(i) the Somerset Dam Catchment had received less than 20mm however, significant rain, with isolated falls exceeding 100mm, had fallen in the Wivenhoe Dam Catchment in the previous 6 hours;

(ii) the level of Lake Somerset was expected to peak at 103.5m AHD in the next few hours unless further significant rainfall was experienced and total discharge was expected to decrease over the following 24 hours from 1,700m^3/s to about 1,200m^3/s;

(iii) the level of Lake Wivenhoe was rising and was expected to reach about 73.8m AHD during 11 January 2011;

(iv) releases had been increased from Wivenhoe Dam to ensure a fuse plug was not triggered;

(v) outflows into the Brisbane River from the Bremer River and Lockyer Creek were increasing although the flash flooding experienced in the upper Lockyer Creek was not expected to increase significantly the Brisbane River flow above the current projection of 4,000m^3/s at Moggill;

Particulars of (d)

(i) Situation Report sent by Mr Malone to various persons at or about 12.15 on 10 January 2011 [SEQ.001.011.4641].

(ii) Situation Report sent by Mr Malone to various persons at or about 18.43 on 10 January 2011 [SEQ.001.011.4649].

(e) pleads that at or about 00.00 on 11 January 2011:

(i) rainfall continued in the catchments of Somerset Dam and Wivenhoe Dam and although falls were generally less than 20mm from 18.00 on 10 January 2011, some isolated falls in the upper Brisbane River of up to 110mm had been recorded;

(ii) the level of Lake Somerset was falling slowly from its peak of approximately 103.52m AHD at 19.00 on 10 January 2010, while peak inflow was estimated to be about 4,200m^3/s;

(iii) the level of Lake Wivenhoe was rising at about 50mm per hour and expected to reach about 73.8m AHD during the afternoon on 11 January 2011, with releases held at a rate of 2,750m^3/s since 19.30 on 10 January 2010;

(iv) outflows into the Brisbane River from the Downstream Catchments were increasing and the flood levels in the Lockyer Creek Catchment were expected to exceed maximum recorded levels; and

(v) consideration was to be given to modifying the release rates from Wivenhoe Dam to moderate the peak flows emanating from the Lockyer Creek; and

Particulars of (e)

Situation Report sent by Mr Ayre to various persons at or about 23.55 on 10 January 2011 [SEQ.001.011.4619].

(f) subject to the matters pleaded in paragraphs (a) to (e) above, otherwise admits the allegations pleaded in paragraph 317.

419 In relation to paragraph 318 of the FASOC, Seqwater:

(a) repeats paragraph 217 above;

(b) pleads that at or about 06.00 on 11 January 2011:

(i) rainfall continued in the catchments of North Pine Dam, Somerset Dam and Wivenhoe Dam and isolated falls in the upper Brisbane River of up to 125mm had been recorded with widespread falls of 40-70mm in the Somerset Dam catchment;

(ii) there had also been rainfall of 20-60mm in the Lockyer Creek catchment in the last 12 hours and rainfall of up to 30mm in the Bremer River catchment;

(iii) Somerset Dam was continuing to fall slowly with total discharge into Wivenhoe Dam at 1,400m^3/s which was expected to decrease to 500m^3/s later in the day to ensure that the combined flood mitigation capacity of Somerset Dam and Wivenhoe Dam was maximised;

(iv) Lake Wivenhoe was rising at about 25mm per hour, with releases continued to be held at a rate of 2,750m^3/s, and was expect to reach just over 74.0m AHD during the evening on 11 January 2011;

(v) outflows into the Brisbane River from the Downstream Catchments were increasing;

(vi) the BOM had advised that the rainfall which was responsible for the flash flooding in the upper areas of the Lockyer Creek was not observed at any rainfall stations but was considered to be extreme, and flood levels in the

Lockyer Creek catchments would exceed maximum recorded levels in some stations in the upper catchment;

(vii) consideration was given to modifying the releases from Wivenhoe Dam to try and moderate the peak flows emanating from the Lockyer Creek but the rainfall in the past 12 hours in the catchment above the dam meant that this option was not possible and, as such, the strategy was intended to maintain the current rate of release until the Lockyer Creek had peaked; and

(viii) it was expected that if further rainfall occurred, releases from Wivenhoe Dam might need to be increased in order to maintain the security of the dam which may result in flows in the lower Brisbane River approaching or exceeding 5,000m^3/s;

Particulars of (b)

Situation Report sent to various persons at or about 06.12 on 11 January 2011 [SEQ.001.011.4633].

(c) pleads that at or about 12.00 on 11 January 2011:

(i) with no further rainfall, Lake Wivenhoe would approach 75m AHD;

(ii) with 50mm of rainfall in the Stanley and Upper Brisbane catchments in the next 12 to 24 hours the releases would need to be increased to around 6,000m^3/s;

(iii) the current strategy concerned trying to prevent the trigger of the first fuse plug when the water level of Lake Wivenhoe reached 75.6m AHD; and

(iv) the Sluices Gates had been closed at Somerset Dam; and

Particulars of (c)

Situation Report sent to various persons at or about 12.11 on 11 January 2011 [SEQ.001.018.3877].

(d) subject to the matters pleaded in paragraphs (a) to (c) above, Seqwater otherwise admits the allegations pleaded in paragraph 318.

