

03 May 2016

Mr Peter Rose
Chief Executive Officer
Southern Response Earthquake Services Ltd
10 Show Place
Christchurch 8149
NEW ZEALAND

Dear Peter

Earthquake Claim Liabilities as at 31 March 2016

We have been asked by Southern Response Earthquake Services Limited ("SRES") to make an assessment of its insurance liabilities as at 31 March 2016. SRES is the Crown-owned entity which emerged from a transaction whereby, with effect from 5 April 2012, the ongoing business of AMI Insurance Limited ("AMI") was separated from the existing AMI entity and sold to Insurance Australia Group.

The purpose of this letter is to provide an estimate of the earthquake claim liabilities for Southern Response Earthquake Services Limited ("SRES") as at 31 March 2016. This valuation is predominantly based on a roll forward of our 31 December 2015 valuation with changes to valuation assumptions where emerging experience, or new information in respect of emerging issues, suggests changes are appropriate. We include commentary on the key changes to assumptions later in this letter.

This letter does not deal with the other non-earthquake retained events that were transferred from AMI Insurance Limited to SRES at the close of business on 5 April 2012.

Summary of Results

Table 1 summarises our estimates of SRES' earthquake liabilities at 31 March 2016. The line below the table indicates our estimate of the total amount which will be ultimately paid once all claims are settled (including payments already made but excluding SRES CHE expenses). This represents our central estimate of the ultimate liability. Our recommended provisions incorporate a risk margin which we believe to be consistent with the requirements to establish provisions which incorporate at least a 75% probability of sufficiency.

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Table 1 – Recommended EQ Provisions at 31 March 2016

Provisions for Outstanding Claims as at 31 Mar 2016	Cat 93	Cat 106	Cat 112	Total		
	4-Sep-10 \$m	22-Feb-11 \$m	13-Jun-11 \$m	Major \$m	Minor \$m	Overall \$m
Gross Incurred Cost in 31 Mar \$ before EQC	1,120.3	2,563.4	104.7	3,788.4	43.4	3,831.8
Expected EQC Share	-345.9	-589.5	-39.5	-974.9	-8.1	-983.0
Gross Incurred Cost in 31 Mar \$ after EQC	774.4	1,973.9	65.2	2,813.5	35.3	2,848.8
less paid to 31 Mar 2016	-604.4	-1,394.5	-51.2	-2,050.1	-30.9	-2,081.0
Gross Outstanding Claims						
In 31 Mar 2016 Values	170.0	579.4	13.9	763.4	4.4	767.8
Allowance for Future Inflation	5.4	13.9	0.7	20.0	1.0	21.0
Inflated Values	175.4	593.3	14.6	783.4	5.5	788.8
Discount to Present Value	-3.4	-11.6	-0.3	-15.3	-0.1	-15.4
OSC Discounted to 31 Mar 2016	172.0	581.7	14.3	768.0	5.4	773.4
Claims Handling	█	█	█	█	█	█
Gross Central Estimate	█	█	█	█	█	█
Catastrophe R/I Recoveries	0.0	0.0	-14.3	-14.3	-1.1	-15.4
Aggregate R/I Recoveries	0.0	0.0	0.0	0.0	0.0	0.0
Net Central Estimate	181.7	614.6	0.8	797.2	4.6	801.7
Risk Margin	█	█	█	█	█	█
Recommended provision	█	█	█	█	█	█
Inflated Gross Central Estimate (Incl paid to date, excl CHE)	780	1,988	66	2,834	36	2,869.9
Change on 31 Dec 2015 Valuation	23	72	3	98	1	99
Change on 30 Sep 2015 Valuation	-44	168	9	133	5	138

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Our central estimate of the gross inflated ultimate cost excluding CHE at 31 March 2016 is \$99m higher than our 31 December 2015 estimate. Table 2 shows the main components of cost underpinning our overall estimate of SRES' ultimate earthquake liabilities.

Table 2 – Estimated Ultimate EQ Liabilities at 31 March 2016

	31 Dec 15 \$m	31 Mar 16 \$m	Mov't Dec15 to Mar16 \$m
Ultimate Outflows			
Over Cap	3,074	3,184	110
Out of Scope	319	323	3
Other	153	151	-2
Claims Cost (Excl PM Cost)	3,546	3,657	111
Project Management Costs	█	█	█
SRES Claims Handling	█	█	█
Ultimate Inflows			
EQC Contributions	975	985	10
Reinsurance Recoveries	1,253	1,256	3
	2,228	2,240	13
Net Outflow (net of RI)	█	█	█
Cum. Paid Net of EQC (excl CHE)	1,965	2,081	116
Discounted Net Liability			
Central Estimate	785	802	17
Risk Margin	█	█	█
Recommended Provision	█	█	█

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The major drivers of the movements in the central estimate are described in Table 3.

