


# Social Impact Assessment for the 2016/17 Levy Proposals

A report to

South East  
Natural Resources Management Board

Prepared by

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# ABBREVIATIONS

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ABS	Australian Bureau of Statistics
ANZSIC	Australian and New Zealand Standard Industrial Classifications
ATO	Australian Taxation Office
CPI	Consumer Price Index
DEWNR	Department of Environment, Water and Natural Resources
EBIT	earnings before interest and tax
EBITD	earnings before interest, tax and depreciation
GOS	gross operating surplus
GRP	gross regional product
GSP	gross state product
LGA	local government area
NRM	Natural Resources Management
RISE	Regional Industry Structure and Employment
SENRM	South East Natural Resource Management Board
SA	South Australia
SAILIS	South Australian Integrated Land Information System



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# EXECUTIVE SUMMARY

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## Introduction

The South East Natural Resources Management Board (the Board) is currently undertaking its annual review of its Business Plan 2016/17- 2018/19 which forms part of the South East Regional NRM Plan. In preparing the regional NRM plan, section 75 (3) (h) of the Natural Resources Management Act 2004 (NRM Act) requires that the Board identify its source or sources of funding for implementing the regional NRM plan, including sources such as levies.

The purpose of this report is to enable the Board to report on the expected social and economic impacts of the imposition of any levy imposed under chapter five of the NRM Act. Additionally, in order to meet the requirement for a significant increase in the Boards levy funded income an analysis of alternative Division 1 and 2 levy options was required to assist the Board to evaluate approaches to meet these changes .

## Method

The approach to the assessment of the Division 1 and Division 2 Levies involves the following steps.

1. Develop measures of household income
2. Develop business financial models and prepare indicators
3. Calculate the Division 1 Levy
4. Calculate the Division 2 Levy
5. Assess the impact of the Division 1 Levy on households
6. Assess the impact of Division 1 and Division 2 Levies on businesses
7. Assess the impact of Division 1 and Division 2 Levies on gross regional product

The level of impact of a levy is determined by the percentage change that would occur due to the effect of a levies introduction. A *minor* impact is an impact that has an effect which causes a shift that is less than one per cent. A *moderate* impact is an impact that has an effect which causes a shift between one and five per cent. A *significant* impact is an impact that has an effect which causes a shift that is greater than five per cent.

## Division 1 Levy Options and Scenarios

The Board has requested that three budget scenarios be analysed for the Division 1 Levy:

- the first scenario (1) uses a budget amount of \$4,644,000 for 2016/17
- the second scenario (2) uses a budget amount of \$3,440,000 for 2016/17
- the third scenario (3) uses a budget amount of \$2,866,380 for 2016/17

The Board has requested an impact assessment of these budget scenarios for the following options:

- the value of rateable land (Option 1)
- a fixed charge of the same amount on all rateable land (Option 2)
- the purpose for which rateable land is used and the area of the land (Option 3)

For Option 1, a total capital valuation amount of \$14.2 billion for rateable properties within the Board area gives a levy rate of:

- 0.0003272 cents in the dollar for scenario 1
- 0.0002424 cents in the dollar for scenario 2
- 0.0002020 cents in the dollar for scenario 3

For Option 2 (a fixed charge of the same amount on all rateable land), the Regional NRM Levy for an individual property was set by the Board to be:

- \$120.46 for scenario 1
- \$89.23 for scenario 2
- \$74.35 for scenario 3

For Option 3 (the purpose for which rateable land is used and the area of the land), the Regional NRM Levy was set by the Board as detailed in Table ES- 1.

Table ES-1 Regional NRM Levy rates by land use and area, Option 3

Budget	Property	Rate (\$/m <sup>2</sup> )	Rate (\$/Ha)
Scenario 1	Residential	\$0.0230	\$245.00
	Primary production	\$0.0001	\$0.79
	Other	\$0.0046	\$46.08
Scenario 2	Residential	\$0.0171	\$170.64
	Primary production	\$0.0001	\$0.58
	Other	\$0.0034	\$34.15
Scenario 3	Residential	\$0.0142	\$142.20
	Primary production	\$0.0000	\$0.49
	Other	\$0.0028	\$28.46

Source: NR South East

### Division 1 Levy - Distributional Impact

The distributional impact of the Option 1 (capital value) across the different property types can be summarised as follows:

For Option 1 (capital value), under budget Scenario 1, the total amount raised would be \$4,644,000, \$1,859,467 (40 per cent) from residential properties, \$277,499 (6 per cent) from commercial properties, \$87,068 (2 per cent) from industrial properties, \$2,288,577 (49 per cent) from rural properties and \$131,790 (3 per cent) from other properties.

For Option 1 (capital value), under budget Scenario 2, the total amount raised would be \$3,440,000 \$1,377,383 (40 per cent) from residential properties, \$205,555 (6 per cent) from

commercial properties, \$64,495 (2 per cent) from industrial properties, \$1,695,242 (49 per cent) from rural properties and \$97,326 (3 per cent) from other properties.

For Option 1 (capital value), under budget Scenario 3, the total amount raised would be \$2,866,380, \$1,147,704 (40 per cent) from residential properties, \$171,278 (6 per cent) from commercial properties, \$53,740 (2 per cent) from industrial properties, \$1,412,560 (49 per cent) from rural properties and \$81,097 (3 per cent) from other properties.

For Option 2 (flat rate), with a fixed charge of \$120.46, the total amount raised under budget Scenario 1 would be \$4,644,000, \$3,118,873 (69 per cent) from residential properties, \$288,255 (6 per cent) from commercial properties, \$76,129 (2 per cent) from industrial properties, \$310,419 (7 per cent) from rural properties and \$780,324 (17 per cent) from other properties.

For Option 2 (flat rate), with a fixed charge of \$89.23, the total amount raised under budget Scenario 2 would be \$3,440,000, \$2,362,128 (69 per cent) from residential properties, \$213,522 (6 per cent) from commercial properties, \$56,392 (2 per cent) from industrial properties, \$229,940 (7 per cent) from rural properties and \$578,018 (17 per cent) from other properties.

For Option 2 (flat rate), with a fixed charge of \$74.35, the total amount raised under budget Scenario 3 would be \$2,866,380, \$1,968,243 (69 per cent) from residential properties, \$177,917 (6 per cent) from commercial properties, \$46,989 (2 per cent) from industrial properties, \$191,598 (7 per cent) from rural properties and \$481,653 (17 per cent) from other properties.

For Option 3 (purpose and area), under budget Scenario 1, the total amount raised would be \$4,644,000, \$1,949,875 (42 per cent) from residential/rural living properties, \$1,839,113 (40 per cent) from primary production properties and \$855,011 (18 per cent) from other properties.

For Option 3 (purpose and area), under budget Scenario 2, the total amount raised would be \$3,440,000, \$1,454,352 (42 per cent) from residential/rural living properties, \$1,362,306 (40 per cent) from primary production properties and \$633,342 (18 per cent) from other properties.

Option 3 (purpose and area), under budget Scenario 3, the total amount raised would be \$2,866,380, \$1,203,506 (42 per cent) from residential/rural living properties, \$1,135,142 (40 per cent) from primary production properties and \$527,732 (18 per cent) from other properties.

### **Division 1 Levy Impacts - Households**

A summary of the impact of the Division 1 levy options on average and low personal income is detailed in Table ES-2. Across all options the levy would be a *minor* impost on both average income and low income households. The exception would be under Option 1 (capital value) for a household with the maximum capital value and low income (single pensioners) but the impact would still be *significant* (impact greater than 5 per cent).

Table ES-2 Impact of Division 1 levy options on average and low personal income

Levy Option	NRM Levy/ Residential Property	Levy as a % of			
		mean after tax income	mean wages & salaries (net)	full age pension for couples	full age pension for singles
Option 1 (Capital value):					
Scenario 1					
Mean CV	\$70.24	0.15%	0.17%	0.21%	0.31%
Median CV	\$63.76	0.14%	0.15%	0.19%	0.29%
Maximum CV	\$2,578.17	5.64%	6.17%	7.65%	11.53%
Minimum CV	\$0.36	0.00%	0.00%	0.00%	0.00%
Scenario 2					
Mean CV	\$52.03	0.11%	0.12%	0.15%	0.23%
Median CV	\$47.23	0.10%	0.11%	0.14%	0.21%
Maximum CV	\$1,909.76	4.18%	4.57%	5.66%	8.54%
Minimum CV	\$0.27	0.00%	0.00%	0.00%	0.00%
Scenario 3					
Mean CV	\$43.35	0.09%	0.10%	0.13%	0.19%
Median CV	\$39.36	0.09%	0.09%	0.12%	0.18%
Maximum CV	\$1,591.30	3.48%	3.81%	4.72%	7.12%
Minimum CV	\$0.22	0.00%	0.00%	0.00%	0.00%
Option 2 (Flat rate)					
Scenario 1					
\$120.46/ assessment	\$120.46	0.26%	0.29%	0.36%	0.54%
Scenario 2					
\$89.23/ assessment	\$89.23	0.20%	0.21%	0.26%	0.40%
Scenario 3					
\$74.35/ assessment	\$74.35	0.16%	0.18%	0.22%	0.33%
Option 3 (Purpose and area)					
Scenario 1					
Mean	\$75.48	0.17%	0.18%	0.22%	0.34%
Max	\$2,302.22	5.04%	5.51%	6.83%	10.29%
Scenario 2					
Mean	\$55.92	0.12%	0.13%	0.17%	0.25%
Max	\$1,706.40	3.73%	4.08%	5.06%	7.63%
Scenario 3					
Mean	\$46.59	0.10%	0.11%	0.14%	0.21%
Max	\$1,422.00	3.11%	3.40%	4.22%	6.36%

Source: EconSearch analysis

### Division 1 Levy Impacts - Dryland Farms

The impacts of introducing the land based levy on the financial performance of the representative dryland farms are summarised below.