420 In relation to paragraph 319 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 417 to 419 above;

(b) pleads that at or about 18.00 on 11 January 2011:

(i) in the previous 12 hours, rainfall of up to 370mm had fallen in the catchment of Wivenhoe Dam and in the past hour, rainfall of 15-30mm had been recorded in the same area;

(ii) at 17.30 Wivenhoe Dam was releasing water at about 6,700m^3/s and the current expectation was that the dam would reach a steady rate where outflows equalled inflows within the next three hours without further significant rainfall; and

(iii) the level of Lake Wivenhoe was rising slowly and expected to peak at 75.5m AHD; and

Particulars of (b)

Situation Report sent by Mr Malone to various persons at or about 17.59 on 11 January 2011 [SEQ.001.018.3842].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, Seqwater otherwise admits the allegations pleaded in paragraph 319.

421 Seqwater denies the allegations pleaded in paragraph 320 of the FASOC.

422 Seqwater denies the allegations pleaded in paragraph 321 of the FASOC.

Water Level

423 In relation to paragraph 322 of the FASOC, Seqwater:

(a) pleads that the approximate water level of Lake Somerset during 10 to 11 January 2011 was:

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
10/01/2011 00.00	102.38	SEQ.001.019.4370
10/01/2011 01.00	102.54	SEQ.001.019.4368
10/01/2011 02.00	102.62	SEQ.001.019.4367
10/01/2011 03.00	102.70	SEQ.001.019.4366
10/01/2011 04.00	102.78	SEQ.001.019.4365
10/01/2011 05.00	102.84	SEQ.001.019.4364
10/01/2011 06.00	102.93	SEQ.001.019.4363
10/01/2011 07.00	102.98	SEQ.001.019.4362
10/01/2011 08.00	103.02	SEQ.001.019.4361
10/01/2011 09.00	103.08	SEQ.001.019.4360
10/01/2011 09.20	103.09	SEQ.004.024.0057
10/01/2011 10.00	103.11	SEQ.001.019.4359

Time	Dam Levels Email Reading (m AHD)	Particulars of Dam Levels Email Reading
10/01/2011 11.00	103.16	SEQ.001.019.1358
10/01/2011 12.00	103.27	SEQ.004.024.0062
10/01/2011 12.13	103.28	SEQ.001.019.4357
10/01/2011 13.00	103.36	SEQ.001.019.4356
10/01/2011 14.30	103.41	SEQ.001.019.4355
10/01/2011 15.00	103.43	SEQ.001.019.4354
10/01/2011 16.00	103.45	SEQ.001.019.4353
10/01/2011 17.00	103.45	SEQ.004.024.0050
10/01/2011 18.00	103.46	SEQ.001.019.4352
10/01/2011 19.00	103.45	SEQ.001.019.4351
10/01/2011 20.00	103.46	SEQ.001.019.4350
10/01/2011 21.00	103.44	SEQ.001.019.4349
10/01/2011 22.00	103.40	SEQ.001.019.4348
11/01/2011 00.00	103.37	SEQ.001.019.4347
11/01/2011 01.00	103.36	SEQ.001.019.4346
11/01/2011 02.00	103.31	SEQ.001.019.4344
11/01/2011 03.00	103.27	SEQ.001.019.4343
11/01/2011 04.00	103.23	SEQ.001.019.4342
11/01/2011 05.00	103.28	SEQ.001.019.4341
11/01/2011 06.00	103.34	SEQ.001.019.4340
11/01/2011 07.00	103.40	SEQ.001.019.4339
11/01/2011 08.00	103.46	SEQ.001.019.4338
11/01/2011 09.45	103.53	SEQ.001.019.4337
11/01/2011 10.15	103.56	SEQ.001.019.4336
11/01/2011 11.00	103.61	SEQ.001.019.4334
11/01/2011 12.00	103.68	SEQ.001.019.4333
11/01/2011 13.30	103.91	SEQ.001.019.4332
11/01/2011 14.00	103.96	SEQ.001.019.4331
11/01/2011 15.00	104.12	SEQ.001.022.1417
11/01/2011 16.00	104.31	SEQ.001.019.4330
11/01/2011 17.00	104.41	SEQ.001.019.4329
11/01/2011 18.30	104.56	SEQ.001.019.4328
11/01/2011 19.00	104.60	SEQ.001.019.4327
11/01/2011 20.00	104.70	SEQ.001.019.4326
11/01/2011 21.00	104.78	SEQ.001.019.4325
11/01/2011 22.00	104.85	SEQ.001.019.4324
11/01/2011 23.00	104.90	SEQ.001.019.4323

(b) the approximate water level of Lake Wivenhoe during 10 to 11 January 2011 was:

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
10/01/2011 00.00	69.800	SEQ.001.019.2703	69.82
10/01/2011 01.00	69.970	SEQ.001.019.2702	69.99
10/01/2011 02.00	70.170	SEQ.001.019.2701	70.20
10/01/2011 03.00	70.360	SEQ.001.019.2699	70.39
10/01/2011 04.00	70.570	SEQ.001.019.2698	70.60
10/01/2011 05.00	70.770	SEQ.001.019.2697	70.80
10/01/2011 06.00	70.960	SEQ.001.019.2696	70.99
10/01/2011 07.00	71.160	SEQ.001.019.2695	71.20
10/01/2011 08.00	71.360	SEQ.001.019.2694	71.40
10/01/2011 09.00	71.560	SEQ.001.019.2693	71.60
10/01/2011 10.00	71.780	SEQ.001.019.2692	71.83
10/01/2011 11.00	71.950	SEQ.001.019.2691	72.00
10/01/2011 12.00	72.070	SEQ.001.019.2690	72.12
10/01/2011 13.00	72.260	SEQ.001.019.2689	72.32
10/01/2011 14.00	72.410	SEQ.001.019.2688	72.47
10/01/2011 15.00	72.540	SEQ.001.019.2687	72.61
10/01/2011 16.00	72.700	SEQ.001.019.2685	72.77
10/01/2011 17.00	72.840	SEQ.001.019.2682	72.92
10/01/2011 18.00	72.920	SEQ.001.019.2680	73.00
10/01/2011 19.00	72.990	SEQ.001.019.2678	73.07
10/01/2011 19.30	73.030	SEQ.001.019.2677	
10/01/2011 20.00	73.060	SEQ.001.019.2676	73.14
10/01/2011 22.00	73.170	SEQ.001.019.2675	73.25
10/01/2011 23.00	73.220	SEQ.001.019.2674	73.30
11/01/2011 00.00	73.260	SEQ.001.019.2673	73.34
11/01/2011 02.00	73.350	SEQ.001.019.2672	73.43
11/01/2011 04.00	73.400	SEQ.001.019.2671	73.48
11/01/2011 06.00	73.510	SEQ.001.019.2670	73.59
11/01/2011 07.00	73.610	SEQ.001.019.2669	73.69
11/01/2011 08.00	73.700	SEQ.001.019.2668	73.78
11/01/2011 09.00	73.810	SEQ.001.019.2667	73.90
11/01/2011 10.00	73.950	SEQ.001.019.2666	74.04
11/01/2011 11.00	74.100	SEQ.001.019.2665	74.19
11/01/2011 11.30	74.190	SEQ.001.019.2663	

Time	Dam Level Email Reading (m AHD)	Particulars of Dam Levels Email Reading	Corrected Water Level (m AHD)
11/01/2011 12.00	74.270	SEQ.001.019.2662	74.36
11/01/2011 12.30	74.320	SEQ.001.019.2661	
11/01/2011 13.00	74.390	SEQ.001.019.2660	74.48
11/01/2011 13.30	74.450	SEQ.001.019.2658	
11/01/2011 14.00	74.570	SEQ.001.019.2657	74.66
11/01/2011 14.30	74.610	SEQ.001.022.1418	
11/01/2011 15.00	74.710	SEQ.001.022.1416	74.80
11/01/2011 15.30	74.760	SEQ.001.019.2656	
11/01/2011 16.00	74.810	SEQ.001.019.2655	74.90
11/01/2011 16.30	74.850	SEQ.001.019.2654	
11/01/2011 17.00	74.890	SEQ.001.019.2653	74.98
11/01/2011 17.30	74.920	SEQ.001.019.2652	
11/01/2011 18.00	74.950	SEQ.001.019.2651	75.04
11/01/2011 18.30	74.960	SEQ.001.019.2650	
11/01/2011 19.00	74.970	SEQ.001.019.2649	75.06
11/01/2011 19.30	74.970	SEQ.001.019.2648	
11/01/2011 20.00	74.970	SEQ.001.019.2647	75.06
11/01/2011 20.30	74.965	SEQ.001.019.2646	
11/01/2011 21.00	74.950	SEQ.001.019.2645	75.04
11/01/2011 21.16	74.950	SEQ.001.019.2644	
11/01/2011 22.00	74.950	SEQ.001.019.2642	75.04
11/01/2011 22.30	74.940	SEQ.001.019.2641	
11/01/2011 23.00	74.920	SEQ.001.019.2640	75.01
11/01/2011 23.45	74.910	SEQ.001.019.2639	

Particulars of (b)

Corrected Water Level Readings of Lake Wivenhoe: Wivenhoe gauge board readings at the date and time specified as adjusted as set out in Exhibit JAM-16 to the affidavit of Justin Anthony McDonnell dated 31 October 2014.

(c) pleads that the levels of Lake Wivenhoe and Lake Somerset both rose and fell in the period 10 to 11 January 2011;

(d) pleads that the net levels of Lake Wivenhoe and Lake Somerset both rose and fell in the period 10 to 11 January 2011 as follows:

(i) for Lake Wivenhoe:

(A) based on the Dam Levels Email Readings, from approximately 69.80m AHD at about 00.00 on 10 January 2011 to approximately 74.97m AHD at about 19.00 on 11 January 2011, then dropped to approximately 74.91m AHD at about 23.45 on 11 January 2011; and

(B) based on the Corrected Water Level Readings, from approximately 69.82m AHD at about 00.00 on 10 January 2011 to approximately 75.06m AHD at about 19.00 on 11 January 2011, and then dropped to approximately 75.01m AHD at about 23.00 on 11 January 2011; and

(ii) for Lake Somerset, from approximately 102.38m AHD at about 00.00 to approximately 104.90m AHD at about 23.00 on 11 January 2011, with an intermediate drop to approximately 103.23m AHD at about 04.00 on 11 January 2011;

(e) repeats paragraphs 217, 418(b) and (c), 419(b) and (d) and 420(b) above; and

(f) subject to the matters pleaded in paragraphs (a) to (e) above, Seqwater otherwise denies the allegations pleaded in paragraph 322.

424 In relation to paragraph 323 of the FASOC, Seqwater:

(a) repeats paragraphs 423(a) to (e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 323.

425 In relation to paragraph 324 of the FASOC, Seqwater:

(a) repeats paragraphs 423(a) to (e) above; and

(b) subject to the matter pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 324.