Table 3 – Explanation of Movements in Inflated Gross Central Estimate

	Traffic Light	Notes	Mov't from Dec-15
Ultimate Vs 'Completion' Costs	●	We have identified that there is a range of payment activity during and after construction on Arrow-managed properties that results in the ultimate cost being higher than the PIMS-based (Arrow Claim System) cost we had incorporated into our valuations. This activity appears persistent and likely to occur into the future. This adjustment is in line with the relationship exhibited by claims which have now been completed for at least 18 months.	\$50M
New Overcaps (Numbers)	●	For the March valuation, EQC has provided a detailed breakdown of the remaining SRES insured properties that EQC hasn't yet resolved. This breakdown indicates the number of future over caps SRES will receive will be higher than the volume implied by the recent stream of experience. In response we have allowed for a further 75 over cap claims.	\$22M
New Overcaps Mix	●	There has been a slight increase in the proportion of new over cap assessments that are repairs rather than rebuilds.	-\$3M
Rebuild Size	●	Rebuild size development has been higher than expected - scope change at RFP and contract variations have both deteriorated in the latest quarter.	\$13M
Repair Size	●	The size of new repair assessments has been higher in the latest quarter, possibly driven by increased complexity in the jobs being sent over cap by the EQC. Repair scope change at RFP stage has been stable for properties assessed with engineering upfront, but has been significantly higher for properties that were initially assessed without engineering. Contracts have also come in higher than their RFP cost for the first time.	\$18M
Repairs to Rebuilds	●	We have observed a reduction in the number of properties switching from repair to rebuild in the last few months and have responded to this experience.	-\$4M
Cash Settlements	●	Small reduction in the expected size of cash settlements offset by a small increase in cost from a higher number of customers changing from and an Arrow managed repair/rebuild to a cash settlement during the documentation process.	\$0M
Out of Scope and Minor Classes	●	Whilst OOS claims are mostly finalised, the remaining OOS claims are experiencing upwards revision in assessed claim estimates. This movement is offset by lower claim numbers in other minor classes.	\$1M
Other Movements	●	Minor contributions from Escalation, Throughput, EQC contributions, Enhanced foundations and project management costs.	\$1M
Inflated Ultimate Excluding SRES Claims Handling			\$99M
SRES Claims Handling	●	SRES' claims handling expense (CHE) forecasts have increased by \$ million, largely due to a slow down in staff run-down.	\$
Inflated Ultimate			\$

Key	
●	Higher than previous valuation
●	In line with valuation
●	Better than previous valuation

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Key Observations

In this section we provide further detail around the key movements in the valuation during the quarter.

“Ultimate” Versus “Completion” costs

To determine the amount paid up until the date of the valuation, previous valuations have relied on the ERT report from AMIGO which provides a cumulative snapshot of paid to date, with no breakdown into payment types. With this limitation, our valuation process for rebuilds and repairs has traditionally relied on Arrow's PIMS data to establish the final cost outcome of each Arrow-

managed claim. At the time of completion of construction, our reconciliations of PIMs with ERT have generally shown a close correspondence and it has been assumed that we could treat the PIMS cost as the finalised cost of a claim.

Through sampling of a small number of claims that had been completed some time ago we have identified that there are a range of small miscellaneous payments that are made during and after the construction phase and that there are also payments made post-completion. These post-completion payments appear to relate to partial cash settlements for construction issues which have emerged post-completion and were not picked up when reconciling PIMs and ERT costs at completion. For all of these payments, there is no readily accessible electronic data or systematic reporting of their volume or value.

Using a range of data sources (PIMS, finance reports supporting payments to Arrow, finance cash settlement spreadsheets) we have pieced together an approximate view of the overall value of these payments and how they emerge over time. We have come to the view that these miscellaneous payments have been quite persistent (in volume and value) and are likely to continue into the future and that we should make an additional allowance for them in the valuation.

We have allowed for outstanding repairs to have 5% of additional costs and outstanding rebuilds to have 4% (based on historical experience). This results in an increase of \$50 million to the central estimate of the ultimate liability.

