# Developer Charges Reform Program: Phase 1

June 25 **2013** 

Developer Charges Revenue Options

Prepared for:

Property Council of Australia, Tasmania

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Last updated: 20 November 2013

## **Executive Summary**

In April 2013, CommSec's State of the States report confirmed that the Tasmanian economy is lagging the rest of Australia in terms of economic growth, retail trade, equipment investment, construction work, population growth, housing finance, and dwelling starts. Adding to Tasmania's economic misery, Tasmania had the second strongest real wage growth at 2.3 percentage points (behind ACT and just exceeding the country's strongest economy of Western Australia) and yet reported the nation's highest trend jobless rate of 7.2%, being 21.3% above its decade average; the pressure is on to turn Tasmania around.

It is well recognised that commercial activity coupled with improved spending conditions are key drivers of economic fortunes. To this end the Property Council of Australia commissioned an investigation into the potential impact of promoting commercial activity by waiving developer charges for a limited period of time, and enabling spending by redistributing water and sewerage distributions back into the community by reducing charges (price reductions).

Our analysis shows that over the three years to 2014-15, Tasmania's water and sewerage corporations<sup>1</sup> are planning to withdraw just over \$80 million in the form of Distributions.

The following analysis examines 4 options where development activity and spending are enabled by stimulating:

- 1. Construction and development via a 2 year waiver of Developer Chargers; and
- 2. Spending through the reinvestment of these Distributions into the various businesses and applying them to fund a reduction in fixed water and sewerage charges.

# Bottom line savings of between \$50 - \$100 (or up to 33%) each year could be made available to the average householder, whilst simultaneously affording the State's economic activity a shot in the arm, and expediting the transition to sustainable water and sewerage pricing.

The figures used in our analysis are conservatively based on:

- Distributions planned for the three regulated entities and Onstream as reported in various financial reports over three years to 2014-15
- Foregone Developer Chargers revenue estimated at \$10 million.

These figures exclude any windfall water and sewerage income that may arise due to:

- Average household water usage exceeding the Final Determination's budgeted 200kl per annum, amongst other assumptions made within the Water and Sewerage Price Determination process
- Industry efficiency gains (estimated at \$7 million)

<sup>&</sup>lt;sup>1</sup> Onstream plus the three Regulated Entities (REs) of Southern Water, Cradle Mountain Water and Ben Lomond Water

Last updated: 25 June 2013

## **Option Outcomes**

		Distributions Reinvested	Developer Charges Revenue Waived	Impact
Option A		100%	100%	Fixed Charges (Water & Sewerage, and Water only)
Option B		100%	50%	Fixed Charges (Water & Sewerage, and Water only)
Outing C	using Option A revenue relief	100%	100%	Transition to Required Revenue Limits (and ultimately
Option C	using Option B revenue relief	100%	50%	Target Tariffs and removal of cross subsidisation)
Option D (	Combination)	100%	100%	Combination impact on Fixed Costs AND Transition Times

#### • Fixed Charge reductions (Options A & B) of up to 11.70% (all revenue relief applied to reduce fixed charges i.e. no transition time impact)

Fixed Charge Comparison		Ben	Lomond Wa	ter		Cradle	Mountain W	/ater	Sc	outhern Wat	er
		2012-13	2013-14	2014-15	2	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Final Determination	\$	\$763.00	\$809.00	\$858.00	\$	\$980.46	\$1,039.28	\$1,101.65	\$761.03	\$806.68	\$855.08
Option A, Fixed Water & Sewerage	\$	\$710.16	\$757.84	\$779.16	\$	\$902.13	\$948.39	\$999.66	\$671.97	\$733.90	\$779.63
Option B, Fixed Water & Sewerage	\$	\$710.16	\$748.81	\$769.91	\$	\$902.13	\$946.16	\$997.35	\$671.97	\$724.02	\$769.39

Option A, Fixed Water & Sewerage	%	-6.93%	-6.32%	-9.19%	-7.99%	-8.75%	-9.26%	-11.70%	-9.02%	-8.82%
Option B, Fixed Water & Sewerage	%	-6.93%	-7.44%	-10.27%	-7.99%	-8.96%	-9.47%	-11.70%	-10.25%	-10.02%

#### • Significantly reduced transition times (Option C) (all revenue relief applied to reduce transition times i.e. no fixed charge reductions)

Transition Times to Revenue Requirements	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Final Determination									
Upper	Х	Х	Х	X	Х	Х	х	Х	Х
Statutory	Х	Х	Х	Х	Х	Х	Х	Х	Х
Lower	Х	CMW							
Option C: based on Revenue Relief under Option A (with 100%	% waived on	developer	<sup>•</sup> charges for	2 years)					
Upper	Х	Х	Х	Х	Х	Х	Х	BLW&CMW	SW
Statutory	Х	Х	Х	Х	CMW	BLW & SW			
Lower	All 3								
Option C: based on Revenue Relief under Option B (with 50%	waived on	developer	charges for 2	2 years)					
Upper	Х	Х	Х	Х	Х	Х	Х	All 3	
Statutory	Х	Х	Х	Х	All 3				
Lower	All 3								

NB: The Final Determination (May 2012) states, "...it will take some time to transition all customers to these target tariffs". Based on the size of the revenue gaps and revenue growth forecasts provided in the Final Determination, Statutory and Upper Revenue Limit targets will not be reached by 2020-21.

• Fixed Charge reductions of up to 5.85% AND significantly reduced transition times (Option D, Combination) (revenue relief available under Option A applied equally to reduce fixed charges and reduce transition times, 50:50)

Fixed Charge Comparison		Ben	Lomond Wa	ter		Cradle	e Mountain V	Vater	So	uthern Wat	er
Fixed charge comparison		2012-13	2013-14	2014-15	Γ	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Final Determination	\$	\$763.00	\$809.00	\$858.00	Γ	\$980.46	\$1,039.28	\$1,101.65	\$761.03	\$806.68	\$855.08
Option D (combination)	\$	\$736.58	\$783.42	\$818.58	Γ	\$941.29	\$993.84	\$1,050.66	\$716.50	\$770.29	\$817.36
										_	
Option D (combination)	%	-3.46%	-3.16%	-4.59%	Γ	-3.99%	-4.37%	-4.63%	-5.85%	-4.51%	-4.41%

Time to Revenue Requirements	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Final Determination															
Upper	Х	Х	Х	Х	Х	Х	Х	Х	Х	unlikel	y given cur	rently	unlikel	y given cur	rently
Statutory	Х	Х	Х	Х	Х	Х	Х	Х	Х	availa	ble informa	ation	availa	ble informa	ation
Lower	Х	CMW													
Option D (combination)															
Upper	х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х	CMW	BLW	SW
Statutory	х	Х	Х	Х	Х	Х	CMW	Х	BLW&SW						
Lower	SW	CMW	BLW												

#### last updated 25 June 2013

Table 1.0

Option Summary A & B		Unit	TOTAL	Ben L	.omond Wa	ter	Cradle	Mountain W	ater	So	outhern Wat	er
updated	25-Jun-13		3 years	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Assumptions												
Option A												
Dist Reinvested, RE	100%	\$'000	80,096	4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
Dist Reinvested, Onstream	100%	\$'000	273	21	23	25	22	24	27	39	43	47
Dev. Charges Rev. Waived	100%	\$'000	-10,000	0	-1,597	-1,597	0	-274	-274	0	-3,129	-3,129
Option B												
Dist Reinvested, RE	100%	\$'000	80,096	4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
Dist Reinvested, Onstream	100%	\$'000	273	21	23	25	22	24	27	39	43	47
Dev. Charges Rev. Waived	50%	\$'000	-5,000	0	-798	-798	0	-137	-137	0	-1,565	-1,565
Revenue, total												
Statutory Revenue Limit:	Fin. Det.	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
Option Revenue Relief:	А	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
Option Revenue Relief:	В	\$'000	75,369	4,759	5,324	7,605	4,986	5,690	6,169	14,651	13,090	13,095
Option / Stat Limit	A / Fin Det	%	7.33%	5.60%	5.15%	7.53%	6.75%	7.43%	7.90%	9.46%	7.34%	7.22%
Option / Stat Limit	B / Fin Det	%	7.85%	5.60%	6.06%	8.41%	6.75%	7.61%	8.08%	9.46%	8.34%	8.20%

Dist Reinvested, RE = Regulated entities' forecast dividends, income tax equivalents, and guarantee fees

Dist Reinvested, Onstream = distributions made by Onstream, in 2011-12 of \$77,000, projected at same growth rate as total distributions made by regulated entities. Assigned to each regulated entity in accordance to share of comprehensive income to enable derivation of percentage savings per regulated entity.