426 In relation to paragraph 325 of the FASOC, Seqwater:

(a) repeats paragraphs 423(a) to (e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 325.

427 In relation to paragraph 326 of the FASOC, Seqwater:

(a) repeats paragraphs 423(a) to (e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 326.

428 In relation to paragraph 327 of the FASOC, Seqwater:

(a) repeats paragraphs 423(a) to (e) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 327.

429 Seqwater denies the allegations pleaded in paragraph 328 of the FASOC.

Flood Operations

430 Seqwater admits the allegations pleaded in paragraph 329 of the FASOC.

431 In relation to paragraph 329A of the FASOC, Seqwater:

(a) admits that all four Flood Engineers met at around the end of each shift on 10 and 11 January to discuss the developing situation and the actual and projected releases which were expected to be made from Somerset Dam and Wivenhoe Dam in the following shift;

(b) admits the allegations pleaded in paragraph 329A(b);

(c) pleads in relation to paragraph 329A(c) that:

(i) Mr Tibaldi continued to assist Mr Ayre and Mr Ruffini in conducting flood operations until around 21.30 on 11 January 2011; and

(ii) Mr Malone continued to assist Mr Ayre and Mr Ruffini in conducting flood operations until around 23.00 on 11 January 2011; and

(d) subject to the matters pleaded at paragraphs (a) to (c) above, otherwise denies the allegations pleaded in paragraph 329A.

432 In relation to the allegations pleaded in paragraph 329B of the FASOC, Seqwater:

(a) pleads that the initial Loss and continuing Loss parameters pleaded in paragraph 329B of the FASOC were used by the Flood Engineers to estimate surface runoff hydrographs within the Somerset Dam Catchment and Wivenhoe Dam Catchment at rated gauging stations on 10 and 11 January 2011; and

(b) subject to the matters pleaded at paragraph (a) above, otherwise denies the allegations pleaded in paragraph 329B.

433 In relation to paragraph 330 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 417(b), 418(b) to (e), 419(b) to (c) and 420(b) above; and

(b) subject to the matters pleaded in paragraph (a) above, otherwise denies the allegations pleaded in paragraph 330.

434 In relation to paragraph 331 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 417(b), 418(b) to (e), 419(b) to (c) and 420(b) above; and

(b) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 331.

435 In relation to paragraph 332 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 417(b), 418(b) to (e), 419(b) to (c) and 420(b) above;

(b) pleads that on or about 04.30 on 11 January 2011, Mr Ayre issued an operations directive to the Somerset Dam Operators which:

(i) advised that, in order to prevent Wivenhoe Dam exceeding the trigger level for the implementation of Strategy W4, it was necessary to store water in Somerset Dam; and

(ii) instructed the Somerset Dam Operators to undertake the following operations:

(A) close Sluice J at 05.00 on 11 January 2011;

(B) close Sluice N at 06.00 on 11 January 2011; and

(C) close Sluice K at 07.00 on 11 January 2011; and

Particulars

Somerset Directive #6 sent by Mr Ayre to the Somerset Dam Operators at or about 04.30 on 11January 2011 [SEQ.004.024.0202].

(c) subject to the matters pleaded in paragraphs (a) and (b) above, otherwise denies the allegations pleaded in paragraph 332.

436 Seqwater denies the allegations pleaded in paragraph 333 of the FASOC.

437 In relation to the allegations pleaded in paragraph 334 of the FASOC, Seqwater:

(a) repeats paragraphs 32(a) to (h) and 36 above;

(b) pleads that at or around 17.48 on 11 January 2011, Robert Drury of Seqwater attempted to contact representatives of Tarong Energy to request that it cease releasing water from Splityard Creek Dam;

Particulars of (b)

Flood Event Log, [SEQ.002.844.1076].

(c) pleads that the full supply volume of Splityard Creek Dam is approximately 3% of the volume of Lake Wivenhoe between EL67 and EL74;

(d) pleads that only in extraordinary circumstances, such as when Lake Wivenhoe was predicted to exceed 79m AHD (with the Wivenhoe Dam Radial Gates closed) or 80m AHD (with the Wivenhoe Dam Radial Gates open) could the operation of the Wivenhoe Power Station affect in any significant way to the structural integrity of Wivenhoe Dam;

(e) pleads that the releases made by Tarong Energy from Splityard Creek Dam on 11 January 2011 comprised less than 1% of the inflows into Wivenhoe Dam which were experienced on 11 January 2011;

(f) pleads that at the time the releases from Splityard Creek Dam were made on 11 January 2011, the Flood Engineers were already operating Wivenhoe Dam in Strategy W4, and as such, the releases from Splityard Creek Dam had no impact on the overall operating strategy; and

(g) subject to the matters pleaded in paragraphs (a) to (f) above, otherwise denies the allegations pleaded in paragraph 334.

438 Seqwater denies the allegations pleaded in paragraph 335 of the FASOC and, further, pleads that:

(a) Tarong Energy failed to notify the Flood Engineers on 11 January 2011 that it proposed to release approximately 5,262ML;

(b) at or around 17.00 on 11 January 2011, Tarong Energy personnel experienced both a loss of telephone and email communications; and

(c) Tarong Energy personnel located at Wivenhoe Power Station reported communication difficulties with mobile phone networks throughout the January 2011 flood event.

Particulars

Statement of Andrew Krotewicz to the Queensland Floods Commission of Inquiry, 3 November 2011 [SEQ.010.018.2064].