New Over Cap Numbers

For this valuation, EQC has provided a detailed breakdown of the remaining SRES insured properties that EQC has yet to resolve. This breakdown indicates that the number of future Over Caps SRES will receive is likely to be higher than the amount implied by the recent stream of experience of new Over Cap claims. As at the end of February 2016, EQC currently has 368 unresolved properties insured with SRES. In total we have allowed for 130 of these to turn over cap in the future – an increase of 75 on our estimated number of ultimate Over Cap properties from our December valuation.

Repair and Rebuild Sizes

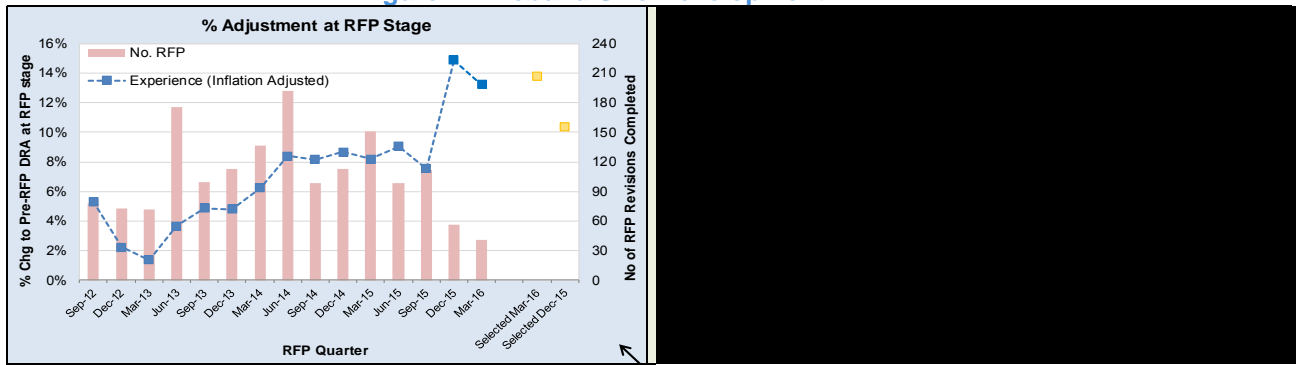
Our assessment of Over Cap average claim size is based primarily on Arrow's assessed costs. We then assess the adequacy of the DRA estimates against the emerging experience to make adjustments to the DRA estimates where appropriate. For the details of this process we refer the reader to our 30 June 2015 valuation report.

Rebuild Size Development

Figure 1 shows how rebuild properties have developed through their construction phases:



Figure 1 – Rebuild Size Development



After 18 months of stable scope change at RFP of around 8-9% on average, rebuild properties have experienced scope changes of approximately 14% on average over the last six months. This increase has been evident for both 'Group Home Builds' and 'Design and Builds'.

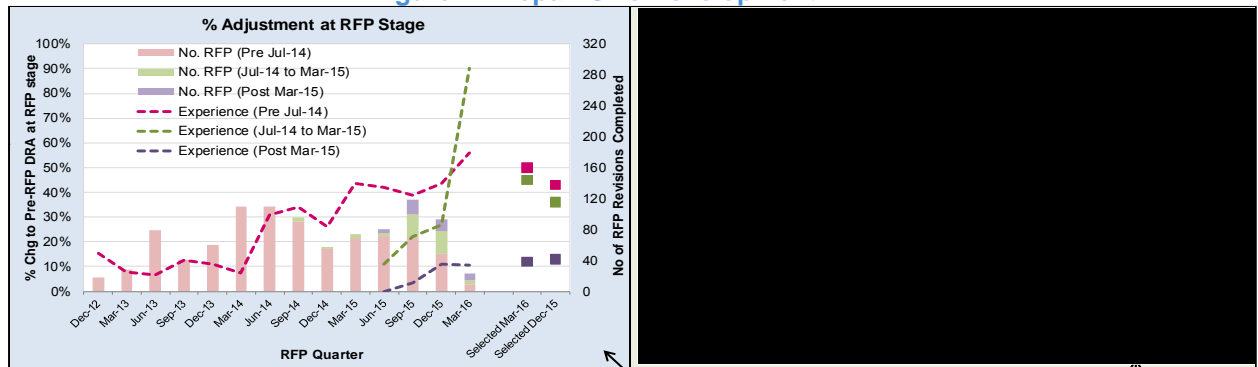
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Repair Size Development