Dev. Charges Rev. Waived = Revenue foregone due to waiving of Developer Charges for two years from 2013-14 Nil adjustment to Developer Charges revenue was made for 2012-13

Sources: Distributions from regulated entities, Statement of Cash Flows, Annual Reports 2011-12 Distributions from Onstream, Statement of Cash Flows, Annual Report 2011-12, and A'Ohlin Commercial Insights for forecasts Cost to waive Developer Charges revenue, per annum total estimates from Chairman TasWater, May 2013; Bid To Stimulate Development, 25 June 2013; and A'Ohlin Commercial Insights for entity breakdowns

Table 1.0 presents two options with:

- A. Option A has 100% of Distributions (\$80 million for all three regulated entities, plus \$273,000 for Onstream) reinvested over the three years to 2014-15 and 100% of Developer Charges waived for the next two years of this first three year term (foregone revenue of -\$10 million), totalling revenue relief of \$70.369 million
- B. Option B has 100% of Distributions reinvested over the three years to 2014-15 and 50% of Developer Charges waived for the next two years of this first three year term (foregone revenue is halved), totalling revenue relief of \$75.369 million

## **Option Calculations**

Table 2.0 shows Target Tariffs per customer for each regulated entity.

#### **Table 2.0: Final Determination Target Tariffs**

FINAL DETERMINATION (MAY 2012)		Ben	Lomond W	ater	Cradle	e Mountain V	Vater	So	uthern Wa	ter
FINAL DETERMINATION (MAT 2012)		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	\$	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474
Total Variable per customer	\$	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	\$	\$286.00	\$303.00	\$322.00	\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
Sewerage (fixed)	\$	\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
Revenue per Customer	\$	\$943.00	\$993.68	\$1,047.48	\$1,160.46	\$1,223.96	\$1,291.13	\$941.03	\$991.36	\$1,044.56

Table 2.1 presents the impact on Target Tariffs under Options A and B through a reduction in Fixed Charges (both Fixed Water and Sewerage).

#### Table 2.1: Impact on Fixed Water and Sewerage tariffs

		Ben l	Lomond Wat	ter	Cradle	Mountain V	Vater	So	uthern Wat	er
OPTION A: REDUCE TOTAL FIXED (sew	/erage + water)	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	\$	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474
Total Variable per customer	\$	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	\$	\$266.19	\$283.84	\$292.41	\$353.77	\$371.92	\$392.03	\$240.45	\$262.61	\$278.9
Sewerage (fixed)	\$	\$443.96	\$474.00	\$486.75	\$548.36	\$576.48	\$607.64	\$431.52	\$471.29	\$500.6
		¢000.4C	\$942.52	\$968.64	\$1,082.13	\$1,133.07	\$1,189.15	\$851.97	\$918.58	\$969.13
Revenue per Customer	\$ \$	\$890.16	<i>35</i> 42.52	3500.04	Ş1,002.13	Ş1,133.07	\$1,105.15	<i>5</i> 0 <b>51</b> .57	<del>,</del> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<i><i><i></i></i></i>
Revenue per Customer	\$	\$890.16	Ş <b>542.</b> 32	Ş508.04	Ş1,002.13	ŞI,133.07	Ş1,109.15	<b>JUJI</b> .37	<i>\$</i> <b>910.30</b>	φ <b>σσσ</b> τη.
·			SS42.SZ			• Mountain V			uthern Wat	-
Revenue per Customer							Vater		·	-
·		Ben I	Lomond Wa	ter	Cradle	• Mountain V	Vater 2014-15	So	uthern Wat	er
OPTION B: REDUCE TOTAL FIXED (sew	verage + water)	Ben I 2012-13	Lomond Wat 2013-14	ter 2014-15	Cradle 2012-13	Mountain V 2013-14	Vater 2014-15 \$0.9474	So 2012-13	uthern Wat 2013-14	er 2014-1
OPTION B: REDUCE TOTAL FIXED (sew	verage + water)	Ben I 2012-13 \$0.9000	Lomond Wat 2013-14 \$0.9234 \$184.68	ter 2014-15 \$0.9474	Cradle 2012-13 \$0.9000	Mountain V 2013-14 \$0.9234	Vater 2014-15 \$0.9474 \$189.48	<b>So</b> <b>2012-13</b> \$0.9000	uthern Wat 2013-14 \$0.9234	er 2014-1 \$0.947 \$189.4
OPTION B: REDUCE TOTAL FIXED (sew Variable Water Total Variable per customer	verage + water) \$ \$	Ben l 2012-13 \$0.9000 \$180.00	Lomond War 2013-14 \$0.9234 \$184.68 \$280.46	ter 2014-15 \$0.9474 \$189.48	Cradle 2012-13 \$0.9000 \$180.00	Mountain V 2013-14 \$0.9234 \$184.68	Vater 2014-15 \$0.9474 \$189.48	<b>So</b> <b>2012-13</b> \$0.9000 \$180.00	uthern Wat 2013-14 \$0.9234 \$184.68	er 2014-1 \$0.947

Table 2.2 shows that Fixed charges could be reduced by up to 12%.

#### Table 2.2: Fixed Charge Comparison (reductions of up to 12% of Final Pricing Plans' Fixed Charges)

ixed Charge Comparison		Ben	Lomond Wa	ter	Crad	e Mountain V	Vater	Sc	outhern Wa	ter
ixed charge comparison		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Final Determination	\$	\$763.00	\$809.00	\$858.00	\$980.46	\$1,039.28	\$1,101.65	\$761.03	\$806.68	\$855.08
Option A, Fixed Water & Sewerage	\$	\$710.16	\$757.84	\$779.16	\$902.13	\$948.39	\$999.66	\$671.97	\$733.90	\$779.63
Option B, Fixed Water & Sewerage	\$	\$710.16	\$748.81	\$769.91	\$902.13	\$946.16	\$997.35	\$671.97	\$724.02	\$769.39
Option A, Fixed Water & Sewerage	%	-6.93%	-6.32%	-9.19%	-7.99%	-8.75%	-9.26%	-11.70%	-9.02%	-8.82%
Option B, Fixed Water & Sewerage	%	-6.93%	-7.44%	-10.27%	-7.99%	-8.96%	-9.47%	-11.70%	-10.25%	-10.02%

Notes:

- Target Tariffs result in "Forecast Revenue" which typically falls short of all three Revenue Limit requirements (Upper, Statutory and Lower)<sup>2</sup>; Cradle Mountain Water is the only entity transitioning to a sustainable level over this first three year term, with revenue in 2013-14 expected to be above the lower revenue limit<sup>3</sup>
- Total Revenue per Customer in Tables 2.1 and 2.2 is determined by reducing the Final Determination's Target Tariffs by the percentage savings derived under each Option relative to the Final Determination's Statutory Limit Revenue requirement, as shown in Table 1.0, eg. 18.86% in 2012-13 for Ben Lomond Water
  - Statutory Revenue Limit provides a middle ground estimate of required revenue
  - Percentage savings relative to the Lower Limit are much higher whilst those relative to the Upper Limit are lower
  - Under the current transition paths, it is not expected that the Upper Limit revenue requirements will be achieved for some time
- Variable water consumption rate and assumed average consumption of 200kl per annum remain as per the Final Determination

Table 2.3 presents the scenario impacts through a reduction in Fixed Water only (i.e. no impact on Sewerage). Savings of up to 33% are shown in Table 2.4.

<sup>&</sup>lt;sup>2</sup> 2012 Water and Sewerage Price Determination Investigation – Final Report, pp.70-73