- Under Option 1 (capital value), for dryland farm operations (cropping, cropping-livestock and sheep-beef) the impact on farm profitability would be *minor* (reduces EBIT by less than 1 per cent).
- Under Option 2 (flat rate), the land based levy would comprise a very small proportion of variable and total costs. It has *minor* impact on farm profitability.
- Under Option 3 (purpose and area), the land based levy would comprise a very small proportion of variable and total costs. Under the assumption that the mean levy calculated for rural properties in the South East is a typical land levy rate, the levy would have *minor* impact on farm profitability.

### Division 1 Levy Impacts – Non-farm Businesses

The impacts of introducing the land based levy on the financial performance of non-farm businesses was assessed. Non-farm businesses include a range of industry and commercial enterprises not directly associated with primary production.

The financial impact of the Division 1 land based levy on non-farm business income in the South East region is as follows:

- Option 1
  - The mean and median levies per property would be less than 1.0 per cent of median gross operating surplus (GOS) across the majority of industries and therefore would be a *minor* impact.
  - The maximum levy would be *significant* (greater than 5 per cent of median GOS) for the businesses in the construction; transport, postal, warehouse; rental hiring and real estate; education and training; health care and social; arts and recreation; and other services sectors.
  - The maximum levy would be *moderate* (greater than 1 per cent but less than 5 per cent of median GOS) for the businesses in the mining; manufacturing; wholesale trade; retail trade; accommodation and food; information, media, and technology; finance and insurance; and public administration sectors.
  - The minimum levy would be *minor* across all industries.
- Option 2
  - The fixed levy for all scenarios would have a *minor* impact on business profitability across all industries except other services which has a very low median GOS.

- Option 3
  - The mean levy would have a *minor* impact on business profitability for the majority of industries
  - The maximum levy would have a *moderate* impact for businesses in the retail trade; financial and insurance; hiring and real estate; education and training; and arts and recreation services sectors.
  - The maximum levy would have a *significant* impact for businesses in construction; transport, postal and warehousing; health care and social; and other services sectors.
  - The minimum levy would be *minor* across all industries.

### Division 2 Levy Scenarios

For 2016/17, the SENRM Board has resolved that the water levy for all prescribed water resource areas in the SENRM Region will be based on a fixed charge of \$200 per license and a rate on the quantity of water allocated. This is a modification of the approach taken in previous years, which was previously defined as a rate on the quantity of water allocated. For the purpose of the analysis the Board requested the impact assessment of the following options:

1. a fixed charge of \$50 and the quantity of water allocated
2. a fixed charge of \$100 and the quantity of water allocated
3. a fixed charge of \$200 and the quantity of water allocated
4. the quantity of water allocated

The Board has requested that three budget outcomes be analysed for the above listed scenarios:

- the first scenario (1) uses the budget amount for the NRM Water Levy of \$3,956,000
- the second scenario (2) uses a budget amount for the NRM Water Levy of \$5,160,000
- the third scenario (3) uses a budget amount for the NRM Water Levy of \$5,733,620

### Division 2 Levy Impacts- Irrigation Farms

The impact of the water based levy scenarios on the financial performance of a range of irrigation farming enterprises was modelled. The key points to note from these analyses are as follows.

- with profitable enterprises (dairy, winegrapes and potatoes) the impact on farm profitability would be *minor* (reduces EBIT by less than 1 per cent). However, the levy would have a *moderate* impact (reduces EBIT by more than 1 per cent but less than 5 per cent) with some profitable industries (sheep).
- for marginal operations the impact on farm profitability would be *significant* (reduces EBIT by more than 5 per cent). The analysis showed that the lower profit margin and

higher water using industries (lucerne<sup>1</sup>) are the industries where the water based levy would have a *significant* impact on enterprise profitability.

### Division 1 and 2 Levies Combined Impacts - Irrigated Farms and Forestry

The impact of the combined land based and water based levies on the financial performance of a range of irrigated farming and forestry enterprises was modelled. The key point to note from the analyses is that the land based levy does increase the aggregate levy paid by landholders but only marginally increases the impact of levies over all.

The combined impact of the land and water based levy on forestry water licence holders has a *minor* impact across all options across the industry as a whole. The combination of Land Option 1 and Water Option 4 under Scenario 3 is the only exception, resulting in a *moderate* impact. For all scenarios the land and water levy combination of Option 1 (capital value) + Option 4 (water allocation alone) has the greatest impact and the combination of Option 2 (flat rate) + Option 3 (\$200 fixed charge + water allocation) has the least impact.

### Division 1 and 2 Levies Combined Impacts - Gross Regional Product

Gross regional product (GRP) for the SENRM region for 2013/14 was estimated to be \$3.66 billion, which represents 4 per cent of South Australia's Gross State Product (\$96.97 billion).

The various levy amounts to be collected under the Division 1 and 2 levies as a proportion of GRP are detailed in Table ES-3. It shows that the amount to be collected under all scenarios would be less than 0.3 per cent of SENRM region GRP.

Table ES 3 Aggregate levy income as a proportion of gross regional product (GRP)

Levy Scenario	Division 1 Levy	Division 2 Levy	Total Amount	Total Amount/GRP
Scenario 1	\$4,644,000	\$3,956,000	\$8,600,000	0.235%
Scenario 2	\$3,440,000	\$5,160,000	\$8,600,000	0.235%
Scenario 3	\$2,866,380	\$5,733,620	\$8,600,000	0.235%

Source: EconSearch analysis

<sup>1</sup> Costs are modelled for the Tintinara PWA, where licensees pump water from the aquifer. The cost of extracting water would be less in other regions (such as Kingston) where there are no costs for pumping as the water is artesian. Lower pumping costs would result in a greater EBIT for these enterprises resulting in a lower levy impact.



# 1. INTRODUCTION

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## 1.1 Background

The South East Natural Resources Management Board (the Board) is currently undertaking its annual review of its Business Plan 2016/17- 2018/19 which forms part of the South East regional NRM Plan. In preparing the regional NRM plan, section 75 (3) (h) of the *Natural Resources Management Act 2004* (NRM Act) requires that the Board identify its source or sources of funding for implementing the regional NRM plan, including sources such as levies. In identifying any such levy/s to be imposed, the NRM Act also requires that the regional NRM plan address:

- the basis upon which the levy/s has been applied (section 75 (3) (j));
- why particular levy/s have been chosen (section 75 (3) (j)); and
- the expected social impact of the imposition of such a levy/s (section 75 (3) (i)).

Section 92 in chapter five of the NRM Act enables the Board to specify the amount to be contributed by constituent councils (Division 1 Levy) towards the cost of performing its functions under the Act. Section 101 in chapter five of the NRM Act enables the Minister for Sustainability, Environment and Conservation to declare a water levy or levies (Division 2 Levy) that will return an amount as stated in the Regional NRM Plan.

Section 92 (2) and sections 101 (6) and (8) of the NRM Act further specifies the basis or method for determining the Division 1 and Division 2 Levies. The Board has previously adopted a fixed charge of the same amount on all rateable land as the basis for determining the Division 1 levy and the quantity of water allocated (with the exception of water taken pursuant to a notice under section 128) as the basis for determining the Division 2 levy (SENRM, 2013).

The purpose of this report is to enable the Board to report on the expected social and economic impacts of the imposition of any levy imposed under chapter five of the NRM Act. Additionally, an analysis of alternative Division 1 and 2 levy options was required.

This paper contains the following sections:

**Section 2: Analysis of Division 1 Levy:** provides estimates of the social and economic impacts of the Division 1 levy on households, dryland farm enterprises and non-farm businesses. The distributional impact of the levy by land use by local government area (LGA) within the South East NRM Region is also presented.

**Section 3: Analysis of Division 2 Levy:** presents representative farm data for the principal irrigation enterprise types in the region, and an assessment of the impact of the Division 2 levy on farm profitability.

**Section 4: Analysis of the Division 1 and Division 2 Levy Combined:** provides estimates of the impacts of the Division 1 and 2 levies combined on irrigated farm enterprises. It also presents the estimates of impact of the aggregate levy amount on gross regional product (GRP).

## 1.2 Method of Analysis

The approach to the assessment of the Division 1 and Division 2 Levies involves the following steps.

1. **Develop measures of household income:** the following measures of household income were prepared for average income households:
  - mean taxable income (before and after tax)
  - mean wages and salaries (gross and net)

And low income households:

- full age pension for singles and couples.

For average income households, standard rates of taxation and Australian Tax Office (ATO) data from 2012/13 on taxable income were used to estimate mean taxable income and mean wages and salaries by LGA. These ATO data refer to individual earnings rather than household income and therefore represent a conservative estimate of household income.

To assess the impact on low income household income the full age pension was used as a measure of household income. Data on household income by LGA were sourced from the 2011 Population Census to estimate the proportion of households on incomes on or below to the full age pension.