439 Seqwater denies the allegations pleaded in paragraph 336 of the FASOC and, further, repeats paragraph 437 above.

10 – 11 January 2011 Breaches

440 Seqwater denies the allegations pleaded in paragraph 337 of the FASOC.

441 In relation to paragraph 339 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 244, 417(b), 418(b) to (e), 419(b) to (c) and 420(b) above;

(b) pleads that save for complying with the Flood Mitigation Manual, a reasonably prudent flood engineer would not have acted as pleaded in paragraph 339 of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) pleads, further, that:

(i) the Flood Engineers' acts and omissions were not so unreasonable that no public authority having Seqwater's functions could properly consider those acts or omissions to be a reasonable exercise of its functions; and

(ii) accordingly, by section 36 of the *Civil Liability Act 2003* (Qld), those acts and omissions were not wrongful;

(d) in addition, or alternatively to (c) above, pleads that:

(i) in not making precautionary releases based on the weather forecasts pleaded in paragraph 139A of the FASOC or, in the alternative, in not making precautionary releases based on the 4-day and 8-day weather forecasts pleaded in paragraph 139A of the FASOC, the Flood Engineers acted in a way that was widely accepted by peer professional opinion by a

significant number of respected practitioners in the field as competent professional practice; and

(ii) accordingly, by section 22(1) of the *Civil Liability Act 2003* (Qld), the Flood Engineers did not breach a duty;

(e) further, in addition or alternatively to (c) and (d) above, pleads that the Flood Engineers' acts and omissions:

(i) were exercises of professional engineering judgment;

(ii) were within the range of judgments that were reasonable in the circumstances confronting the Flood Engineers; and

(iii) accordingly, did not give rise to any breach of duty;

(f) further, in addition or alternatively to (c), (d) and (e) above, pleads that it was reasonable for the Flood Engineers to read the Flood Mitigation Manual as:

(i) not authorising releases that would reduce the lake levels below FSL, save for the need to take into account base flow as expressly provided in section 8.5; and

(ii) leaving it to the professional judgment of the Flood Engineers as to the reliance that should be placed on forecasts in making decisions about releases;

(g) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 339; and

(h) subject to the matters pleaded in paragraphs (a) to (g) above, otherwise denies the allegations pleaded in paragraph 339.

442 Seqwater denies the allegations pleaded in paragraph 339A of the FASOC.

443 Seqwater denies the allegations pleaded in paragraph 339B of the FASOC and:

(a) repeats paragraph 244 above;

(b) pleads further that a reasonably prudent flood engineer would not have acted as pleaded in paragraph 339B of the FASOC because that:

(i) would be contrary to the Flood Mitigation Manual;

(ii) would involve making releases below FSL which was not otherwise permitted for the reasons pleaded in Section G above; and

(iii) alternatively, would require the Flood Engineers to decide to release water from the water supply storage compartments of Somerset Dam and Wivenhoe Dam, which was a decision a reasonably prudent flood engineer would not make in the policy and regulatory framework pleaded in Section G above;

(c) repeats paragraph 441(c) to (f) above; and

(d) further, repeats paragraph 113 above in relation to "Flood Operations" as pleaded in paragraph 339B.

444 Seqwater denies the allegations pleaded in paragraph 340 of the FASOC and, further, repeats paragraph 441(b) to (f) above.

445 Seqwater denies the allegations pleaded in paragraph 341 of the FASOC.

W Causation and Loss

446 In relation to paragraph 342 of the FASOC, Seqwater:

(a) repeats paragraphs 217, 392(b) and (c), 417(b), 417(b) to (e), 419(b) and 420(b) above;

(b) pleads that the temporal and spatial distribution of rainfall which occurred from 9 to 11 January 2011 varied throughout the Somerset Dam Catchment, the Wivenhoe Dam Catchment and the Downstream Catchments;

(c) admits that there was rainfall in the catchment areas of Lake Somerset and Lake Wivenhoe, and that runoff volumes were generated during the period 9 January 2011 to 11 January 2011;

(d) does not admit that the rainfall was "substantial" or the runoff was significant; and

(e) subject to the matters pleaded in paragraphs (a) to (d) above, Seqwater otherwise admits the allegations pleaded in paragraph 342.

447 Seqwater denies the allegations pleaded in paragraph 343 of the FASOC.

448 In relation to paragraph 344 of the FASOC, Seqwater pleads that:

(a) from 9 January 2011 to 19 January 2011 there was a Flood Event and releases were required to be made in accordance with the Flood Mitigation Manual; and

(b) subject to the matters pleaded in paragraph (a) above, Seqwater otherwise does not admit the allegations pleaded in paragraph 344.

449 In relation to paragraph 345 of the FASOC, Seqwater:

(a) repeats paragraph 448 above; and

(b) subject to those matters, otherwise denies the allegations pleaded in paragraph 345.

450 In relation to paragraph 346 of the FASOC, Seqwater:

(a) denies the Flood Engineers committed one or more of the Flood Engineers' Breaches (as that expression is defined in paragraph 343 of the FASOC);

(b) repeats and relies on the matters pleaded at paragraphs 446 and 448 above in response to paragraphs 342 and 344 of the FASOC; and

(c) otherwise denies the allegations pleaded in paragraph 346.

451 In relation to paragraph 347 of the FASOC:

(a) Seqwater denies the allegations pleaded in paragraph 347 of the FASOC; and

(b) further, relies on section 11 of the *Civil Liability Act 2003* (Qld).