<sup>&</sup>lt;sup>3</sup> ibid, Figure 4.2, p.71

#### Table 2.3: Impact on Fixed Water tariffs

Tarriff per Customer (potable wat	0	1									
OPTION A: REDUCE FIXED WATER (no	change in se	werage)	Ben I	Lomond Wa	ter	Cradle	e Mountain V	Vater	So	uthern Wat	er
of non A. REDOCE TIXED WATER (no	change in se	weidge/	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	\$		\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474
Total Variable per customer	\$		\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	\$		\$233.16	\$251.84	\$243.16	\$306.16	\$316.67	\$330.03	\$183.26	\$215.87	\$230.52
Sewerage (fixed)	\$		\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
Revenue per Customer	\$		\$890.16	\$942.52	\$968.64	\$1,082.13	\$1,133.07	\$1,189.15	\$851.97	\$918.58	\$969.11
			· · ·	-							
•		worago)		Lomond Wa	ter	Cradle	e Mountain V	Vater	Sc	outhern Wat	er
OPTION B: REDUCE FIXED WATER (no		werage)		Lomond Wa 2013-14	ter 2014-15	Cradle 2012-13	e Mountain V 2013-14	Vater 2014-15	Sc 2012-13	outhern Wat 2013-14	er 2014-15
•		werage)	Ben l	2013-14			2013-14			2013-14	2014-15
OPTION B: REDUCE FIXED WATER (no	change in se	werage)	Ben I 2012-13	<b>2013-14</b> \$0.9234	2014-15	2012-13	<b>2013-14</b> \$0.9234	<b>2014-15</b> \$0.9474	2012-13	<b>2013-14</b> \$0.9234	<b>2014-15</b> \$0.9474
OPTION B: REDUCE FIXED WATER (no o	change in se	werage)	Ben I 2012-13 \$0.9000	<b>2013-14</b> \$0.9234 \$184.68	<b>2014-15</b> \$0.9474	<b>2012-13</b> \$0.9000	<b>2013-14</b> \$0.9234 \$184.68	<b>2014-15</b> \$0.9474	<b>2012-13</b> \$0.9000	<b>2013-14</b> \$0.9234 \$184.68	<b>2014-15</b> \$0.9474 \$189.48
OPTION B: REDUCE FIXED WATER (no o Variable Water Total Variable per customer	change in se	werage)	Ben   2012-13 \$0.9000 \$180.00	<b>2013-14</b> \$0.9234 \$184.68 \$242.81	<b>2014-15</b> \$0.9474 \$189.48	<b>2012-13</b> \$0.9000 \$180.00	<b>2013-14</b> \$0.9234 \$184.68 \$314.44	<b>2014-15</b> \$0.9474 \$189.48	<b>2012-13</b> \$0.9000 \$180.00	<b>2013-14</b> \$0.9234 \$184.68	-
OPTION B: REDUCE FIXED WATER (no Variable Water Total Variable per customer Fixed Water	change in se	werage)	Ben 2012-13 \$0.9000 \$180.00 \$233.16	<b>2013-14</b> \$0.9234 \$184.68 \$242.81 \$506.00	<b>2014-15</b> \$0.9474 \$189.48 \$233.91	<b>2012-13</b> \$0.9000 \$180.00 \$306.16	<b>2013-14</b> \$0.9234 \$184.68 \$314.44 \$631.72	<b>2014-15</b> \$0.9474 \$189.48 \$327.72 \$669.63	<b>2012-13</b> \$0.9000 \$180.00 \$183.26	<b>2013-14</b> \$0.9234 \$184.68 \$205.99	<b>2014-15</b> \$0.9474 \$189.48 \$220.28

#### Table 2.3: Fixed WATER Charge Comparison (reductions of up to 33% of Final Pricing Plans' Fixed WATER Charges)

Fixed Water Comparison		Ben	Lomond Wa	ter	Cradle	Mountain W	/ater	So	outhern Wat	er
fixed water comparison		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Final Determination	\$	\$286.00	\$303.00	\$322.00	\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
Option A, Fixed Water only	\$	\$233.16	\$251.84	\$243.16	\$306.16	\$316.67	\$330.03	\$183.26	\$215.87	\$230.52
Option B, Fixed Water only	\$	\$233.16	\$242.81	\$233.91	\$306.16	\$314.44	\$327.72	\$183.26	\$205.99	\$220.2
Option A, Fixed Water only	%	-18.48%	-16.89%	-24.49%	-20.37%	-22.30%	-23.61%	-32.71%	-25.21%	-24.66%
Option B, Fixed Water only	%	-18.48%	-19.86%	-27.36%	-20.37%	-22.85%	-24.14%	-32.71%	-28.64%	-28.01%

The third Option – Option C – examines the transition timing implications where 100% of Distributions are reinvested for the three year period to 2014-15 and a total waiver of Developer Charges revenue is implemented for two years from 2013-14.

Table 3.0 shows the Final Determination's required revenue limits and forecasts, the gap between each required revenue limit (Upper, Statutory, and Lower) and that of each regulated entities' forecast revenue streams eg. Southern Water in 2013-14 has a Statutory Revenue Limit of \$156.994 million whilst the Forecast Revenue is \$119.285 million => a gap of \$73.268 million. The Revenue Relief available under Option A is \$31.196 million and Option B provides relief of \$36.7 million. It should be noted that Forecast Revenue only exceeds the Lower Revenue Limit for *Cradle Mountain Water from 2013-14 onwards; all others remain financially unsustainable*.

#### Table 3.0: Revenue Gaps Vs Scenario Revenue Relief (Option C)

FIN	AL DETERMINATION ASSUMPTIONS	Unit	TOTAL	Ben L	omond Wate	er	Cradle	Mountain Wa	ater	Sou	thern Wate	r
	Revenue Limits & Forecast Revenue			2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
U	Upper Revenue Limit	\$'000	1,174,529	102,910	104,714	106,723	92,823	93,947	95,315	191,341	192,553	194,204
S	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
L	Lower Revenue Limit	\$'000	747,542	66,882	69,153	71,202	59,253	59,459	60,791	118,489	120,396	121,918
F	Forecast Revenue	\$'000	730,263	62,162	65,473	67,926	55,540	60,069	62,484	116,781	119,285	120,543

Optio	n C: Time to Revenue Limits' Achieveme	n variable	s	Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
	<b>Revenue GAP (Revenue Limits Vs Foreca</b>	ist Revenue	)	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
FU	Forecast - Upper	\$'000	-444,266	-40,748	-39,241	-38,797	-37,283	-33,878	-32,831	-74,560	-73,268	-73,661
FS	Forecast - Statutory	\$'000	-229,428	-22,768	-22,414	-22,503	-18,331	-14,712	-13,886	-38,023	-37,709	-39,082
FL	Forecast - Lower	\$'000	-17,279	-4,720	-3,680	-3,276	-3,713	610	1,693	-1,708	-1,111	-1,375
	Option Revenue Relief											
А	Option A (100% dev charges waived)	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
В	Option B (50% dev charges waived)	\$'000	75,369	4,759	5,324	7,605	4,986	5,690	6,169	14,651	13,090	13,095

Table 3.1 shows how the gap between the Required Revenue stream and Forecast Revenue could be closed using the revenue relief provided through each of Option A and Option B. This is calculated by adding the revenue relief to the value of the gap.

#### Table 3.1: Options C, Gap Closure using Revenue Relief available under Options A & B, 2012-13 to 2014-15

Option	C: Time to Revenue Limits' Achievement									
GAP CL	OSURE: Revenue Gap + Scenario Relief, 2012-13 t	o 2014-15 Be	n Lomond Wat	ter	Cradle	Mountain W	ater	Sou	thern Wate	r
Option	A Revenue Relief, 100% Waived Devlpr Charges	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
FU+A	(Forecast - Upper) + Option Relief \$'000	-35,988	-34,716	-31,990	-32,296	-28,326	-26,798	-59,908	-61,742	-62,131
FS+A	(Forecast - Statutory) + Option Relief \$'000	-18,009	-17,889	-15,697	-13,345	-9,159	-7,853	-23,371	-26,184	-27,553
FL+A	(Forecast - Lower) + Option Relief \$'000	40	845	3,531	1,273	6,163	7,725	12,944	10,415	10,155
Option	B Revenue Relief, 50% Waived Devlpr Charges									
FU+B	(Forecast - Upper) + Option Relief \$'000	-35,988	-33,918	-31,191	-32,296	-28,189	-26,662	-59,908	-60,178	-60,566
FS+B	(Forecast - Statutory) + Option Relief \$'000	-18,009	-17,090	-14,898	-13,345	-9,022	-7,717	-23,371	-24,619	-25,988
FL+B	(Forecast - Lower) + Option Relief \$'000	40	1,643	4,329	1,273	6,300	7,862	12,944	11,980	11,720

Under both Options, **all three** regulated entities transition to financial sustainability (as measured by the Lower Revenue Limit) **this financial year**, **2012-13**.

Tables 3.2a and 3.2b look beyond this first term to estimate when all three regulated entities could be expected to reach their Statutory and Upper Revenue Limits: Statutory Limits are achieved by 2017-18 and Upper Limits by 2020-21 (i.e. within the next 2 terms, as opposed to "unknown" under the current pricing plans' transition paths).