2. **Develop business financial models and prepare indicators:** Two approaches were taken to develop business models. A 'bottom-up' approach was undertaken to develop farm models for typical dryland and irrigated commodity types for the region.

The following data sources were used to create/update the farm financial models:

- The Phylloxera and Grape Industry Board of South Australia's (PGIBSA) 2015 South Australian grape crush survey (winegrapes) (PGIBSA 2015)
- ABARES farm survey data (dairy, beef, sheep, cropping) (by special request).
- ABARES commodities data derived Australian Commodities Statistics Report (ABARES 2014)
- ABS consumer price index, ABS Cat No. 6401.0 (ABS 2015)
- Other industry sources.

The indicators were developed for each enterprise are variable costs, total costs and earnings before interest and tax (EBIT).

The second approach was a 'top-down' approach used to develop an enterprise gross operating surplus for non-farming businesses in broad industry sectors. These sectors correspond to Australian and New Zealand Standard Industrial Classification (ANZSIC)

Industry divisions. Using previous analysis on business count data (ABS Cat. No. 8165.0) and extracting data on gross operating surplus for each industry division from the most recent RISE models for the relevant Government region, an approximate estimate of the gross operating surplus for the median business for each industry division was estimated.

Forestry and logging industry level data were obtained from RISE models<sup>2</sup> developed by EconSearch for the Limestone Coast State Government region. Industry level earnings and costs were extracted from the model base data and used to develop the industry level indicator required for this analysis, namely earnings before interest, tax and depreciation (EBITD).

3. **Calculate the Division 1 Levy:** Given the basis for the Division 1 levy, the mean, median, minimum and maximum levy (where applicable) by land use type were calculated for each LGA. This was based on South Australian Integrated Land Information System (SAILIS) data on properties provided by DEWNR and levy quanta provided by the Board.
4. **Calculate the Division 2 Levy:** Given the basis for the Division 2 levy, the levy for individual enterprises (irrigated farms) and in aggregate (forestry) were estimated based on expected water consumption/allocation for each commodity (using the farm models and forestry models developed under step 2). The Division 2 levy quanta and options were provided by the Board.
5. **Assess the impact of the Division 1 Levy on households:** The measures of household income prepared under step 1 were compared with the Regional NRM Levy (step 3) to assess the likely effects of the Regional NRM Levy on households in the region. The distributional impact of the levy by land use by LGA was also assessed.
6. **Assess the impact of Division 1 and Division 2 Levies on businesses:** The measures of business income prepared under step 2 were compared with the Division 1 levy amounts (step 3) and/or the Division 2 amounts (step 4) to assess the likely effects of the levies on businesses.

The impact of the Division 1 levy was assessed for dry land farming enterprises and reported as a percentage of variable costs, total costs and EBIT.

The impact of the Division 1 levy was assessed for selected non-farming enterprises and reported as a percentage of gross operating surplus.

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<sup>2</sup> RISE (Regional Industry Structure and Employment) models are developed annually by EconSearch for the Department of Premier and Cabinet for South Australia and each of the State Government regions, including the Limestone Coast.

The impact of the Division 2 levy and the Division 2 and Division 1 levies combined was assessed for irrigation farming enterprises and reported as a percentage of variable costs, total costs and EBIT.

For the South East NRM Board the Division 1 and forest water levy was assessed against the forestry sector in aggregate, and reported as a percentage impact on EBITD.

7. **Assess the impact of Division 1 and Division 2 Levies on gross regional product:** the impact of the Division 1 and Division 2 levies in aggregate was assessed for the region as a whole and reported as a percentage of gross regional product (GRP).

EconSearch used the GRP derived from the 2013/14 RISE model previously developed for the Limestone Coast State Government region. The RISE model is a model designed to assist a regional analyst understand the structure of a regional economy and estimate the economic impact of change in the region.

As the Limestone Coast State Government region differs from the South East NRM region, a basis for adjusting estimated GRP had to be calculated. For the South East this involved identifying the contribution to GRP of the area within the Coorong (a part of the Mallee and Murray State Government region) and adding that to the Limestone Coast State Government region GRP. As GRP data were not available at this small area level, adjustments were made on the basis of employment.

## 1.3 Definition of terms

**Earnings Before Interest and Tax:** (EBIT) is defined as total income plus interest less total variable costs and total overheads. It is used as a term of gross profit for each of the farming enterprises contained in this report.

**Earnings Before Interest, Tax and Depreciation:** (EBITD) is defined as industry gross margin (total income less total variable costs) less wages and salaries. EBITD is used as a profit measure for enterprises when the level of depreciation is unknown. It is used for the forestry enterprises contained in this report.

**Gross Operating Surplus:** (GOS) is defined as total income less total cash costs and is expressed in current dollar terms. GOS may be used interchangeably with the term Gross Profit. A GOS value of zero represents a breakeven position for the business, where total cash costs equals total cash revenue (income). If GOS is a negative value the firm is operating at a cash loss and if positive the firm is making a cash profit. GOS does not include owner/operator wages, unpaid family work, or depreciation.

**Gross regional product:** (GRP) is a measure of the net contribution of an activity to the regional economy. GRP is measured as the value of output less the cost of goods and services (including imports) used in producing the output. In other words, it can be measured as the sum of household income, 'gross operating surplus and gross mixed income net of payments to owner managers' and 'taxes less subsidies on products and production'. It represents payments to the

primary inputs of production (labour, capital and land). Using GRP as a measure of economic impact avoids the problem of double counting that may arise from using value of output for this purpose.

**Minor impact:** is defined as an impact that has an effect which causes a shift that is less than one per cent.

**Moderate impact:** is defined as an impact that has an effect which causes a shift between one and five per cent.

**Significant impact:** is defined as an impact that has an effect which causes a shift that is greater than five per cent.

## 2. ANALYSIS OF THE DIVISION 1 LEVY

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### 2.1 Division 1 Levy

The *Natural Resources Management Act 2004* sets out a number of alternative ways in which Division 1 (land based) levies can be determined. The basis for the levy can be chosen from the following:

1. the value of rateable land – if the value of rateable land is the basis for the levy, a council must use capital value, site value or annual value as the basis to impose the levy
2. a fixed charge of the same amount on all rateable land – regardless of the size, value or location of the property, the levy would be the same for all rateable properties
3. a fixed charge of an amount that depends on the purpose for which rateable land is used – given the existing land use classification of properties, it is likely that such a basis for determining the levy would include the following categories: residential, commercial, industry, primary production and vacant land/other
4. the area of rateable land - regardless of the value, location or use of the property, the levy would be determined simply according to the size of the property
5. the purpose for which rateable land is used and the area of the land – a combination of options (3) and (4) above
6. the location of the rateable land – this would be according to local government area, NRM Group area or some other spatial definition.

The Board has requested an impact assessment of the following options:

- the value of rateable land (Option 1)
- a fixed charge of the same amount on all rateable land (Option 2).
- the purpose for which rateable land is used and the area of the land (Option 3)

The Board has requested that three budget scenarios be analysed for Option 1:

- the first scenario (1) uses a budget amount of \$4,644,000 for 2016/17
- the second scenario (2) uses a budget amount of \$3,440,000 for 2016/17
- the third scenario (3) uses a budget amount of \$2,866,380 for 2016/17

For Option 1, a total capital valuation amount of \$14.2 billion for rateable properties within the Board area gives a levy rate of:

- 0.0003272 cents in the dollar for scenario 1
- 0.0002424 cents in the dollar for scenario 2
- 0.0002020 cents in the dollar for scenario 3

For Option 2 (a fixed charge of the same amount on all rateable land), the Regional NRM Levy for an individual property was determined to be:

- \$120.46 for scenario 1
- \$89.23 for scenario 2
- \$74.35 for scenario 3

For Option 3 (the purpose for which rateable land is used and the area of the land), the Regional NRM Levy for an individual property was set by the Board and is detailed in Table 2.1.

Table 2.1 Regional NRM Levy rates by land use and area, Option 3

Budget	Property	Rate (\$/m <sup>2</sup> )	Rate (\$/Ha)
Scenario 1	Residential	\$0.0230	\$245.00
	Primary production	\$0.0001	\$0.79
	Other	\$0.0046	\$46.08
Scenario 2	Residential	\$0.0171	\$170.64
	Primary production	\$0.0001	\$0.58
	Other	\$0.0034	\$34.15
Scenario 3	Residential	\$0.0142	\$142.20
	Primary production	\$0.0000	\$0.49
	Other	\$0.0028	\$28.46

Source: NR South East

## 2.2 Distributional Impact of the Levy by Land Use by LGA

In considering the impact of the proposed levy using Option 1, it is of interest to illustrate the mean, median, maximum and minimum levies paid by individuals or organisations. The mean, median, maximum and minimum levies per property have been calculated for each LGA and, within each LGA, for each land use type. These calculations, together with the contribution to the budget scenarios are shown in Table 2.2 to Table 2.4 for each LGA (by land use type). The Regional NRM Levy contribution, within each LGA, by land use for Option 2 is shown for each budget scenario in Table 2.5 to Table 2.7. Table 2.8 shows the minimum, maximum, and mean Regional NRM Levy contribution, by land use, for Option 3 for each budget scenario. As aggregate data were provided, instead of by LGA, these figures relate to the South East as a whole and are not disaggregated at a regional level.