452 Seqwater denies the allegations pleaded in paragraph 348 of the FASOC.

X Direct Liability of Seqwater and SunWater in negligence

Direct Liability of Seqwater in Negligence

453 Seqwater denies the allegations pleaded in paragraph 349 of the FASOC.

454 Seqwater denies the allegations pleaded in paragraph 350 of the FASOC.

Liability of SunWater in Negligence

455 Seqwater admits the allegations pleaded in paragraph 351 of the FASOC.

456 In relation to paragraph 352 of the FASOC, Seqwater:

(a) denies the Flood Engineers (or one or more of them) committed one or more of the Flood Engineers' breaches in the period 16 December 2010 to 11 January 2011 as alleged or at all; and

(b) otherwise does not plead to paragraph 352 as it contains no allegations against Seqwater.

457 In relation to paragraph 353 of the FASOC, Seqwater:

(a) denies the Flood Engineers (or one or more of them) committed one or more of the Flood Engineers' breaches in the period 16 December 2010 to 11 January 2011 as alleged or at all; and

(b) otherwise does not plead to paragraph 353 as it contains no allegations against Seqwater.

Y Private Nuisance and Trespass

458 In relation to paragraph 354 of the FASOC, Seqwater:

(a) pleads that the pleading in paragraph 354 of the composition of the subgroup of persons on whose behalf the proceedings have been commenced by the Plaintiff ("**Subgroup Members**") does not comply with section 157 of the CPA because not all of the Subgroup Members have claims against any one or more of the Defendants, contrary to section 157(1)(a) of the CPA, since:

(i) as pleaded in paragraph 357 of the FASOC, the claims against the Defendants are pleaded to arise from loss or damage caused by the "Greater Flooding" defined in paragraph 346(b) of the FASOC;

(ii) paragraph 354 identifies the Subgroup Members by reference to, relevantly, the inundation by water of land located downstream of Wivenhoe Dam;

(iii) the scope of the inundation pleaded in paragraph 354 is broader than, and in addition, or in the alternative, does not correlate to, the Greater Flooding pleaded in paragraph 357; and

(iv) therefore, not all Subgroup Members may have claims against any one or more of the Defendants because a Subgroup Member may have been inundated by water as pleaded in paragraph 354 but not have suffered loss or damage caused by the Greater Flooding pleaded in paragraph 357;

(b) does not admit that the Plaintiff is an appropriate representative of the Subgroup Members for the purposes of section 157 of the CPA because Seqwater cannot admit, as it does not know, that the Plaintiff's use and enjoyment of an interest in land located downstream of Wivenhoe Dam was interfered with either from inundation of land by water as pleaded in paragraph 354 or from the Greater Flooding pleaded in paragraph 357; and

(c) otherwise does not admit the allegations pleaded in paragraph 354.

459 Seqwater denies the allegations pleaded in paragraph 355 of the FASOC and repeats the matters pleaded at paragraphs 209, 213 and 215 above in response to paragraphs 143, 147 and 149 of the FASOC.

460 Seqwater denies the allegations pleaded in paragraph 356 of the FASOC and relies on the matters pleaded at paragraphs 207(c) above in response to paragraph 142A(c) of the FASOC.

461 Seqwater denies the allegations pleaded in paragraph 357 of the FASOC.

462 Seqwater denies the allegations pleaded in paragraph 358 of the FASOC.

463 Seqwater denies the allegations pleaded in paragraph 359 of the FASOC and, further:

(a) repeats paragraphs 55 to 113 above;

(b) pleads that had the releases of water made from Somerset Dam and Wivenhoe Dam in the period 9 January 2011 to 19 January 2011 not been made, there would have been an unacceptable level of risk to the structural safety of Somerset Dam and Wivenhoe Dam;

(c) pleads that the operation of Somerset Dam and Wivenhoe Dam and the reduction of an unacceptable level of risk to the structural safety of Somerset Dam and Wivenhoe Dam, were in the interests of all persons holding interests in land located downstream of Wivenhoe Dam in the period 9 January 2011 to 19 January 2011; and

(d) by reason of the matters pleaded in paragraphs (a) to (c) above, pleads that any interference with the use and enjoyment of interests in land held by the plaintiff and other Subgroup Members caused by the releases of water made from Wivenhoe Dam in the period 9 January 2011 to 19 January 2011 (which interference is denied as pleaded above) was not unreasonable interference.

464 In relation to paragraph 360 of the FASOC, Seqwater:

(a) admits that it permitted SunWater and the Flood Engineers to conduct flood operations at Somerset Dam and Wivenhoe Dam; and

(b) otherwise denies the allegations pleaded in paragraph 360.

465 Seqwater denies the allegations pleaded in paragraph 361 of the FASOC.

466 Seqwater denies the allegations pleaded in paragraph 362 of the FASOC.

467 In the alternative to paragraphs 460 to 466:

(a) Seqwater was authorised to operate Somerset Dam and Wivenhoe Dam to conduct flood operations; and

(b) the flood operations the subject of the claims were undertaken with all reasonable regard and care for the interests of other persons,

and Seqwater is not liable for nuisance or trespass as alleged.