#### Table 3.2a: Option C, Forecast Gap Closure using Revenue Relief available under Options A & B, 2015-16 to 2017-18

2011-15	Option Relief is applied pa to reducing gap bo	alance	Benl	າ) omond Wate	r	Cradle I	Mountain Wa	ater	Sou	thern Wate	
	A Revenue Relief, 100% Waived Devlpr		2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
FU+Af	(Forecast - Upper) + Option Relief	\$'000	-25,183	-18,377	-11,570	-20,766	-14,734	-8,701	-50,601	-39,071	-27,542
FS+Af	(Forecast - Statutory) + Option Relief	\$'000	-8,890	-2,084	4,723	-1,821	4,211	10,244	-16,023	-4,493	7,037
FL+Af	(Forecast - Lower) + Option Relief	\$'000	10,337	17,144	23,950	13,758	19,790	25,823	21,685	33,215	44,745
Option	B Revenue Relief, 50% Waived Devlpr Ch	narges									
FU+Bf	(Forecast - Upper) + Option Relief	\$'000	-23,586	-15,981	-8,376	-20,493	-14,323	-8,154	-47,472	-34,377	-21,283
FS+Bf	(Forecast - Statutory) + Option Relief	\$'000	-7,293	312	7,917	-1,547	4,622	10,791	-12,893	201	13,296
FL+Bf	(Forecast - Lower) + Option Relief	\$'000	11,934	19,539	27,144	14,031	20,201	26,370	24,815	37,909	51,004

#### Table 3.2b: Option C, Forecast Gap Closure using Revenue Relief available under Options A & B, 2018-19 to 2020-21

Option	C: Time to Revenue Limits' Achievemen	t									
GAP CL	OSURE: Revenue Gap + Option Relief, 20	118-19 to 202	0-21 (third term)								
2014-15	5 Option Relief is applied pa to reducing gap be	alance	Ben L	omond Wate	er	Cradle	Mountain Wa	ater	Sou	thern Wate	r
C	Option A		2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
FU+Af	(Forecast - Upper) + Option Relief	\$'000	-4,764	2,043	8,849	-2,669	3,364	9,396	-16,012	-4,482	7,048
FS+Af	(Forecast - Statutory) + Option Relief	\$'000	11,529	18,336	25,142	16,276	22,309	28,341	18,567	30,097	41,627
FL+Af	(Forecast - Lower) + Option Relief	\$'000	30,757	37,563	44,370	31,855	37,887	43,920	56,275	67,805	79,335
С	Option B										
FU+Bf	(Forecast - Upper) + Option Relief	\$'000	-771	6,834	14,439	-1,985	4,184	10,353	-8,188	4,907	18,001
FS+Bf	(Forecast - Statutory) + Option Relief	\$'000	15,522	23,127	30,732	16,960	23,129	29,298	26,391	39,485	52,580
FL+Bf	(Forecast - Lower) + Option Relief	\$'000	34,749	42,354	49,959	32,539	38,708	44,877	64,099	77,193	90,288

Legend: Green border = first year of sustainabilty i.e. where Lower Revenue Limit is achieved

Orange border = first year of generating revenue covering a Statutory return (lower WACC applied to existing assets + market WACC applied to new assets) Blue border = first year of generating revenue covering Upper Limit (full market WACC on both existing and new assets)

	FORECASTING ASSUMPTION	NS									
			Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	•
Option	n Revenue Relief Forecasts	(same as for 2014-15)	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
			2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Af	Option A	\$'000	6,807	6,807	6,807	6,032	6,032	6,032	11,530	11,530	11,530
Bf	Option B	\$'000	7,605	7,605	7,605	6,169	6,169	6,169	13,095	13,095	13,095

Option C's Transition Times to reach Revenue Requirements are also significantly reduced as compare to those under the current pricing plans:

Transition Times to Revenue Requirements	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Final Determination									
Upper	Х	Х	Х	Х	Х	Х	Х	Х	Х
Statutory	Х	Х	Х	Х	Х	Х	Х	Х	Х
Lower	Х	CMW							

Option C: based on Revenue Relief under Option A (with 100	% waived on	develope	r charges fo	r 2	years)					
Upper	Х	Х	Х		Х	Х	Х	Х	BLW&CMW	SW
Statutory	Х	Х	Х		Х	CMW	BLW & SW			
Lower	All 3									

Option C: based on Revenue Relief under Option B (with 50%										
Upper	Х	Х	Х	х	Х	Х	Х	All 3		
Statutory	Х	Х	Х	х	All 3					
Lower	All 3									

Option D shows the impact on a combination of reduction fixed charges AND transition times. The Revenue Relief is equally applied reducing fixed charges AND transitions. Tables 4.1 and 4.2 shows Revenue Relief available for application across reducing both fixed charges AND transition times – in this case we are using the same assumptions as those under Option A.

#### Table 4.1: Option D, Revenue Relief Available

Option	D Combination: Revenue Relief (\$'000)	variables		Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
				2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
iR	Distributions Reinvested, Reg Entities	100%		4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
iO	Distributions Reinvested, Onstream	100%		21	23	25	22	24	27	39	43	47
j	Developer Charges Revenue, Waived	100%		0	-1,597	-1,597	0	-274	-274	0	-3,129	-3,129
k=i+j	Option Revenue Relief	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
I=k/g	Rev Relief / Staty Rev Limit	% pa	0	5.60%	5.15%	7.53%	6.75%	7.43%	7. <i>9</i> 0%	9.46%	7. <b>3</b> 4%	7.22%
m	TOTAL Relief over 3 year period	\$'000	70,369			16,091			16,572			37,707
m/h	3 year (Rev Relief / Statory Rev Limit)	% 3 year	7.33%			6.11%			7.36%			8.00%

#### Table 4.2: Option D, Application of Revenue Relief

Application of Revenue Relief (\$'000)		Ben l	omond Wate	er	Cradle	Mountain Wa	ater	Southern Water		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Target Tariff, Fixed Charge Reduction	50%	2,380	2,263	3,403	2,493	2,776	3,016	7,326	5,763	5,765
Time to Close Revenue Gaps	50%	2,380	2,263	3,403	2,493	2,776	3,016	7,326	5,763	5,765
Total Revenue Relief	\$'000	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
Target Tariff Savings	% pa	2.80%	2.57%	3.76%	3.38%	3.71%	<i>3.95%</i>	4.73%	3.67%	3.61%

NB: the above annual % savings drive the Tariff Analysis below

Table 4.3 shows how this translates into reduced fixed charge tariffs per customer.

#### Table 4.3: Option D, Target Tariffs

Combination: Target Tariff Impact (per average REDUCE TOTAL FIXED CHARGES (sewerage + wa		Bon I	omond Wat	or		Cradle	Mountain W	ator	So	uthern Wat	ər
REDUCE TOTAL TIALD CHARGES (Sewerage + wa	variables	2012-13	2013-14	2014-15		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	Target Tariff	\$0.90	\$0.92	\$0.95	_	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48		\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	reduce	\$276.10	\$293.42	\$307.21		\$369.13	\$389.74	\$412.02	\$256.39	\$275.63	\$292.47
Sewerage (fixed)	reduce	\$460.48	\$490.00	\$511.37		\$572.16	\$604.10	\$638.63	\$460.11	\$494.66	\$524.88
=n*(1-I) Revenue per Customer	Staty Rev - Rev Relief	\$916.58	\$968.10	\$1,008.06	_	\$1,121.29	\$1,178.52	\$1,240.14	\$896.50	\$954.97	\$1,006.84
I Rev Relief / Staty Rev Limit		2.80%	2.57%	3.76%		3.38%	3.71%	3.95%	4.73%	3.67%	3.61%

Table 4.4 shows the difference in Fixed Charges under Option D relative to the Final Determination. Savings of up to \$170 per customer per annum or 15.41% are achieved under Option D.

#### **Table 4.4: Comparison of Fixed Charges**

Fixed Water & Sewerage Comparison		Ben	Lomond Wa	ter		Cradle	Mountain V	Vater	So	uthern Wat	er
Fixed water & Sewerage Comparison		2012-13	2013-14	2014-15		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Final Determination, Fixed Water	\$	\$286.00	\$303.00	\$322.00		\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
Final Determination, Sewerage	\$	\$477.00	\$506.00	\$536.00		\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
Final Determination, Total Fixed	\$	\$763.00	\$809.00	\$858.00		\$980.46	\$1,039.28	\$1,101.65	\$761.03	\$806.68	\$855.08
Combination, Fixed Water	Ś	\$276.10	\$293.42	\$307.21	$\vdash$	\$369.13	\$389.74	\$412.02	\$256.39	\$275.63	\$292.47
Combination, Sewerage	\$	\$460.48		\$511.37		\$572.16	\$604.10		\$460.11	\$494.66	\$524.88
Combination, Total Fixed	\$	\$736.58	\$783.42	\$818.58		\$941.29	\$993.84	\$1,050.66	\$716.50	\$770.29	\$817.36
Change from Final Determination			<u> </u>								
Combination, Fixed Water	\$	-\$9.90	-\$9.58	-\$14.79		-\$15.36	-\$17.82	-\$20.00	-\$15.93	-\$13.02	-\$13.50
Combinaton, Sewerage	\$	-\$16.52	-\$16.00	-\$24.63		-\$23.81	-\$27.62	-\$31.00	-\$28.60	-\$23.37	-\$24.23
Combination, Total Fixed	\$	-\$26.42	-\$25.58	-\$39.42		-\$39.17	-\$45.44	-\$ <b>50.99</b>	-\$44.53	-\$36.39	-\$37.72
Combination, Fixed Water	%	-3.46%	-3.16%	-4.59%		-3.99%	-4.37%	-4.63%	-5.85%	-4.51%	-4.41%
Combinaton, Sewerage	%	-3.46%	-3.16%	-4.59%		-3.99%	-4.37%	-4.63%	-5.85%	-4.51%	-4.41%
Combination, Total Fixed	%	- <b>3.4</b> 6%	- <b>3.16%</b>	<b>-4.59%</b>		- <b>3.99%</b>	-4.37%	- <b>4.63</b> %	-5.85%	-4.51%	-4.41%

Savings of up to \$51 and 5.85% per customer per annum are achieved under Option D.