Key points to note from the data presented in Table 2.2 to Table 2.8 are:

- Option 1, Scenario 1 (Table 2.2)
  - Residential property levy: mean of \$70, median of \$64, maximum of \$2,578 and minimum of \$0.
  - Commercial property levy: mean of \$116, median of \$66, maximum of \$9,120 and minimum of \$0.
  - Industrial property levy: mean of \$138, median of \$46, maximum of \$18,323 and minimum of \$0.

- Rural property levy: mean of \$184, median of \$145, maximum of \$6,037 and minimum of \$0.
- All properties levy: mean of \$96, median of \$59, maximum of \$18,323 and minimum of \$0.
- The maximum levy across all properties would be \$18,323 for a property classified in the industrial property category in Wattle Range.
- Total amount raised would be \$4,644,000, \$1,859,467 (40 per cent) from residential properties, \$277,499 (6 per cent) from commercial properties, \$87,068 (2 per cent) from industrial properties, \$2,288,577 (49 per cent) from rural properties and \$131,790 (3 per cent) from other properties.
- Option 1, Scenario 2 (Table 2.3)
  - Residential property levy: mean of \$52, median of \$47, maximum of \$1,910 and minimum of \$0.
  - Commercial property levy: mean of \$86, median of \$49, maximum of \$6,756 and minimum of \$0.
  - Industrial property levy: mean of \$102, median of \$34, maximum of \$13,573 and minimum of \$0.
  - Rural property levy: mean of \$136, median of \$107, maximum of \$4,472 and minimum of \$0.
  - All properties levy: mean of \$71, median of \$43, maximum of \$13,573 and minimum of \$0.
  - The maximum levy across all properties would be \$13,573 for a property classified in the industrial property category in Wattle Range.
  - Total amount raised would be \$3,440,000 \$1,377,383 (40 per cent) from residential properties, \$205,555 (6 per cent) from commercial properties, \$64,495 (2 per cent) from industrial properties, \$1,695,242 (49 per cent) from rural properties and \$97,326 (3 per cent) from other properties.
- Option 1, Scenario 3 (Table 2.4)
  - Residential property levy: mean of \$43, median of \$39, maximum of \$1,591 and minimum of \$0.
  - Commercial property levy: mean of \$72, median of \$41, maximum of \$5,629 and minimum of \$0.
  - Industrial property levy: mean of \$85, median of \$28, maximum of \$11,309 and minimum of \$0.
  - Rural property levy: mean of \$114, median of \$89, maximum of \$3,726 and minimum of \$0.
  - All properties levy: mean of \$59, median of \$36, maximum of \$11,309 and minimum of \$0.



- The maximum levy across all properties would be \$11,309 for a property classified in the industrial property category in Wattle Range.
- Total amount raised would be \$2,866,380, \$1,147,704 (40 per cent) from residential properties, \$171,278 (6 per cent) from commercial properties, \$53,740 (2 per cent) from industrial properties, \$1,412,560 (49 per cent) from rural properties and \$81,097 (3 per cent) from other properties.
- Option 2, Scenario 1 (Table 2.5)
  - Total amount raised would be \$4,644,000, \$3,118,873 (68 per cent) from residential properties, \$288,255 (6 per cent) from commercial properties, \$76,129 (2 per cent) from industrial properties, \$310,419 (7 per cent) from rural properties and \$780,324 (17 per cent) from other properties.
- Option 2, Scenario 2 (Table 2.6)
  - Total amount raised would be \$3,440,000, \$2,362,128 (68 per cent) from residential properties, \$213,522 (6 per cent) from commercial properties, \$56,392 (2 per cent) from industrial properties, \$229,940 (7 per cent) from rural properties and \$578,018 (17 per cent) from other properties.
- Option 2, Scenario 3 (Table 2.7)
  - Total amount raised would be \$2,866,380, \$1,968,243 (68 per cent) from residential properties, \$177,917 (6 per cent) from commercial properties, \$46,989 (2 per cent) from industrial properties, \$191,598 (7 per cent) from rural properties and \$481,653 (17 per cent) from other properties.
- Option 3, Scenario 1 (Table 2.8)
  - The total amount raised would be \$4,644,000, \$1,949,875 (42 per cent) from residential/rural living properties, \$1,839,113 (40 per cent) from primary production properties and \$855,011 (18 per cent) from other properties.
- Option 3, Scenario 2 (Table 2.8)
  - The total amount raised would be \$3,440,000, \$1,454,352 (42 per cent) from residential/rural living properties, \$1,362,306 (40 per cent) from primary production properties and \$633,342 (18 per cent) from other properties.
- Option 3, Scenario 3 (Table 2.8)
  - The total amount raised would be \$2,866,380, \$1,203,506 (42 per cent) from residential/rural living properties, \$1,135,142 (40 per cent) from primary production properties and \$527,732 (18 per cent) from other properties.

Table 2.2 Mean, median, maximum and minimum levy per property and contribution by land use type for Option 1, Scenario 1 <sup>a</sup>

Council Name	Residential Property						Commercial Property						Industrial Property						Rural Property						All Property					
	Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised							
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)						
Coorong	35	31	136	8	11,281	1%	5	15	638	0	1,627	1%	12	7	88	0	162	0%	278	245	1,783	1	176,935	8%	148	51	1,783	0	191,414	4%
Grant	80	77	344	3	179,983	10%	22	61	1,309	0	8,322	3%	135	65	2,421	3	8,246	9%	165	128	6,037	1	435,569	19%	111	62	11,452	0	646,523	14%
Kingston	88	79	360	16	111,836	6%	29	62	1,055	3	8,491	3%	30	25	311	8	1,064	1%	262	159	3,902	0	187,592	8%	115	61	3,902	0	328,135	7%
Mount Gambier City	68	65	2,578	9	814,880	44%	53	80	9,120	7	158,291	57%	144	79	2,269	8	32,077	37%	141	131	466	9	7,323	0%	73	67	9,120	0	1,047,721	23%
Naracoorte & Lucindale	66	59	761	0	184,593	10%	32	62	2,884	0	31,435	11%	107	64	2,822	1	7,384	8%	176	110	4,581	0	453,753	20%	104	53	4,581	0	688,393	15%
Robe	127	100	540	12	168,977	9%	100	164	1,178	0	16,663	6%	48	49	196	11	2,583	3%	202	128	1,971	1	98,608	4%	116	80	1,971	0	307,076	7%
Tatiara	52	44	275	5	106,839	6%	18	43	1,431	0	20,542	7%	113	35	1,456	1	8,483	10%	188	146	3,820	1	359,905	16%	99	48	3,820	0	503,123	11%
Wattle Range	63	56	2,290	5	281,078	15%	21	41	2,855	0	32,127	12%	265	44	18,323	2	27,069	31%	166	113	5,939	0	568,892	25%	95	47	18,323	0	931,614	20%
<b>Total</b>	<b>70</b>	<b>64</b>	<b>2,578</b>	<b>0</b>	<b>1,859,467</b>	<b>100%</b>	<b>116</b>	<b>66</b>	<b>9,120</b>	<b>0</b>	<b>277,499</b>	<b>100%</b>	<b>138</b>	<b>46</b>	<b>18,323</b>	<b>0</b>	<b>87,068</b>	<b>100%</b>	<b>184</b>	<b>145</b>	<b>6,037</b>	<b>0</b>	<b>2,288,577</b>	<b>100%</b>	<b>96</b>	<b>59</b>	<b>18,323</b>	<b>0</b>	<b>4,644,000</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.3 Mean, median, maximum and minimum levy per property and contribution by land use type for Option 1, Scenario 2 <sup>a</sup>

Council Name	Residential Property						Commercial Property						Industrial Property						Rural Property						All Property					
	Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised							
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)						
Coorong	26	23	101	6	8,357	1%	4	11	473	0	1,206	1%	9	5	65	0	120	0%	206	182	1,321	1	131,063	8%	110	38	1,321	0	141,788	4%
Grant	59	57	254	2	133,321	10%	16	45	969	0	6,165	3%	100	48	1,794	2	6,108	9%	122	95	4,472	1	322,643	19%	82	46	8,483	0	478,906	14%
Kingston	65	58	267	12	82,842	6%	22	46	782	2	6,289	3%	22	18	230	6	788	1%	194	118	2,890	0	138,957	8%	85	45	2,890	0	243,063	7%
Mount Gambier City	50	48	1,910	7	603,615	44%	40	59	6,756	5	117,253	57%	107	58	1,681	6	23,761	37%	104	97	345	7	5,425	0%	54	50	6,756	0	776,090	23%
Naracoorte & Lucindale	49	44	564	0	136,735	10%	24	46	2,136	0	23,285	11%	79	47	2,090	1	5,470	8%	130	81	3,393	0	336,114	20%	77	39	3,393	0	509,921	15%
Robe	94	74	400	9	125,168	9%	74	121	873	0	12,343	6%	35	36	145	8	1,914	3%	150	95	1,460	1	73,043	4%	86	59	1,460	0	227,464	7%
Tatiara	38	33	204	4	79,140	6%	14	32	1,060	0	15,216	7%	84	26	1,079	1	6,284	10%	140	108	2,830	0	266,597	16%	73	35	2,830	0	372,684	11%
Wattle Range	47	41	1,697	4	208,206	15%	16	30	2,115	0	23,798	12%	197	33	13,573	2	20,051	31%	123	84	4,399	0	421,401	25%	70	35	13,573	0	690,084	20%
<b>Total</b>	<b>52</b>	<b>47</b>	<b>1,910</b>	<b>0</b>	<b>1,377,383</b>	<b>100%</b>	<b>86</b>	<b>49</b>	<b>6,756</b>	<b>0</b>	<b>205,555</b>	<b>100%</b>	<b>102</b>	<b>34</b>	<b>13,573</b>	<b>0</b>	<b>64,495</b>	<b>100%</b>	<b>136</b>	<b>107</b>	<b>4,472</b>	<b>0</b>	<b>1,695,242</b>	<b>100%</b>	<b>71</b>	<b>43</b>	<b>13,573</b>	<b>0</b>	<b>3,440,000</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.4 Mean, median, maximum and minimum levy per property and contribution by land use type for Option 1, Scenario 3 <sup>a</sup>