Figure 2 shows how repair properties have developed through their construction phases:

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Figure 2 - Repair Size Development


Scope adjustment at RFP has been lower for properties assessed post Mar-15 (engineering done upfront) showing the new process is holding up well at RFP. Old claims that were last assessed on the prior to Mar-15 are receiving significantly higher increases

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Arrow has changed their approach to assessing repair properties over the past 18 months by completing engineering scoping upfront (implemented towards the end of 2014) and then additionally completing parts of design upfront (from April 2015), rather than later in the process. This has meant that costs have been recognised earlier on in the process and has reduced the amount of development that occurs prior to settlement on the more recent jobs. We analyse these cohorts separately and Figure 3 shows how we expect their costs to develop.

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Our expected ultimate size for the cohorts is consistent with the profile of the homes in these cohorts. More specifically, properties initially assessed post Mar-15 are expected to have a lower ultimate size and this is explained by the fact that these homes are smaller value and have a

smaller size. These jobs assessed more recently are also properties that EQC has changed to being Over Cap late in the process, so it would be expected that the size of these jobs is closer to the EQC Cap.

Cash Settlements

There has continued to be an increased proportion of customers choosing a cash settlement decision initially and also changing from an Arrow managed rebuild or repair to a cash settlement option. As a result, we have increased our expectations for future 'cash settlements' as shown in Figure 4 and future election changers as shown in Figure 5.

Figure 4 – Proportion of Customers Initially Choosing a Cash Settlement

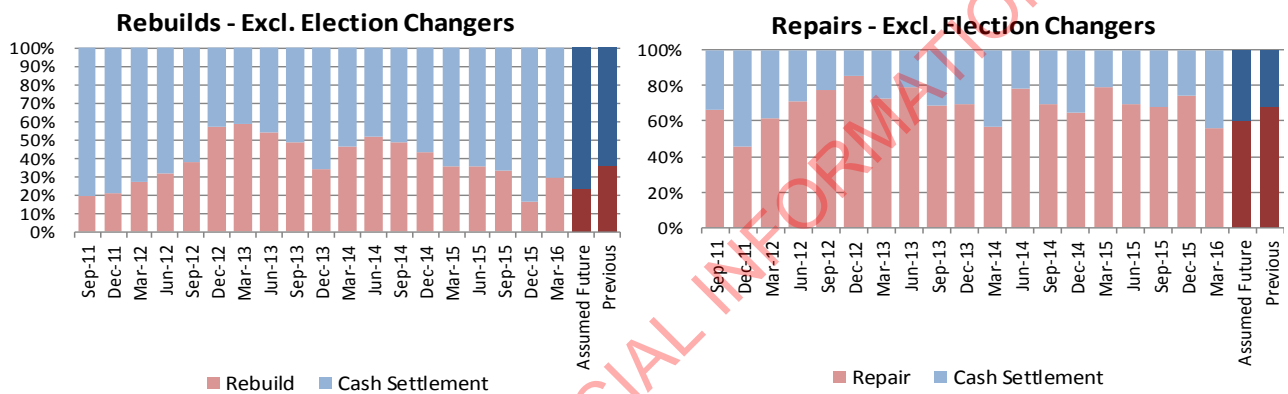


Figure 5 – Projected Future Election Changers

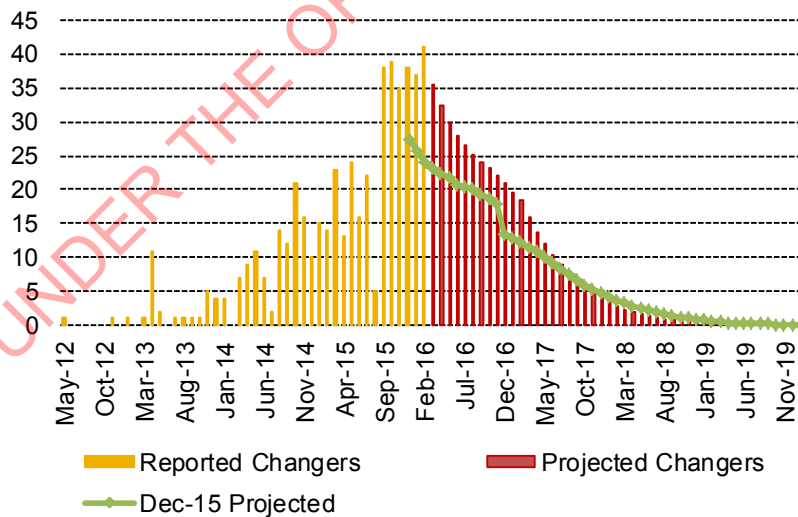


Table 4 shows the effect of the higher number of cash settlements on ultimate property types. There has been a reduction in the number of repairs and rebuilds and an increase in the number of cash settlements.