Z Vicarious Liability

Vicarious Liability of Seqwater

468 In relation to paragraph 363 of the FASOC, Seqwater:

(a) denies that Mr Tibaldi committed one or more of the breaches pleaded in paragraph 363 of the FASOC and relies on the matters pleaded above;

(b) pleads that at all times during December 2010 and January 2011, flood operations at Somerset Dam and Wivenhoe Dam were performed by SunWater under the Flood Management Services Agreement as amended by the Deed of Variation and Extension No 1 [SEQ.001.010.7254], the Deed of Variation and Extension No 2 [SEQ.001.010.7259] and the Deed of Variation and Extension No 3 [SEQ.001.010.7265];

(c) pleads that at all times during December 2010 and January 2011, Mr Tibaldi performed the function of a Flood Operations Engineer for Somerset Dam and Wivenhoe Dam:

(i) for and on behalf of SunWater; and

(ii) under the direction, control and supervision of SunWater; and

(d) otherwise denies the allegations pleaded in paragraph 363.

469 In relation to paragraph 364 of the FASOC, Seqwater:

(a) denies that Mr Malone committed one or more of the breaches pleaded in paragraph 364 of the FASOC and relies on the matters pleaded above;

(b) pleads that at all times during December 2010 and January 2011, flood operations at Somerset Dam and Wivenhoe Dam were performed by SunWater under the Flood Management Services Agreement as amended by the Deed of Variation and Extension No 1, the Deed of Variation and Extension No 2 and the Deed of Variation and Extension No 3;

(c) pleads that at all times during December 2010 and January 2011, Mr Malone performed the function of a Flood Operations Engineer for Somerset Dam and Wivenhoe Dam:

(i) for and on behalf of SunWater; and

(ii) under the direction, control and supervision of SunWater; and

(d) otherwise denies the allegations pleaded in paragraph 364.

470 Seqwater denies the allegations pleaded in paragraph 365 of the FASOC.

471 Seqwater denies the allegations pleaded in paragraph 366 of the FASOC.

472 Seqwater denies the allegations pleaded in paragraph 367 of the FASOC.

473 Seqwater denies the allegations pleaded in paragraph 368 of the FASOC.

Vicarious Liability of SunWater

474 Seqwater does not plead to paragraph 369 of the FASOC as it contains no allegations against Seqwater.

475 Seqwater does not plead to paragraph 370 of the FASOC as it contains no allegations against Seqwater.

476 Seqwater does not plead to paragraph 371 of the FASOC as it contains no allegations against Seqwater.

477 Seqwater does not plead to paragraph 372 of the FASOC as it contains no allegations against Seqwater.

Vicarious Liability of the State of Queensland

478 Seqwater does not plead to paragraph 373 of the FASOC as it contains no allegations against Seqwater.

479 Seqwater does not plead to paragraph 374 of the FASOC as it contains no allegations against Seqwater.

480 Seqwater does not plead to paragraph 375 of the FASOC as it contains no allegations against Seqwater.

481 Seqwater does not plead to paragraph 376 of the FASOC as it contains no allegations against Seqwater.

482 Seqwater does not plead to paragraph 377 of the FASOC as it contains no allegations against Seqwater.

AA Section 374 of the Water Supply Act

483 In relation to paragraph 378 of the FASOC, Seqwater:

(a) repeats paragraphs 18(b), 100 and 101 above and admits the allegations pleaded in paragraph 378 of the FASOC;

(b) pleads, further, that section 374(2) of the Safety and Reliability Act operates to prevent civil liability attaching to Seqwater for the acts and omissions of Seqwater that are the subject of allegations in the FASOC (which acts and omissions are denied, not admitted and admitted as pleaded above) as at all material times:

(i) Seqwater was the owner of Somerset Dam and Wivenhoe Dam;

(ii) the Flood Mitigation Manual was an approved flood mitigation manual for Somerset Dam and Wivenhoe Dam under section 371 of the Safety and Reliability Act; and

(iii) the acts and omissions of Seqwater that are the subject of allegations in the statement of claim (which acts and omissions are denied, not admitted and admitted as pleaded above) were made honestly and without negligence in observing the operational procedures in the Flood Mitigation Manual.

484 Seqwater does not plead to paragraph 379 of the FASOC as it contains no allegations against Seqwater.

BB Relief

485 In relation to paragraph 380 of the FASOC, Seqwater:

(a) denies that the plaintiff, on its own behalf and on behalf of other Group Members, is entitled to the relief claimed from Seqwater;

(b) pleads that the plaintiff's claim for interest in accordance with section 100 of the *Civil Procedure Act* 2005 (Cth) is embarrassing as there is no such Act of the Commonwealth of Australia; and

(c) Seqwater does not admit that the plaintiff, on its own behalf and on behalf of other Group Members, is entitled to the relief claimed from SunWater or from the State of Queensland.

486 In addition, or in the alternative, to the matters pleaded in the previous paragraph, if the plaintiff, on its own behalf and on behalf of other Group Members, would otherwise be entitled to relief from Seqwater (which is denied as pleaded above), then Seqwater pleads as follows:

(a) in or about June 2004 the plaintiff entered into a lease for Shop 9 at the Fairfield Gardens Shopping Centre located at 180 Fairfield Road, Fairfield (the "**First Lease**");

(b) in or about May 2009 the plaintiff entered into a further lease for Shop 9 at the Fairfield Gardens Shopping Centre located at 180 Fairfield Road, Fairfield for a six year period commencing on 1 June 2009 and expiring on 31 May 2015 (he "**Second Lease**");