Council Name	Residential Property						Commercial Property						Industrial Property						Rural Property						All Property					
	Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised		Mean levy per property	Median levy per property	Max levy	Min levy	Total raised							
	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)	(\$)	(\$)	(\$)	(\$)	(\$)	(%)						
Coorong	21	19	84	5	6,963	1%	3	9	394	0	1,005	1%	8	4	55	0	100	0%	171	151	1,101	1	109,208	8%	92	32	1,101	0	118,145	4%
Grant	49	47	212	2	111,089	10%	13	38	808	0	5,137	3%	83	40	1,494	2	5,090	9%	102	79	3,726	1	268,843	19%	69	38	7,068	0	399,049	14%
Kingston	54	48	222	10	69,028	6%	18	38	651	2	5,241	3%	18	15	192	5	657	1%	162	98	2,408	0	115,786	8%	71	38	2,408	0	202,532	7%
Mount Gambier City	42	40	1,591	6	502,962	44%	33	49	5,629	4	97,701	57%	89	48	1,401	5	19,799	37%	87	81	288	6	4,520	0%	45	41	5,629	0	646,677	23%
Naracoorte & Lucindale	41	36	470	0	113,935	10%	20	38	1,780	0	19,402	11%	66	39	1,742	1	4,558	8%	109	68	2,827	0	280,067	20%	64	33	2,827	0	424,892	15%
Robe	78	62	333	8	104,296	9%	62	101	727	0	10,285	6%	30	30	121	7	1,594	3%	125	79	1,217	1	60,863	4%	72	50	1,217	0	189,534	7%
Tatiara	32	27	170	3	65,943	6%	11	26	884	0	12,679	7%	70	22	899	1	5,236	10%	116	90	2,358	0	222,142	16%	61	30	2,358	0	310,539	11%
Wattle Range	39	34	1,414	3	173,488	15%	13	25	1,762	0	19,830	12%	164	27	11,309	1	16,708	31%	103	70	3,665	0	351,133	25%	59	29	11,309	0	575,013	20%
<b>Total</b>	<b>43</b>	<b>39</b>	<b>1,591</b>	<b>0</b>	<b>1,147,704</b>	<b>100%</b>	<b>72</b>	<b>41</b>	<b>5,629</b>	<b>0</b>	<b>171,278</b>	<b>100%</b>	<b>85</b>	<b>28</b>	<b>11,309</b>	<b>0</b>	<b>53,740</b>	<b>100%</b>	<b>114</b>	<b>89</b>	<b>3,726</b>	<b>0</b>	<b>1,412,560</b>	<b>100%</b>	<b>59</b>	<b>36</b>	<b>11,309</b>	<b>0</b>	<b>2,866,380</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.5 Fixed levy per property and contribution by land use type for Option 2, Scenario 1<sup>a</sup>

Council Name	Residential Property				Commercial Property				Industrial Property				Rural Property				All Property	
	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	Total raised (\$)	(%)
Coorong	326	120	39,269	1%	70	120	8,432	3%	13	120	1,566	2%	132	120	15,897	5%	94,555	2%
Grant	2,258	120	271,993	9%	86	120	10,359	4%	61	120	7,348	10%	548	120	65,982	21%	447,350	10%
Kingston	1,273	120	153,342	5%	78	120	9,396	3%	36	120	4,336	6%	148	120	17,868	6%	274,684	6%
Mount Gambier City	12,007	120	1,446,334	45%	1,063	120	128,046	44%	222	120	26,742	35%	11	120	1,298	0%	1,715,890	37%
Naracoorte & Lucindale	2,780	120	334,872	11%	332	120	39,992	14%	69	120	8,312	11%	534	120	64,285	21%	553,222	12%
Robe	1,332	120	160,449	5%	81	120	9,757	3%	54	120	6,505	9%	101	120	12,153	4%	271,498	6%
Tatiara	2,066	120	248,865	8%	279	120	33,608	12%	75	120	9,034	12%	396	120	47,665	15%	430,720	9%
Wattle Range	4,431	120	533,747	17%	404	120	48,665	17%	102	120	12,287	16%	708	120	85,272	27%	856,080	18%
<b>Total</b>	<b>26,473</b>	<b>120</b>	<b>3,188,873</b>	<b>100%</b>	<b>2,393</b>	<b>120</b>	<b>288,255</b>	<b>100%</b>	<b>632</b>	<b>120</b>	<b>76,129</b>	<b>100%</b>	<b>2,577</b>	<b>120</b>	<b>310,419</b>	<b>100%</b>	<b>4,644,000</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.6 Fixed levy per property and contribution by land use type for Option 2, Scenario 2 <sup>a</sup>

Council Name	Residential Property				Commercial Property				Industrial Property				Rural Property				All Property	
	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	Total raised (\$)	(%)
Coorong	326	89	29,088	1%	70	89	6,246	3%	13	89	1,160	2%	132	89	11,775	5%	70,041	2%
Grant	2,258	89	201,476	9%	86	89	7,674	4%	61	89	5,443	10%	548	89	48,875	21%	331,371	10%
Kingston	1,273	89	113,587	5%	78	89	6,960	3%	36	89	3,212	6%	148	89	13,236	6%	203,469	6%
Mount Gambier City	12,007	89	1,071,358	45%	1,063	89	94,849	44%	222	89	19,809	35%	11	89	961	0%	1,271,030	37%
Naracoorte & Lucindale	2,780	89	248,053	11%	332	89	29,624	14%	69	89	6,157	11%	534	89	47,618	21%	409,794	12%
Robe	1,332	89	118,851	5%	81	89	7,227	3%	54	89	4,818	9%	101	89	9,002	4%	201,110	6%
Tatiara	2,066	89	184,345	8%	279	89	24,895	12%	75	89	6,692	12%	396	89	35,307	15%	319,052	9%
Wattle Range	4,431	89	395,368	17%	404	89	36,048	17%	102	89	9,101	16%	708	89	63,165	27%	634,133	18%
<b>Total</b>	<b>26,473</b>	<b>89</b>	<b>2,362,128</b>	<b>100%</b>	<b>2,393</b>	<b>89</b>	<b>213,522</b>	<b>100%</b>	<b>632</b>	<b>89</b>	<b>56,392</b>	<b>100%</b>	<b>2,577</b>	<b>89</b>	<b>229,940</b>	<b>100%</b>	<b>3,440,000</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.7 Fixed levy per property and contribution by land use type for Option 2, Scenario 3 <sup>a</sup>

Council Name	Residential Property				Commercial Property				Industrial Property				Rural Property				All Property	
	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	No. of Properties	Fixed levy per property (\$)	Total raised (\$)	(%)	Total raised (\$)	(%)
Coorong	326	74	24,238	1%	70	74	5,204	3%	13	74	967	2%	132	74	9,812	5%	58,362	2%
Grant	2,258	74	167,880	9%	86	74	6,394	4%	61	74	4,535	10%	548	74	40,725	21%	276,115	10%
Kingston	1,273	74	94,646	5%	78	74	5,799	3%	36	74	2,677	6%	148	74	11,029	6%	169,541	6%
Mount Gambier City	12,007	74	892,709	45%	1,063	74	79,033	44%	222	74	16,505	35%	11	74	801	0%	1,059,086	37%
Naracoorte & Lucindale	2,780	74	206,690	11%	332	74	24,684	14%	69	74	5,130	11%	534	74	39,678	21%	341,461	12%
Robe	1,332	74	99,033	5%	81	74	6,022	3%	54	74	4,015	9%	101	74	7,501	4%	167,575	6%
Tatiara	2,066	74	153,605	8%	279	74	20,743	12%	75	74	5,576	12%	396	74	29,420	15%	265,850	9%
Wattle Range	4,431	74	329,441	17%	404	74	30,037	17%	102	74	7,584	16%	708	74	52,632	27%	528,392	18%
<b>Total</b>	<b>26,473</b>	<b>74</b>	<b>1,968,243</b>	<b>100%</b>	<b>2,393</b>	<b>74</b>	<b>177,917</b>	<b>100%</b>	<b>632</b>	<b>74</b>	<b>46,989</b>	<b>100%</b>	<b>2,577</b>	<b>74</b>	<b>191,598</b>	<b>100%</b>	<b>2,866,380</b>	<b>100%</b>

<sup>a</sup> "Vacant land" and "other property" categories are not shown in the table but are included in the "All property" values.