Relative to those under the current pricing plans' transition paths, Tables 4.5 and 4.6 show that transition time reductions are also achieved.

#### Table 4.5: Transition Times - Summary, Option D

Time to Revenue Requirements	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Final Determination															
Upper	Х	Х	Х	х	Х	Х	Х	Х	Х	unlike	ly given cur	rently	unlike	y given cur	rently
Statutory	Х	Х	Х	х	Х	Х	Х	Х	Х	availa	able inform	ation	availa	ble informa	ation
Lower	Х	CMW													
Option D (combination)															
Upper	Х	Х	Х	х	Х	Х	Х	Х	Х	Х	Х	х	CMW	BLW	SW
Statutory	Х	Х	Х	Х	Х	Х	CMW	Х	BLW&SW						
Lower	SW	CMW	BLW												

#### Table 4.6: Transition Times - Detail, Option D

	Unit	Ben L	omond Wa	ter	Cradle I	Mountain V	Vater	Sou	uthern Wate	er
Revenue Limits & Forecast Revenue	-	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Upper Revenue Limit	\$'000	102,910	104,714	106,723	92,823	93,947	95,315	191,341	192,553	194,204
Statutory Revenue Limit	\$'000	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
Lower Revenue Limit	\$'000	66,882	69,153	71,202	59,253	59,459	60,791	118,489	120,396	121,918
Forecast Revenue	\$'000	62,162	65,473	67,926	55,540	60,069	62,484	116,781	119,285	120,543
Revenue GAP, Revenue Limits & Foreca	st Revenue									
Forecast - Upper	\$'000	-40,748	-39,241	-38,797	-37,283	-33,878	-32,831	-74,560	-73,268	-73,661
Forecast - Statutory	\$'000	-22,768	-22,414	-22,503	-18,331	-14,712	-13,886	-38,023	-37,709	-39,082
Forecast - Lower	\$'000	-4,720	-3,680	-3,276	-3,713	610	1,693	-1,708	-1,111	-1,375
Option Revenue Relief										
Revenue Relief for Closing Revenue	Gan \$'000	2,380	2,263	3,403	2,493	2,776	3,016	7,326	5,763	5,765

The Revenue Relief available in 2014-15 (eg. \$3,403,000 for BLW) is applied to the Gap Balance each year until the Gap Balance moves into positive territory. Once the Gap Balance becomes positive, the Revenue Limit requirements are met. Without more information on how cross subsidisation will be eliminated, it is assumed it will be achieved once revenue limits are reached.

# **Appendix 1: Key Assumptions**

STRIBUTIONS	Unit	Annual Reports	Final Deter	mination (Ma	ay 2012)
		2011-12	2012-13	2013-14	2014-15
Ben Lomond Water	\$'000	5,500	4,738	6,099	8,378
Cradle Mountain Water	\$'000	2,507	4,964	5,802	6,279
Southern Water	\$'000	14,578	14,612	14,612	14,612
Total Regulated Entities	\$'000	22,585	24,314	26,513	29,269
gro	owth %		7.656%	9.044%	10.395%
Onstream	\$'000	77	83	90	100
Ben Lomond Water	%	25.55%	21	23	25
Cradle Mountain Water	%	27.01%	22	24	27
Southern Water	%	47.45%	39	43	47
TOTAL DISTRIBUTIONS, W&S	\$'000	22,662	24,397	26,603	29,369
gulated Entities' Shares of Onstream's T	•			20,000	
		2011-12	%		
Ben Lomond Water	\$'000	-35	25.55%		
Cradle Mountain Water	\$'000	-37	27.01%		
Southern Water	\$'000	-65	47.45%		
TOTAL	\$'000	-137	100.00%		

DEVELOPER CHARGES LOST REVENUE due	e to waiver (P&L items only)	2012-13	2013-14	2014-15
sources: Chairman TasWater, estimated TOT	AL annual distributions for 2012-13	3, 2013-14 and 2	014-15	
Regulated entity breakdown based	on % Contributed Assets & Charge	s per entity fror	n 2011-12 Anr	nual Reports
Ben Lomond Water	\$'000	0	1,597	1,597
Cradle Mountain Water	\$'000	0	274	274
Southern Water	\$'000	0	3,129	3,129
Total Regulated Entities <sup>1</sup>	\$'000	0	5,000	5,000
<u>1</u> Chairman TasWater provided es over 2 years	timates of total developer cha	rges potential	lost revenue	of \$10 m
"Opposition finance spokesmar years] would cost about \$5 milli				
TasWater would be offset by the corporations." The Examiner, 2!		•	e water and s	sewerage

REVEN	IUE LIMITS, Final Determination		TOTAL	Ben L	omond Wat	er	Cradle	Mountain W	ater	Sou	thern Wat	er
				2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
	Upper Revenue Limit	\$'000	1,174,529	102,910	104,714	106,723	92,823	93,947	95,315	191,341	192,553	194,204
g	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
	Lower Revenue Limit	\$'000	747,542	66,882	69,153	71,202	59,253	59,459	60,791	118,489	120,396	121,918
	Forecast Revenue	\$'000	730,263	62,162	65,473	67,926	55,540	60,069	62,484	116,781	119,285	120,543
TARG	ET TARIFFS (PER CUSTOMER)		variables	Ben L	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wat	er
		Final Det.		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
	Variable Water	р. 90 ра	2.60%	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474	\$0.9000	\$0.9234	\$0.9474
	Total Variable per customer	KL	200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
	Fixed Water	p. 87		\$286.00	\$303.00	\$322.00	\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
	Sewerage (fixed)	p. 89		\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
	Revenue per Customer			\$943.00	\$993.68	\$1,047.48	\$1,160.46	\$1,223.96	\$1,291.13	\$941.03	\$991.36	\$1,044.56
	Proportion of Bill, Final Determina	ation		Ben L	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wat	er
	Total Variable per customer			19.1%	18.6%	18.1%	15.5%	15.1%	14.7%	19.1%	18.6%	18.1%
	Fixed Water			30.3%	30.5%	30.7%	33.1%	33.3%	33.5%	28.9%	29.1%	29.3%
	Sewerage (fixed)			50.6%	50.9%	51.2%	51.4%	51.6%	51.9%	51.9%	52.3%	52.6%
	Water : Total Fixed			37.5%	37.5%	37.5%	39.2%	39.2%	39.2%	35.8%	35.8%	35.8%
	Sewerage : Total Fixed			62.5%	62.5%	62.5%	60.8%	60.8%	60.8%	64.2%	64.2%	64.2%

# **Appendix 2: Option A Calculations**

#### **OPTION A: 100% Waiver of Developer Charges for 2 years**

FINAL	ETERMINATION ASSUMPTIONS		TOTAL	Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
STATU	ORY REVENUE			2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
g	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
h	3 year Statutory Revenue Limit	\$'000	$\smile$			263,246			225,021			471,423
Option	A: Revenue Relief (\$'000)	variables		Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
				2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
iR	Distributions Reinvested, Reg Entities	100%		4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
iO	Distributions Reinvested, Onstream	100%		21	23	25	22	24	27	39	43	47
j	Developer Charges Revenue, Waiver	100%		0	-1,597	-1,597	0	-274	-274	0	-3,129	-3,129
k=i+j	Option Revenue Relief	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
l=k/g	Rev Relief / Staty Rev Limit	% pa		5.60%	5.15%	7.53%	6.75%	7.43%	7.90%	9.46%	7.34%	7.22%
				Ν	B: the above	annual % savir	ngs drive the Tar	iff Analysis b	elow			
m	TOTAL Relief over 3 year period	\$'000	70,369			16,091			16,572			37,707
m/h	3 year (Rev Relief / Statory Rev Limit)	% 3 year	7.33%			6.11%			7.36%			8.00%