(c) it would have been obvious to a reasonable person in the position of the plaintiff at the time it entered into the First Lease, at the time it entered into the Second Lease, and at all times up to January 2011, that the land at 180 Fairfield Road, Fairfield was at risk of inundation from river flooding;

Particulars

(i) the land at 180 Fairfield Road, Fairfield had been inundated by floodwaters from the Brisbane River in 1974;

(ii) Brisbane City Council made publicly available "Floodwise" property reports and flood mapping information and historical planning approvals for properties in the Brisbane City Council local government area;

(iii) the floodwise property report or flood mapping information for the land on which Shop 9 is located showed that the land:

(A) had been inundated by floodwaters from the Brisbane River in 1974; and

(B) was at risk of inundation from river flooding and overland flow; and

(iv) the approval for the development of the land at 180 Fairfield Road, Fairfield dated 27 June 1985 recorded that the applicant be advised of the relevant flood information;

(d) it would have been obvious to a reasonable person in the position of the plaintiff at the time it entered into the First Lease, at the time it entered into the Second Lease, and at all times up to January 2011, that the operation of Somerset Dam and Wivenhoe Dam:

(i) would from time-to-time involve releases into the Brisbane River, including on occasion during flood events; and

(ii) could not prevent flooding of the Brisbane River in all circumstances;

(e) notwithstanding the matters pleaded in paragraphs (c) and (d) above, the plaintiff entered into the First Lease, entered into the Second Lease, and continued to conduct its business from Shop 9 at the Fairfield Gardens Shopping Centre at all material times up to January 2011; and

(f) in the premises of the matters pleaded in paragraphs (a) to (e) above:

(i) the risk of inundation from river flooding, including river flooding caused by or contributed to by releases into the Brisbane River in the operation of Somerset Dam and Wivenhoe Dam, would have been obvious to a reasonable person in the position of the plaintiff;

(ii) the plaintiff voluntarily assumed the risk of inundation from river flooding, including river flooding caused by or contributed to by releases into the Brisbane River in the operation of Somerset Dam and Wivenhoe Dam, and Seqwater is not liable in negligence for any harm suffered by the plaintiff (which harm is denied as pleaded above);

Particulars of (ii)

Seqwater relies on sections 13 and 14 of the *Civil Liability Act 2003* (Qld).

(iii) in addition, or in the alternative, the risk of inundation from river flooding, including river flooding caused by or contributed to by releases into the Brisbane River in the operation of Wivenhoe Dam and Somerset Dam, was an inherent risk and Seqwater is not liable in negligence for any harm suffered by the plaintiff (which harm is denied as pleaded above); and

Particulars of (iii)

Seqwater relies on section 16 of the *Civil Liability Act 2003* (Qld).

(iv) in addition, or in the alternative, the plaintiff has been guilty of contributory negligence, and any award of damages against Seqwater must be reduced to the extent the Court considers it just and equitable having regard to the extent of the plaintiff's responsibility for the loss or damage.

487 In addition, or in the alternative, to the matters pleaded in the previous two paragraphs, if the plaintiff, on its own behalf and on behalf of other Group Members, would otherwise be entitled to relief from Seqwater (which is denied as pleaded above), then Seqwater pleads as follows:

(a) The claims made by the plaintiff are apportionable claims for the purposes of the *Civil Liability Act 2003* (Qld);

Particulars of (a)

Section 28(1)(a) of the *Civil Liability Act 2003* (Qld).

(b) SunWater and the State of Queensland are concurrent wrongdoers for the purposes of the *Civil Liability Act 2003* (Qld); and

Particulars of (b)

Section 30(1) of the *Civil Liability Act 2003* (Qld). Seqwater relies on the matters pleaded against SunWater and the State of Queensland in the FASOC and as further amended from time-to-time.

(c) in the premises of the matters pleaded in paragraphs (a) and (b) above, judgment must not be given against Seqwater for more than an amount reflecting the proportion of the loss or damage claimed that the Court considered just and equitable having regard to the extent of Seqwater's responsibility for the loss or damage.

Particulars of (c)

Section 31(1) of the *Civil Liability Act 2003* (Qld).

SIGNATURE OF LEGAL REPRESENTATIVE

I certify under clause 4 of Schedule 2 to the *Legal Profession Uniform Law Application Act 2014* that there are reasonable grounds for believing on the basis of provable facts and a reasonably arguable view of the law that the defence to the claim for damages in these proceedings has reasonable prospects of success.

Signature	JUSTIN MCBRIDE
Capacity	Solicitor on the record
Date of signature	7 September 2015

AFFIDAVIT VERIFYING

Name	William James Alexander Harpham
Address	c/117 Brisbane Street, Ipswich 4305
Occupation	Claim Manager
Date	7 September 2015

I affirm:

1 I am a Claim Manager employed by the First Defendant, who is responsible for the day-to-day carriage and conduct of these proceedings on behalf of the First Defendant.

2 I believe that the allegations of fact contained in the defence are true.

3 I believe that the allegations of fact that are denied in the defence are untrue.

4 After reasonable inquiry, I do not know whether or not the allegations of fact that are not admitted in the defence are true.

AFFIRMED at	Brisbane
Signature of deponent	
Signature of witness	
Name of witness	Kione Maree Johnson
Address of witness	Level 33, Waterfront Place, 1 Eagle Street Brisbane 4000
Capacity of witness	Solicitor

And as a witness, I certify the following matters concerning the person who made this affidavit (the **deponent**):

1 I saw the face of the deponent.

2 I have known the deponent for at least 12 months.

Signature of witness