Source: SAILIS and EconSearch analysis

Table 2.8 Levy per property and contribution by land use type for Option 3<sup>a</sup>

Budget scenario	Residential/ Rural living			Primary production			Other Property			All Property
	No. of Properties	Levy per property (\$)	Total raised (\$)	No. of Properties	Levy per property (\$)	Total raised (\$)	No. of Properties	Levy per property (\$)	Total raised (\$)	Total raised (\$)
<b>Scenario 1</b>										
Min	-	4.60	-	-	3.93	-	-	0.92	-	-
Max	-	2,302.22	-	-	10,864.22	-	-	2,303.84	-	-
Mean	25,831	75.49	1,949,875	12,240	150.25	1,839,113	5,737	149.03	855,011	4,644,000
<b>Scenario 2</b>										
Min	-	3.41	-	-	2.91	-	-	0.68	-	-
Max	-	1,706.40	-	-	8,052.54	-	-	1,707.60	-	-
Mean	25,831	55.92	1,444,352	12,240	111.30	1,362,306	5,737	110.40	633,342	3,440,000
<b>Scenario 3</b>										
Min	-	2.84	-	-	2.43	-	-	0.57	-	-
Max	-	1,422.00	-	-	6,710.45	-	-	1,423.00	-	-
Mean	25,831	46.59	1,203,506	12,240	92.74	1,135,142	5,737	91.99	527,732	2,866,380

<sup>a</sup> Min, max, and mean calculated for each category from the area, rate, and property number data provided by SENRM

Source: NR South East and EconSearch analysis

## 2.3 Impact on Personal Income – Average (Mean) Income

The impact on households (residential property owners) of the Regional NRM Levy was assessed on the basis of average (mean) individual income<sup>3</sup> by LGA. The total funds to be collected under the three scenarios for Option 1 are described in Section 2.1 along with the three flat rate scenarios for Option 2 and the three purpose and area scenarios under Option 3.

### 2.3.1 Option 1

The impact on average income earners of introducing the levy under Option 1 is outlined in Table 2.9 to Table 2.12 for Scenario 1 (mean, median maximum and minimum levies), in Table 2.13 to Table 2.16 for Scenario 2 and in Table 2.17 to Table 2.20 for Scenario 3.

Key points to note from the data presented in Table 2.9 to Table 2.20 are:

- Option 1, Scenario 1
  - Mean residential levy of \$70.24, 0.15 per cent of mean after tax income and 0.17 per cent of mean net wages and salaries (Table 2.9).
  - Median residential levy of \$63.76, 0.14 per cent of mean after tax income and 0.15 per cent of mean net wages and salaries (Table 2.10).
  - Maximum residential levy of \$2,578.17, 5.64 per cent of mean after tax income and 6.17 per cent of mean net wages and salaries (Table 2.11).
  - Minimum residential levy of \$0.36, less than 0.01 per cent of mean after tax income and less than 0.01 per cent of mean net wages and salaries (Table 2.12).
- Option 1, Scenario 2
  - Mean residential levy of \$52.03, 0.11 per cent of mean after tax income and 0.12 per cent of mean net wages and salaries (Table 2.13).
  - Median residential levy of \$47.23, 0.10 per cent of mean after tax income and 0.11 per cent of mean net wages and salaries (Table 2.14).
  - Maximum residential levy of \$1,909.76, 4.18 per cent of mean after tax income and 4.57 per cent of mean net wages and salaries (Table 2.15).
  - Minimum residential levy of \$0.27, less than 0.01 per cent of mean after tax income and less than 0.01 per cent of mean net wages and salaries (Table 2.16).

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<sup>3</sup> It is recognised that there is likely to be more than one income earner for many properties. In these cases the financial burden of the levy is shared between income earners and the impact on the household will be less than reported here.



- Option 1, Scenario 3
  - Mean residential levy of \$43.35, 0.09 per cent of mean after tax income and 0.10 per cent of mean net wages and salaries (Table 2.17).
  - Median residential levy of \$39.36, 0.09 per cent of mean after tax income and 0.09 per cent of mean net wages and salaries (Table 2.18).
  - Maximum residential levy of \$1,591.30, 3.48 per cent of mean after tax income and 3.81 per cent of mean net wages and salaries (Table 2.19).
  - Minimum residential levy of \$0.22, less than 0.01 per cent of mean after tax income and less than 0.01 per cent of mean net wages and salaries (Table 2.20).

Table 2.9 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 1 – mean capital values

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of mean taxable income <sup>a</sup>	Levy as a % of mean after tax income <sup>b</sup>	Levy as a % of mean wages & salaries (gross) <sup>c</sup>	Levy as a % of mean wages & salaries (net) <sup>d</sup>
Coorong	\$34.61	0.06%	0.08%	0.07%	0.09%
Grant	\$79.71	0.12%	0.16%	0.15%	0.18%
Kingston	\$87.85	0.17%	0.20%	0.19%	0.23%
Mount Gambier City	\$67.87	0.12%	0.15%	0.13%	0.16%
Naracoorte & Lucindale	\$66.40	0.12%	0.15%	0.14%	0.17%
Robe	\$126.86	0.23%	0.28%	0.28%	0.33%
Tatiara	\$51.71	0.10%	0.12%	0.11%	0.13%
Wattle Range	\$63.43	0.11%	0.14%	0.12%	0.15%
<b>Total</b>	<b>\$70.24</b>	<b>0.12%</b>	<b>0.15%</b>	<b>0.14%</b>	<b>0.17%</b>

<sup>a</sup> Mean for taxable individuals, as reported by the ATO for 2012/13.

<sup>b</sup> Mean taxable income less mean net tax paid for 2012/13.

<sup>c</sup> Mean wages and salaries (gross) is the average before tax income of wage and salary earners reported by the ATO for 2012/13.

<sup>d</sup> Mean salaries and wages (net) is the estimated average after tax income of wage and salary earners and has been calculated based on average tax rates and the reported gross wages and salaries.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.10 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 1 – median capital values <sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$31.41	0.06%	0.07%	0.07%	0.08%
Grant	\$76.89	0.12%	0.15%	0.14%	0.18%
Kingston	\$78.53	0.15%	0.18%	0.17%	0.20%
Mount Gambier City	\$64.79	0.11%	0.14%	0.12%	0.15%
Naracoorte & Lucindale	\$58.90	0.11%	0.13%	0.12%	0.15%
Robe	\$99.80	0.18%	0.22%	0.22%	0.26%
Tatiara	\$44.17	0.08%	0.10%	0.09%	0.11%
Wattle Range	\$55.62	0.10%	0.12%	0.11%	0.13%
<b>Total</b>	<b>\$63.76</b>	<b>0.11%</b>	<b>0.14%</b>	<b>0.13%</b>	<b>0.15%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.11 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 1 – maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$135.79	0.25%	0.31%	0.29%	0.35%
Grant	\$343.56	0.53%	0.68%	0.64%	0.79%
Kingston	\$359.92	0.68%	0.83%	0.78%	0.92%
Mount Gambier City	\$2,578.17	4.52%	5.62%	4.93%	6.00%
Naracoorte & Lucindale	\$760.74	1.38%	1.71%	1.59%	1.90%
Robe	\$539.88	0.96%	1.20%	1.17%	1.39%
Tatiara	\$274.85	0.52%	0.63%	0.59%	0.70%
Wattle Range	\$2,290.40	3.96%	4.92%	4.43%	5.38%
<b>Total</b>	<b>\$2,578.17</b>	<b>4.55%</b>	<b>5.64%</b>	<b>5.10%</b>	<b>6.17%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.12 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 1 – minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$7.69	0.01%	0.02%	0.02%	0.02%
Grant	\$3.27	0.01%	0.01%	0.01%	0.01%
Kingston	\$15.54	0.03%	0.04%	0.03%	0.04%
Mount Gambier City	\$9.18	0.02%	0.02%	0.02%	0.02%
Naracoorte & Lucindale	\$0.36	0.00%	0.00%	0.00%	0.00%
Robe	\$12.43	0.02%	0.03%	0.03%	0.03%
Tatiara	\$5.40	0.01%	0.01%	0.01%	0.01%
Wattle Range	\$5.24	0.01%	0.01%	0.01%	0.01%
<b>Total</b>	<b>\$0.36</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.13 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 2 – mean capital values <sup>a</sup>