FINAL	DETERMINATION ASSUMPTIONS		variables	Ben L	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wate	er
TARGE	T TARIFFS			2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
	Variable Water			\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
	Total Variable per customer	KL	200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
	Fixed Water			\$286.00	\$303.00	\$322.00	\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
	Sewerage (fixed)			\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
n	Revenue per Customer			\$943.00	\$993.68	\$1,047.48	\$1,160.46	\$1,223.96	\$1,291.13	\$941.03	\$991.36	\$1,044.56
	Proportion of Bill, Final Determination											
	Total Variable per customer			19.1%	18.6%	18.1%	15.5%	15.1%	14.7%	19.1%	18.6%	18.1%
	Fixed Water			30.3%	30.5%	30.7%	33.1%	33.3%	33.5%	28.9%	29.1%	29.3%
	Sewerage (fixed)			50.6%	50.9%	51.2%	51.4%	51.6%	51.9%	51.9%	52.3%	52.6%
	Water : Total Fixed			37.5%	37.5%	37.5%	39.2%	39.2%	39.2%	35.8%	35.8%	35.8%
	Sewerage : Total Fixed			62.5%	62.5%	62.5%	60.8%	60.8%	60.8%	64.2%	64.2%	64.2%

#### Option A: Target Tariff Impact (per average customer)

REDUCE TOTAL FIXED (sewerage + water)	variables	Ben L	omond Wate	er	Cradle	Mountain W	/ater	Sou	thern Wate	er
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	Target Tariff	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	reduce	\$266.19	\$283.84	\$292.41	\$353.77	\$371.92	\$392.03	\$240.45	\$262.61	\$278.97
Sewerage (fixed)	reduce	\$443.96	\$474.00	\$486.75	\$548.36	\$576.48	\$607.64	\$431.52	\$471.29	\$500.66
=n*(1-I) Revenue per Customer	Staty Rev - Rev Relief	\$890.16	\$942.52	\$968.64	\$1,082.13	\$1,133.07	\$1,189.15	\$851.97	\$918.58	\$969.11
I Rev Relief / Staty Rev Limit		5.60%	5.15%	7.53%	6.75%	7.43%	7.90%	9.46%	7.34%	7.22%
Proportion of Bill, Final Determination	on									
Total Variable per customer		20.2%	19.6%	19.6%	16.6%	16.3%	15.9%	21.1%	20.1%	19.6%
Fixed Water		29.9%	30.1%	30.2%	32.7%	32.8%	33.0%	28.2%	28.6%	28.8%
Sewerage (fixed)		49.9%	50.3%	50.3%	50.7%	50.9%	51.1%	50.6%	51.3%	51.7%
Water : Total Fixed		37.5%	37.5%	37.5%	39.2%	39.2%	39.2%	35.8%	35.8%	35.8%
Sewerage : Total Fixed		62.5%	62.5%	62.5%	60.8%	60.8%	60.8%	64.2%	64.2%	64.2%

#### Option A: Target Tariff Impact (per average customer)

<b>REDUCE FIXED WATER (i.e. excludes Sewerage)</b>	variables	Ben L	omond Wate	er	Cradle	Mountain W	/ater	Sou	thern Wate	r
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	Target Tariff	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	reduce	\$233.16	\$251.84	\$243.16	\$306.16	\$316.67	\$330.03	\$183.26	\$215.87	\$230.52
Sewerage (fixed)	Target Tariff	\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
=n*(1-l) Revenue per Customer	Staty Rev - Rev Relief	\$890.16	\$942.52	\$968.64	\$1,082.13	\$1,133.07	\$1,189.15	\$851.97	\$918.58	\$969.11
I Rev Relief / Staty Rev Limit		5.60%	5.15%	7.53%	6.75%	7.43%	7.90%	9.46%	7.34%	7.22%
Proportion of Bill, Final Determination										
Total Variable per customer		20.2%	19.6%	19.6%	16.6%	16.3%	15.9%	21.1%	20.1%	19.6%
Fixed Water		26.2%	26.7%	25.1%	28.3%	27.9%	27.8%	21.5%	23.5%	23.8%
Sewerage (fixed)		53.6%	53.7%	55.3%	55.1%	55.8%	56.3%	57.4%	56.4%	56.7%
Water : Total Fixed		32.8%	33.2%	31.2%	33.9%	33.4%	33.0%	27.3%	29.4%	29.6%
Sewerage : Total Fixed		67.2%	66.8%	68.8%	66.1%	66.6%	67.0%	72.7%	70.6%	70.4%

# **Appendix 3: Option B Calculations**

#### **OPTION B: 50% Waiver of Developer Charges for 2 years**

FINAL	DETERMINATION ASSUMPTIONS		TOTAL	Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
STATUT	ORY REVENUE			2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
g	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
h	3 year Statutory Revenue Limit	\$'000	$\smile$			263,246			225,021			471,423
Option	B: Revenue Relief (\$'000)	variables		Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
				2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
iR	Distributions Reinvested, Reg Entities	100%		4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
iO	Distributions Reinvested, Onstream	100%		21	23	25	22	24	27	39	43	47
j	Developer Charges Revenue, Waiver	50%		0	-798	-798	0	-137	-137	0	-1,565	-1,565
k=i+j	Option Revenue Relief	\$'000	75,369	4,759	5,324	7,605	4,986	5,690	6,169	14,651	13,090	13,095
l=k/g	Rev Relief / Staty Rev Limit	% pa	0	5.60%	6.06%	8.41%	6.75%	7.61%	8.08%	9.46%	8.34%	8.20%
				Ν	B: the above	annual % savii	ngs drive the Tar	iff Analysis b	elow			
m	TOTAL Relief over 3 year period	\$'000	75,369			17,688			16,845			40,836
m/h	3 year (Rev Relief / Statory Rev Limit)	% 3 year	7.85%			6.72%			7.49%			8.66%