Table 4 – Ultimate Claim Numbers Breakdown

Properties with Buildings Claims	All Events Combined		
	Dec-15	Mar-16	Movt from Dec15
Ultimate No with Over cap damage	7,815	7,890	75
Arrow Managed			
- Rebuild	2,072	1,955	-117
- Repair	1,301	1,221	-80
	3,373	3,176	-197
Cash Settlements	4,442	4,714	272

Uncertainty of our Estimates

It should be noted that considerable uncertainty still surrounds the projection and valuation of SRES' EQ liabilities. While SRES has progressed most of the way through the damage assessment phase, a large proportion of the overall incurred cost is yet to be settled. In addition, the run-off is exposed to a higher level of variability in claims experience than a typical residential property run-off portfolio. As the claim settlement process has progressed, a greater proportion of outstanding claims liability relates to more complex claims, meaning the uncertainty around future settlement outcomes for outstanding claims is magnified (as compared to 'normal' residential property claims).

Prior to the March valuation, we have undertaken an assessment of SRES' capital needs, using stochastic modelling and historical experience to form a view of the volatility of the portfolio. Our key findings in relation to the risk margin are:

- A risk margin of [REDACTED] is sufficient to cover 75th percentile of outcomes if the exposure to large adverse outcomes are excluded
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- If the potential exposure to large adverse outcomes are allowed for then a risk margin in the range [REDACTED] to [REDACTED] would be appropriate - depending on the view of the probability of a large adverse outcome occurring over the course of the run-off period.

In response, we have increased the risk margin from [REDACTED] to [REDACTED] of the estimated liability (net of EQC contributions but gross of reinsurance recoveries) which maintains SRES' approach of its provisions containing a margin sufficient to produce at least a 75% probability of sufficiency.

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Our view on the key areas of uncertainty is set out in Table 5.



Table 5 – Key Areas of Uncertainty in Valuation Basis

Component of O/S Liability	Gross Exposure to Adverse Mov't \$m	Key Areas of Risk	Risk of an Adverse Movement	
Additional Over Cap Claims	67	While latest information from EQC provides a more granular view, there remains a residual risk that higher volumes might emerge	●	
Settlement Outcome				
Rebuilds	282	[REDACTED]	●	
Repairs	203		●	
MUB's	191		●	
Cash settlements	201		●	
Out of Scope	30		Not materially exposed	●
Temp Accommodation, Other	19		Not materially exposed	●
			●	
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Time to Settlement				
Throughput Delays	1,021	Inflation impact of delays in the time taken for repairs and MUB's	●	
Inflation	1,021	Inflation over the runoff period is higher than assumed	●	
Potential for material change to valuation basis:				
			High ●	
			Medium ●	
			Low ●	
			Unlikely ●	

Reliances and Limitations

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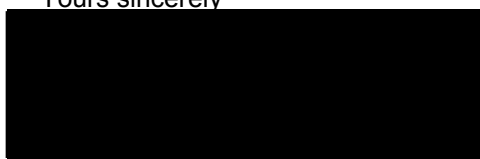
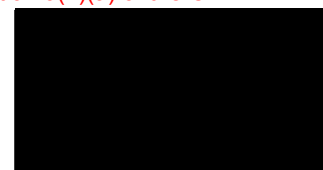
This letter has been prepared for the use of SRES for the stated purpose. We understand that a copy of the letter may be provided to the Board of SRES. No other use of, nor reference to, our letter other than as required by the Crown, should be made without prior written consent from Finity, nor should the whole or part of our letter be disclosed to any unauthorised person.

Third parties, whether authorised or not to receive this letter, should recognise that Finity will not be liable for any losses or damages howsoever incurred by the third party as a result of them receiving, acting upon or relying upon any information or advice contained in the report.

Our letter should be considered as a whole. Members of Finity staff are available to answer any queries, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Yours sincerely

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Fellows of the New Zealand Society of Actuaries
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