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$25.63	0.05%	0.06%	0.06%	0.07%
Grant	\$59.04	0.09%	0.12%	0.11%	0.14%
Kingston	\$65.08	0.12%	0.15%	0.14%	0.17%
Mount Gambier City	\$50.27	0.09%	0.11%	0.10%	0.12%
Naracoorte & Lucindale	\$49.19	0.09%	0.11%	0.10%	0.12%
Robe	\$93.97	0.17%	0.21%	0.20%	0.24%
Tatiara	\$38.31	0.07%	0.09%	0.08%	0.10%
Wattle Range	\$46.99	0.08%	0.10%	0.09%	0.11%
<b>Total</b>	<b>\$52.03</b>	<b>0.09%</b>	<b>0.11%</b>	<b>0.10%</b>	<b>0.12%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.14 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 2 – median capital values <sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$23.27	0.04%	0.05%	0.05%	0.06%
Grant	\$56.96	0.09%	0.11%	0.11%	0.13%
Kingston	\$58.17	0.11%	0.13%	0.13%	0.15%
Mount Gambier City	\$47.99	0.08%	0.10%	0.09%	0.11%
Naracoorte & Lucindale	\$43.63	0.08%	0.10%	0.09%	0.11%
Robe	\$73.92	0.13%	0.16%	0.16%	0.19%
Tatiara	\$32.72	0.06%	0.08%	0.07%	0.08%
Wattle Range	\$41.20	0.07%	0.09%	0.08%	0.10%
<b>Total</b>	<b>\$47.23</b>	<b>0.08%</b>	<b>0.10%</b>	<b>0.09%</b>	<b>0.11%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.15 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 2 – maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$100.58	0.19%	0.23%	0.22%	0.26%
Grant	\$254.49	0.39%	0.51%	0.48%	0.58%
Kingston	\$266.61	0.50%	0.62%	0.58%	0.69%
Mount Gambier City	\$1,909.76	3.35%	4.16%	3.65%	4.45%
Naracoorte & Lucindale	\$563.51	1.02%	1.26%	1.17%	1.40%
Robe	\$399.91	0.71%	0.89%	0.87%	1.03%
Tatiara	\$203.59	0.39%	0.47%	0.44%	0.52%
Wattle Range	\$1,696.59	2.93%	3.64%	3.28%	3.99%
<b>Total</b>	<b>\$1,909.76</b>	<b>3.37%</b>	<b>4.18%</b>	<b>3.78%</b>	<b>4.57%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.16 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 2 – minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$5.70	0.01%	0.01%	0.01%	0.01%
Grant	\$2.42	0.00%	0.00%	0.00%	0.01%
Kingston	\$11.51	0.02%	0.03%	0.02%	0.03%
Mount Gambier City	\$6.80	0.01%	0.01%	0.01%	0.02%
Naracoorte & Lucindale	\$0.27	0.00%	0.00%	0.00%	0.00%
Robe	\$9.21	0.02%	0.02%	0.02%	0.02%
Tatiara	\$4.00	0.01%	0.01%	0.01%	0.01%
Wattle Range	\$3.88	0.01%	0.01%	0.01%	0.01%
<b>Total</b>	<b>\$0.27</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.17 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 3 – mean capital values <sup>a</sup>

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$21.36	0.04%	0.05%	0.05%	0.05%
Grant	\$49.20	0.08%	0.10%	0.09%	0.11%
Kingston	\$54.22	0.10%	0.13%	0.12%	0.14%
Mount Gambier City	\$41.89	0.07%	0.09%	0.08%	0.10%
Naracoorte & Lucindale	\$40.98	0.07%	0.09%	0.09%	0.10%
Robe	\$78.30	0.14%	0.17%	0.17%	0.20%
Tatiara	\$31.92	0.06%	0.07%	0.07%	0.08%
Wattle Range	\$39.15	0.07%	0.08%	0.08%	0.09%
<b>Total</b>	<b>\$43.35</b>	<b>0.08%</b>	<b>0.09%</b>	<b>0.09%</b>	<b>0.10%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.18 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 3 – median capital values <sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$19.39	0.04%	0.04%	0.04%	0.05%
Grant	\$47.46	0.07%	0.09%	0.09%	0.11%
Kingston	\$48.47	0.09%	0.11%	0.11%	0.12%
Mount Gambier City	\$39.99	0.07%	0.09%	0.08%	0.09%
Naracoorte & Lucindale	\$36.35	0.07%	0.08%	0.08%	0.09%
Robe	\$61.60	0.11%	0.14%	0.13%	0.16%
Tatiara	\$27.26	0.05%	0.06%	0.06%	0.07%
Wattle Range	\$34.33	0.06%	0.07%	0.07%	0.08%
<b>Total</b>	<b>\$39.36</b>	<b>0.07%</b>	<b>0.09%</b>	<b>0.08%</b>	<b>0.09%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.19 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 3 – maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$83.81	0.16%	0.19%	0.18%	0.21%
Grant	\$212.05	0.33%	0.42%	0.40%	0.49%
Kingston	\$222.15	0.42%	0.51%	0.48%	0.57%
Mount Gambier City	\$1,591.30	2.79%	3.47%	3.04%	3.70%
Naracoorte & Lucindale	\$469.55	0.85%	1.05%	0.98%	1.17%
Robe	\$333.23	0.59%	0.74%	0.72%	0.86%
Tatiara	\$169.64	0.32%	0.39%	0.36%	0.43%
Wattle Range	\$1,413.69	2.44%	3.04%	2.74%	3.32%
<b>Total</b>	<b>\$1,591.30</b>	<b>2.81%</b>	<b>3.48%</b>	<b>3.15%</b>	<b>3.81%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.20 Impact of Regional NRM Levy on average personal income, by LGA for Option 1, Scenario 3 – minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$4.75	0.01%	0.01%	0.01%	0.01%
Grant	\$2.02	0.00%	0.00%	0.00%	0.00%
Kingston	\$9.59	0.02%	0.02%	0.02%	0.02%
Mount Gambier City	\$5.66	0.01%	0.01%	0.01%	0.01%
Naracoorte & Lucindale	\$0.22	0.00%	0.00%	0.00%	0.00%
Robe	\$7.67	0.01%	0.02%	0.02%	0.02%
Tatiara	\$3.33	0.01%	0.01%	0.01%	0.01%
Wattle Range	\$3.23	0.01%	0.01%	0.01%	0.01%
<b>Total</b>	<b>\$0.22</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>

<sup>a</sup> See footnotes for Table 2.9

Source: ATO (2015a,b), SAILIS and EconSearch analysis

### 2.3.2 Option 2

The impact on average income earners of introducing the levy under Option 2 is outlined in Table 2.21 for Scenario 1, Table 2.22 for Scenario 2 and Table 2.23 for Scenario 3.

Key points to note from the data presented in Table 2.21 to Table 2.23 are:

- Option 2, Scenario 1
  - The fixed residential levy of \$120.46 per property would be 0.26 per cent of mean after tax income and 0.29 per cent of mean net wages and salaries (Table 2.21).
- Option 2, Scenario 2
  - The fixed residential levy of \$89.23 per property would be 0.20 per cent of mean after tax income and 0.21 per cent of mean net wages and salaries (Table 2.22).
- Option 2, Scenario 3
  - The fixed residential levy of \$74.35 per property would be 0.16 per cent of mean after tax income and 0.18 per cent of mean net wages and salaries (Table 2.23).

Table 2.21 Impact of Regional NRM Levy on average personal income, by LGA for Option 2, Scenario 1

Local Government Area	Fixed NRM Levy/Residential Property	Levy as a % of mean taxable income <sup>a</sup>	Levy as a % of mean after tax income <sup>b</sup>	Levy as a % of mean wages & salaries (gross) <sup>c</sup>	Levy as a % of mean wages & salaries (net) <sup>d</sup>
Coorong	\$120.46	0.22%	0.27%	0.26%	0.31%
Grant	\$120.46	0.19%	0.24%	0.23%	0.28%
Kingston	\$120.46	0.23%	0.28%	0.26%	0.31%
Mount Gambier City	\$120.46	0.21%	0.26%	0.23%	0.28%
Naracoorte & Lucindale	\$120.46	0.22%	0.27%	0.25%	0.30%
Robe	\$120.46	0.21%	0.27%	0.26%	0.31%
Tatiara	\$120.46	0.23%	0.28%	0.26%	0.31%
Wattle Range	\$120.46	0.21%	0.26%	0.23%	0.28%
<b>Total</b>	<b>\$120.46</b>	<b>0.21%</b>	<b>0.26%</b>	<b>0.24%</b>	<b>0.29%</b>

<sup>a</sup> Mean for taxable individuals, as reported by the ATO for 2012/13.

<sup>b</sup> Mean taxable income less mean net tax paid for 2012/13.

<sup>c</sup> Mean wages and salaries (gross) is the average before tax income of wage and salary earners reported by the ATO for 2012/13.

<sup>d</sup> Mean salaries and wages (net) is the estimated average after tax income of wage and salary earners and has been calculated based on average tax rates and the reported gross wages and salaries.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.22 Impact of Regional NRM Levy on average personal income, by LGA for Option 2, Scenario 2

Local Government Area	Fixed NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$89.23	0.17%	0.20%	0.19%	0.23%
Grant	\$89.23	0.14%	0.18%	0.17%	0.20%
Kingston	\$89.23	0.17%	0.21%	0.19%	0.23%
Mount Gambier City	\$89.23	0.16%	0.19%	0.17%	0.21%
Naracoorte & Lucindale	\$89.23	0.16%	0.20%	0.19%	0.22%
Robe	\$89.23	0.16%	0.20%	0.19%	0.23%
Tatiara	\$89.23	0.17%	0.21%	0.19%	0.23%
Wattle Range	\$89.23	0.15%	0.19%	0.17%	0.21%
<b>Total</b>	<b>\$89.23</b>	<b>0.16%</b>	<b>0.20%</b>	<b>0.18%</b>	<b>0.21%</b>

<sup>a</sup> See footnotes for Table 2.21

Source: ATO (2015a,b), SAILIS and EconSearch analysis



Table 2.23 Impact of Regional NRM Levy on average personal income, by LGA for Option 2, Scenario 3

Local Government Area	Fixed NRM Levy/Residential Property	Levy as a % of mean taxable income	Levy as a % of mean after tax income	Levy as a % of mean wages & salaries (gross)	Levy as a % of mean wages & salaries (net)
Coorong	\$74.35	0.14%	0.17%	0.16%	0.19%
Grant	\$74.35	0.11%	0.15%	0.14%	0.17%
Kingston	\$74.35	0.14%	0.17%	0.16%	0.19%
Mount Gambier City	\$74.35	0.13%	0.16%	0.14%	0.17%
Naracoorte & Lucindale	\$74.35	0.14%	0.17%	0.15%	0.19%
Robe	\$74.35	0.13%	0.16%	0.16%	0.19%
Tatiara	\$74.35	0.14%	0.17%	0.16%	0.19%
Wattle Range	\$74.35	0.13%	0.16%	0.14%	0.17%
<b>Total</b>	<b>\$74.35</b>	<b>0.13%</b>	<b>0.16%</b>	<b>0.15%</b>	<b>0.18%</b>