50.6%

35.8%

64.2%

51.2%

35.8%

64.2%

51.5%

35.8%

64.2%

FINAL DETERMINATION ASSUMPTIONS	variables	Benl	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wate	er
TARGET TARIFFS		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water		\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water		\$286.00	\$303.00	\$322.00	\$384.49	\$407.56	\$432.02	\$272.32	\$288.65	\$305.97
Sewerage (fixed)		\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
n Revenue per Customer		\$943.00	\$993.68	\$1,047.48	\$1,160.46	\$1,223.96	\$1,291.13	\$941.03	\$991.36	\$1,044.56
Proportion of Bill, Final Determination	on									
Total Variable per customer		19.1%	18.6%	18.1%	15.5%	15.1%	14.7%	19.1%	18.6%	18.1%
Fixed Water		30.3%	30.5%	30.7%	33.1%	33.3%	33.5%	28.9%	29.1%	29.3%
Sewerage (fixed)		50.6%	50.9%	51.2%	51.4%	51.6%	51.9%	51.9%	52.3%	52.6%
Water : Total Fixed		37.5%	37.5%	37.5%	39.2%	39.2%	39.2%	35.8%	35.8%	35.8%
Sewerage : Total Fixed		62.5%	62.5%	62.5%	60.8%	60.8%	60.8%	64.2%	64.2%	64.2%
Option B: Target Tariff Impact (per average cu REDUCE TOTAL FIXED (sewerage + water)	i <mark>stomer)</mark> variables	Ben l	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wat	er
		Ben L 2012-13	omond Wat. 2013-14	er 2014-15	Cradle 2012-13	Mountain W 2013-14	/ater 2014-15	Sou 2012-13	thern Wate 2013-14	er 2014-15
REDUCE TOTAL FIXED (sewerage + water)	variables	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
REDUCE TOTAL FIXED (sewerage + water) Variable Water	variables Target Tariff	<b>2012-13</b> \$0.90	<b>2013-14</b> \$0.92	<b>2014-15</b> \$0.95	<b>2012-13</b> \$0.90	<b>2013-14</b> \$0.92	<b>2014-15</b> \$0.95	<b>2012-13</b> \$0.90	<b>2013-14</b> \$0.92	<b>2014-15</b> \$0.95
REDUCE TOTAL FIXED (sewerage + water) Variable Water Total Variable per customer	variables     Target Tariff     KL   200	<b>2012-13</b> \$0.90 \$180.00	<b>2013-14</b> \$0.92 \$184.68	<b>2014-15</b> \$0.95 \$189.48	<b>2012-13</b> \$0.90 \$180.00	<b>2013-14</b> \$0.92 \$184.68	<b>2014-15</b> \$0.95 \$189.48	<b>2012-13</b> \$0.90 \$180.00	<b>2013-14</b> \$0.92 \$184.68	<b>2014-15</b> \$0.95 \$189.48
REDUCE TOTAL FIXED (sewerage + water) Variable Water Total Variable per customer Fixed Water	variables Target Tariff KL 200 reduce	<b>2012-13</b> \$0.90 \$180.00 \$266.19	<b>2013-14</b> \$0.92 \$184.68 \$280.46	<b>2014-15</b> \$0.95 \$189.48 \$288.94	<b>2012-13</b> \$0.90 \$180.00 \$353.77	<b>2013-14</b> \$0.92 \$184.68 \$371.04	<b>2014-15</b> \$0.95 \$189.48 \$391.12	<b>2012-13</b> \$0.90 \$180.00 \$240.45	<b>2013-14</b> \$0.92 \$184.68 \$259.07	<b>2014-15</b> \$0.95 \$189.48 \$275.31
REDUCE TOTAL FIXED (sewerage + water) Variable Water Total Variable per customer Fixed Water Sewerage (fixed)	variables Target Tariff KL 200 reduce reduce	<b>2012-13</b> \$0.90 \$180.00 \$266.19 \$443.96	<b>2013-14</b> \$0.92 \$184.68 \$280.46 \$468.35	<b>2014-15</b> \$0.95 \$189.48 \$288.94 \$480.97	<b>2012-13</b> \$0.90 \$180.00 \$353.77 \$548.36	<b>2013-14</b> \$0.92 \$184.68 \$371.04 \$575.11	<b>2014-15</b> \$0.95 \$189.48 \$391.12 \$606.23	<b>2012-13</b> \$0.90 \$180.00 \$240.45 \$431.52	<b>2013-14</b> \$0.92 \$184.68 \$259.07 \$464.95	2014-15 \$0.95 \$189.48 \$275.31 \$494.08
REDUCE TOTAL FIXED (sewerage + water) Variable Water Total Variable per customer Fixed Water Sewerage (fixed) =n*(1-l) Revenue per Customer	variables       Target Tariff       KL     200       reduce       reduce       Staty Rev - Rev Relief	<b>2012-13</b> \$0.90 \$180.00 \$266.19 \$443.96 \$890.16	<b>2013-14</b> \$0.92 \$184.68 \$280.46 \$468.35 \$933.49	<b>2014-15</b> \$0.95 \$189.48 \$288.94 \$480.97 \$959.39	2012-13 \$0.90 \$180.00 \$353.77 \$548.36 \$1,082.13	2013-14 \$0.92 \$184.68 \$371.04 \$575.11 \$1,130.84	<b>2014-15</b> \$0.95 \$189.48 \$391.12 \$606.23 \$1,186.83	<b>2012-13</b> \$0.90 \$180.00 \$240.45 \$431.52 \$851.97	<b>2013-14</b> \$0.92 \$184.68 \$259.07 \$464.95 \$908.70	2014-15 \$0.95 \$189.48 \$275.31 \$494.08 \$958.87
REDUCE TOTAL FIXED (sewerage + water)         Variable Water         Total Variable per customer         Fixed Water         Sewerage (fixed)         =n*(1-1) Revenue per Customer         I       Rev Relief / Staty Rev Limit	variables       Target Tariff       KL     200       reduce       reduce       Staty Rev - Rev Relief	<b>2012-13</b> \$0.90 \$180.00 \$266.19 \$443.96 \$890.16	<b>2013-14</b> \$0.92 \$184.68 \$280.46 \$468.35 \$933.49	<b>2014-15</b> \$0.95 \$189.48 \$288.94 \$480.97 \$959.39	2012-13 \$0.90 \$180.00 \$353.77 \$548.36 \$1,082.13	2013-14 \$0.92 \$184.68 \$371.04 \$575.11 \$1,130.84	<b>2014-15</b> \$0.95 \$189.48 \$391.12 \$606.23 \$1,186.83	<b>2012-13</b> \$0.90 \$180.00 \$240.45 \$431.52 \$851.97	<b>2013-14</b> \$0.92 \$184.68 \$259.07 \$464.95 \$908.70	2014-15 \$0.95 \$189.48 \$275.31 \$494.08 \$958.87

#### Option B: Target Tariff Impact (per average customer)

Sewerage (fixed)

Water : Total Fixed

Sewerage : Total Fixed

<b>REDUCE FIXED WATER (i.e. excludes Sewerage)</b>	variables	Ben L	omond Wate	er	Cradle	Mountain W	ater	Sou	thern Wate	r
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	Target Tariff	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	reduce	\$233.16	\$242.81	\$233.91	\$306.16	\$314.44	\$327.72	\$183.26	\$205.99	\$220.28
Sewerage (fixed)	Target Tariff	\$477.00	\$506.00	\$536.00	\$595.97	\$631.72	\$669.63	\$488.71	\$518.03	\$549.11
=n*(1-I) Revenue per Customer	Staty Rev - Rev Relief	\$890.16	\$933.49	\$959.39	\$1,082.13	\$1,130.84	\$1,186.83	\$851.97	\$908.70	\$958.87
I Rev Relief / Staty Rev Limit		5.60%	6.06%	8.41%	6.75%	7.61%	8.08%	9.46%	8.34%	8.20%
Proportion of Bill, Final Determination										
Total Variable per customer		20.2%	19.8%	19.8%	16.6%	16.3%	16.0%	21.1%	20.3%	19.8%
Fixed Water		26.2%	26.0%	24.4%	28.3%	27.8%	27.6%	21.5%	22.7%	23.0%
Sewerage (fixed)		53.6%	54.2%	55.9%	55.1%	55.9%	56.4%	57.4%	57.0%	57.3%
Water : Total Fixed		32.8%	32.4%	30.4%	33.9%	33.2%	32.9%	27.3%	28.5%	28.6%
Sewerage : Total Fixed		67.2%	67.6%	69.6%	66.1%	66.8%	67.1%	72.7%	71.5%	71.4%

50.2%

37.5%

62.5%

50.1%

37.5%

62.5%

50.7%

39.2%

60.8%

50.9%

39.2%

60.8%

51.1%

39.2%

60.8%

49.9%

37.5%

62.5%

## Appendix 4: Option C Calculations (based on revenue relief available under Options A & B)

#### **OPTION C: Timing**

<b>FIN</b>	AL DETERMINATION ASSUMPTIONS	Unit	TOTAL	Ben L	omond Wate	er	 Cradle N	/lountain Wa	ter	Sou	thern Wate	r
	Revenue Limits & Forecast Revenue		_	2012-13	2013-14	2014-15	 2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
U	Upper Revenue Limit	\$'000	1,174,529	102,910	104,714	106,723	92,823	93,947	95,315	191,341	192,553	194,204
S	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
L	Lower Revenue Limit	\$'000	747,542	66,882	69,153	71,202	59,253	59,459	60,791	118,489	120,396	121,918
F	Forecast Revenue	\$'000	730,263	62,162	65,473	67,926	55,540	60,069	62,484	116,781	119,285	120,543

Opti	on C: Time to Revenue Limits' Achievemen	t variables	5	Ben L	omond Wate	er	Cradle	Mountain Wa	ater	Sou	thern Wate	r
	Revenue GAP (Revenue Limits Vs Forecas	st Revenue)	_	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
FU	Forecast - Upper	\$'000	-444,266	-40,748	-39,241	-38,797	-37,283	-33,878	-32,831	-74,560	-73,268	-73,661
FS	Forecast - Statutory	\$'000	-229,428	-22,768	-22,414	-22,503	-18,331	-14,712	-13,886	-38,023	-37,709	-39,082
FL	Forecast - Lower	\$'000	-17,279	-4,720	-3,680	-3,276	-3,713	610	1,693	-1,708	-1,111	-1,375
	Option Revenue Relief											
А	Option A (100% dev charges waived)	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
В	Option B (50% dev charges waived)	\$'000	75,369	4,759	5,324	7,605	4,986	5,690	6,169	14,651	13,090	13,095

Legend: Green border = first year of sustainabilty i.e. where Lower Revenue Limit is achieved

Orange border = first year of generating revenue covering a Statutory return (lower WACC applied to existing assets + market WACC applied to new assets)

Blue border = first year of generating revenue covering Upper Limit (full market WACC on both existing and new assets)

Option	C: Time to Revenue Limits' Achievemen	t										
GAP CL	OSURE: Revenue Gap + Scenario Relief, 3	2012-13 to	2014-15	Ben l	Lomond Wate	er	Cradle	Mountain Wa	ater	Sou	thern Wate	r
Option	A Revenue Relief, 100% Waived Devlpr	Charges		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
FU+A	(Forecast - Upper) + Option Relief	\$'000	-373,897	-35,988	-34,716	-31,990	-32,296	-28,326	-26,798	-59,908	-61,742	-62,131
FS+A	(Forecast - Statutory) + Option Relief	\$'000	-159,059	-18,009	-17,889	-15,697	-13,345	-9,159	-7,853	-23,371	-26,184	-27,553
FL+A	(Forecast - Lower) + Option Relief	\$'000	53,090	40	845	3,531	1,273	6,163	7,725	12,944	10,415	10,155
Option	B Revenue Relief, 50% Waived Devlpr C	harges										
FU+B	(Forecast - Upper) + Option Relief	\$'000	-368,897	-35,988	-33,918	-31,191	-32,296	-28,189	-26,662	-59,908	-60,178	-60,566
FS+B	(Forecast - Statutory) + Option Relief	\$'000	-154,059	-18,009	-17,090	-14,898	-13,345	-9,022	-7,717	-23,371	-24,619	-25,988
FL+B	(Forecast - Lower) + Option Relief	\$'000	58,090	40	1,643	4,329	1,273	6,300	7,862	12,944	11,980	11,720

#### **Option C: Time to Revenue Limits' Achievement**

GAP CLOSURE: Revenue Gap + Option Relief, 2015-16 to 2017-18 (second term)

2014-15	Option Relief is applied pa to reducing gap be	alance	Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
Option	A Revenue Relief, 100% Waived Devlpr	Charges	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
FU+Af	(Forecast - Upper) + Option Relief	\$'000	-25,183	-18,377	-11,570	-20,766	-14,734	-8,701	-50,601	-39,071	-27,542
FS+Af	(Forecast - Statutory) + Option Relief	\$'000	-8,890	-2,084	4,723	-1,821	4,211	10,244	-16,023	-4,493	7,037
FL+Af	(Forecast - Lower) + Option Relief	\$'000	10,337	17,144	23,950	13,758	19,790	25,823	21,685	33,215	44,745
Option	B Revenue Relief, 50% Waived Devlpr Cl	narges									
FU+Bf	(Forecast - Upper) + Option Relief	\$'000	-23,586	-15,981	-8,376	-20,493	-14,323	-8,154	-47,472	-34,377	-21,283
FS+Bf	(Forecast - Statutory) + Option Relief	\$'000	-7,293	312	7,917	-1,547	4,622	10,791	-12,893	201	13,296
FL+Bf	(Forecast - Lower) + Option Relief	\$'000	11,934	19,539	27,144	14,031	20,201	26,370	24,815	37,909	51,004

#### **Option C: Time to Revenue Limits' Achievement**

GAP CLOSURE: Revenue Gap + Option Relief, 20118-19 to 2020-21 (third term)

2014-1	5 Option Relief is applied pa to reducing gap b	palance	Ben I	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
C	Dption A		2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
FU+Af	(Forecast - Upper) + Option Relief	\$'000	-4,764	2,043	8,849	-2,669	3,364	9,396	-16,012	-4,482	7,048
FS+Af	(Forecast - Statutory) + Option Relief	\$'000	11,529	18,336	25,142	16,276	22,309	28,341	18,567	30,097	41,627
FL+Af	(Forecast - Lower) + Option Relief	\$'000	30,757	37,563	44,370	31,855	37,887	43,920	56,275	67,805	79,335
C	Option B		_								
FU+Bf	(Forecast - Upper) + Option Relief	\$'000	-771	6,834	14,439	-1,985	4,184	10,353	-8,188	4,907	18,001
FS+Bf	(Forecast - Statutory) + Option Relief	\$'000	15,522	23,127	30,732	16,960	23,129	29,298	26,391	39,485	52,580
FL+Bf	(Forecast - Lower) + Option Relief	\$'000	34,749	42,354	49,959	32,539	38,708	44,877	64,099	77,193	90,288

Legend: Green border = first year of sustainabilty i.e. where Lower Revenue Limit is achieved

Orange border = first year of generating revenue covering a Statutory return (lower WACC applied to existing assets + market WACC applied to new assets) Blue border = first year of generating revenue covering Upper Limit (full market WACC on both existing and new assets)

	FORECASTING ASSUM	<b>MPTIONS</b>									
	ntion Revenue Relief Forecasts (same as for 2014-15)		Ben L	omond Wate	er	Cradle	Mountain Wa	ater	Sou	thern Water	•
Optio	tion Revenue Relief Forecasts (same as for 2014-15)		2015-16	2016-17	2017-18	2015-16	2016-17	2017-18	2015-16	2016-17	2017-18
			2018-19	2019-20	2020-21	2018-19	2019-20	2020-21	2018-19	2019-20	2020-21
Af	Option A	\$'000	6,807	6,807	6,807	6,032	6,032	6,032	11,530	11,530	11,530
Bf	Option B	\$'000	7,605	7,605	7,605	6,169	6,169	6,169	13,095	13,095	13,095

## Appendix 5: Option D Calculations (based on revenue relief available under Option A, 100% waiver of developer charges)

<b>OPTION D: Combination</b>
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FINAL	DETERMINATION ASSUMPTIONS		TOTAL	Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
STATU	FORY REVENUE			2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
g	Statutory Revenue Limit	\$'000	959,691	84,930	87,887	90,429	73,871	74,781	76,370	154,804	156,994	159,625
h	3 year Statutory Revenue Limit	\$'000	$\smile$			263,246			225,021			471,423
Option	D Combination: Revenue Relief (\$'000)	variables		Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
				2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
iR	Distributions Reinvested, Reg Entities	100%		4,738	6,099	8,378	4,964	5,802	6,279	14,612	14,612	14,612
iO	Distributions Reinvested, Onstream	100%		21	23	25	22	24	27	39	43	47
j	Developer Charges Revenue, Waived	100%		0	-1,597	-1,597	0	-274	-274	0	-3,129	-3,129
k=i+j	Option Revenue Relief	\$'000	70,369	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
l=k/g	Rev Relief / Staty Rev Limit	% pa	0	5.60%	5.15%	7.53%	6.75%	7.43%	7.90%	9.46%	7.34%	7.22%
m	TOTAL Relief over 3 year period	\$'000	70,369			16,091			16,572			37,707
m/h	3 year (Rev Relief / Statory Rev Limit)	% 3 year	7.33%			6.11%			7.36%			8.00%

Application of Revenue Relief (\$'000)		Ben L	omond Wate	er	Cradle I	Mountain Wa	ater	Sou	thern Wate	r
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Target Tariff, Fixed Charge Reduction	50%	2,380	2,263	3,403	2,493	2,776	3,016	7,326	5,763	5,765
Time to Close Revenue Gaps	50%	2,380	2,263	3,403	2,493	2,776	3,016	7,326	5,763	5,765
Total Revenue Relief	\$'000	4,759	4,525	6,807	4,986	5,553	6,032	14,651	11,525	11,530
Target Tariff Savings	% pa	2.80%	2.57%	3.76%	<i>3.38%</i>	3.71%	<i>3.95%</i>	4.73%	3.67%	3.61%

#### Combination: Target Tariff Impact (per average customer)

REDUCE TOTAL FIXED CHARGES (sewerage + wat	ter) variables	BenL	omond Wat	er	Cradle	Mountain W	/ater	Sou	thern Wat	er
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
Variable Water	Target Tariff	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95	\$0.90	\$0.92	\$0.95
Total Variable per customer	KL 200	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48	\$180.00	\$184.68	\$189.48
Fixed Water	reduce	\$276.10	\$293.42	\$307.21	\$369.13	\$389.74	\$412.02	\$256.39	\$275.63	\$292.47
Sewerage (fixed)	reduce	\$460.48	\$490.00	\$511.37	\$572.16	\$604.10	\$638.63	\$460.11	\$494.66	\$524.88
=n*(1-I) Revenue per Customer	Staty Rev - Rev Relief	\$916.58	\$968.10	\$1,008.06	\$1,121.29	\$1,178.52	\$1,240.14	\$896.50	\$954.97	\$1,006.84
I Rev Relief / Staty Rev Limit		2.80%	2.57%	3.76%	3.38%	3.71%	3.95%	4.73%	3.67%	3.61%
Proportion of Bill, Final Determination										
Total Variable per customer		19.6%	19.1%	18.8%	16.1%	15.7%	15.3%	20.1%	19.3%	18.8%
Fixed Water		30.1%	30.3%	30.5%	32.9%	33.1%	33.2%	28.6%	28.9%	29.0%
Sewerage (fixed)		50.2%	50.6%	50.7%	51.0%	51.3%	51.5%	51.3%	51.8%	52.1%
Water : Total Fixed		37.5%	37.5%	37.5%	39.2%	39.2%	39.2%	35.8%	35.8%	35.8%
Sewerage : Total Fixed		62.5%	62.5%	62.5%	60.8%	60.8%	60.8%	64.2%	64.2%	64.2%