<sup>a</sup> See footnotes for Table 2.21

Source: ATO (2015a,b), SAILIS and EconSearch analysis

### 2.3.3 Option 3

The impact on average income earners of introducing the levy under Option 3 is outlined in Table 2.24. The key points to note from this data are:

- Option 3, Scenario 1
  - The mean levy (\$75.48) would be 0.17 per cent of the mean after tax income and 0.18 per cent of mean net wages and salaries (Table 2.24).
  - The maximum levy (\$2,302.22) would be 5.04 per cent of the mean after tax income and 5.51 per cent of mean net wages and salaries
- Option 3, Scenario 2
  - The mean levy (\$55.92) would be 0.12 per cent of the mean after tax income and 0.13 per cent of mean net wages and salaries (Table 2.24).
  - The maximum levy (\$1,706.40) would be 3.73 per cent of the mean after tax income and 4.08 per cent of mean net wages and salaries
- Option 3, Scenario 3
  - The mean levy (\$46.59) would be 0.10 per cent of the mean after tax income and 0.11 per cent of mean net wages and salaries (Table 2.24).
  - The maximum levy (\$1,422.00) would be 3.11 per cent of the mean after tax income and 3.40 per cent of mean net wages and salaries

Table 2.24 Impact of Regional NRM Levy on average personal income, by Scenario for Option 3

South East Area	Average NRM Levy/Residential Property	Levy as a % of mean taxable income <sup>a</sup>	Levy as a % of mean after tax income <sup>b</sup>	Levy as a % of mean wages & salaries (gross) <sup>c</sup>	Levy as a % of mean wages & salaries (net) <sup>d</sup>
<b>Scenario 1</b>					
Min	\$4.60	0.01%	0.01%	0.01%	0.01%
Max	\$2,302.22	4.06%	5.04%	4.56%	5.51%
Mean	\$75.48	0.13%	0.17%	0.15%	0.18%
<b>Scenario 2</b>					
Min	\$3.41	0.01%	0.01%	0.01%	0.01%
Max	\$1,706.40	3.01%	3.73%	3.38%	4.08%
Mean	\$55.92	0.10%	0.12%	0.11%	0.13%
<b>Scenario 3</b>					
Min	\$2.84	0.01%	0.01%	0.01%	0.01%
Max	\$1,422.00	2.51%	3.11%	2.82%	3.40%
Mean	\$46.59	0.08%	0.10%	0.09%	0.11%

<sup>a</sup> Mean for taxable individuals, as reported by the ATO for 2012/13.

<sup>b</sup> Mean taxable income less mean net tax paid for 2012/13.

<sup>c</sup> Mean wages and salaries (gross) is the average before tax income of wage and salary earners reported by the ATO for 2012/13.

<sup>d</sup> Mean salaries and wages (net) is the estimated average after tax income of wage and salary earners and has been calculated based on average tax rates and the reported gross wages and salaries.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

## 2.4 Impact on Personal Income – Low Income

Understandably, the impact of a levy would be greater on low income households than on high income households. Typical of low income households are people receiving an age pension. The following analysis assesses the impact of levy Option 1 (Section 2.4.1), levy Option 2 (Section 2.4.2) and levy Option 3 (Section 2.4.3) on recipients of the age pension (for both couples and for singles).

### 2.4.1 Option 1

The impact on low income earners of introducing the levy under Option 1 is outlined in Table 2.25 to Table 2.28 for Scenario 1, in Table 2.29 to Table 2.32 for Scenario 2 and in Table 2.33 to Table 2.36 for Scenario 3.

Key points to note from the data presented in Table 2.25 to Table 2.36 are summarised below.

- Option 1, Scenario 1
  - Mean residential levy of \$70.24, 0.21 per cent of the full age pension for couples and 0.31 per cent of the full age pension for singles (Table 2.25).
  - Median residential levy of \$63.76, 0.19 per cent of the full age pension for couples and 0.29 per cent of the full age pension for singles (Table 2.26).
  - Maximum residential levy of \$2,578.17, 7.65 per cent of the full age pension for couples and 11.53 per cent of the full age pension for singles (Table 2.27).
  - Minimum residential levy of \$0.36, less than 0.01 per cent of the full age pension for couples and for singles (Table 2.28).
- Option 1, Scenario 2
  - Mean residential levy of \$52.03, 0.15 per cent of the full age pension for couples and 0.23 per cent of the full age pension for singles (Table 2.29).
  - Median residential levy of \$47.23, 0.14 per cent of the full age pension for couples and 0.21 per cent of the full age pension for singles (Table 2.30).
  - Maximum residential levy of \$1,909.76, 5.66 per cent of the full age pension for couples and 8.54 per cent of the full age pension for singles (Table 2.31).
  - Minimum residential levy of \$0.27, less than 0.01 per cent of the full age pension for couples and for singles (Table 2.32).
- Option 1, Scenario 3
  - Mean residential levy of \$43.35, 0.13 per cent of the full age pension for couples and 0.19 per cent of the full age pension for singles (Table 2.33).
  - Median residential levy of \$39.36, 0.12 per cent of the full age pension for couples and 0.18 per cent of the full age pension for singles (Table 2.34).

- Maximum residential levy of \$1,591.30, 4.72 per cent of the full age pension for couples and 7.12 per cent of the full age pension for singles (Table 2.35).
- Minimum residential levy of \$0.22, less than 0.01 per cent of the full age pension for couples and for singles (Table 2.36).

Table 2.25 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 1 – mean capital values

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples <sup>a</sup>	full age pension for singles <sup>b</sup>	\$41,600 <sup>c</sup>	\$31,200 <sup>c</sup>
Coorong	\$34.61	0.10%	0.15%	51%	36%
Grant	\$79.71	0.24%	0.36%	33%	22%
Kingston	\$87.85	0.26%	0.39%	49%	36%
Mount Gambier City	\$67.87	0.20%	0.30%	45%	33%
Naracoorte & Lucindale	\$66.40	0.20%	0.30%	37%	25%
Robe	\$126.86	0.38%	0.57%	46%	31%
Tatiara	\$51.71	0.15%	0.23%	41%	26%
Wattle Range	\$63.43	0.19%	0.28%	46%	33%
<b>Total</b>	<b>\$70.24</b>	<b>0.21%</b>	<b>0.31%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> Full age pension for couples as at 16 September 2015 was \$1,297 per fortnight (combined) or \$33,717 per annum (combined).

<sup>b</sup> Full age pension for singles as at 16 September 2015 was \$860 per fortnight or \$22,365 per annum.

<sup>c</sup> Derived from income distribution reported in 2011 Population Census. These income figures represent the maximum amounts of the annual income bands that the full age pension for couples and for singles is in.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.26 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 1 – median capital values<sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$31.41	0.09%	0.14%	51%	36%
Grant	\$76.89	0.23%	0.34%	33%	22%
Kingston	\$78.53	0.23%	0.35%	49%	36%
Mount Gambier City	\$64.79	0.19%	0.29%	45%	33%
Naracoorte & Lucindale	\$58.90	0.17%	0.26%	37%	25%
Robe	\$99.80	0.30%	0.45%	46%	31%
Tatiara	\$44.17	0.13%	0.20%	41%	26%
Wattle Range	\$55.62	0.16%	0.25%	46%	33%
<b>Total</b>	<b>\$63.76</b>	<b>0.19%</b>	<b>0.29%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.27 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 1 –maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$135.79	0.40%	0.61%	51%	36%
Grant	\$343.56	1.02%	1.54%	33%	22%
Kingston	\$359.92	1.07%	1.61%	49%	36%
Mount Gambier City	\$2,578.17	7.65%	11.53%	45%	33%
Naracoorte & Lucindale	\$760.74	2.26%	3.40%	37%	25%
Robe	\$539.88	1.60%	2.41%	46%	31%
Tatiara	\$274.85	0.82%	1.23%	41%	26%
Wattle Range	\$2,290.40	6.79%	10.24%	46%	33%
<b>Total</b>	<b>\$2,578.17</b>	<b>7.65%</b>	<b>11.53%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.28 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 1 –minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$7.69	0.02%	0.03%	51%	36%
Grant	\$3.27	0.01%	0.01%	33%	22%
Kingston	\$15.54	0.05%	0.07%	49%	36%
Mount Gambier City	\$9.18	0.03%	0.04%	45%	33%
Naracoorte & Lucindale	\$0.36	0.00%	0.00%	37%	25%
Robe	\$12.43	0.04%	0.06%	46%	31%
Tatiara	\$5.40	0.02%	0.02%	41%	26%
Wattle Range	\$5.24	0.02%	0.02%	46%	33%
<b>Total</b>	<b>\$0.36</b>	<b>0.00%</b>	<b>0.00%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.29 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 2 – mean capital values <sup>a</sup>

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$25.63	0.08%	0.11%	51%	36%
Grant	\$59.04	0.18%	0.26%	33%	22%
Kingston	\$65.08	0.19%	0.29%	49%	36%
Mount Gambier City	\$50.27	0.15%	0.22%	45%	33%
Naracoorte & Lucindale	\$49.19	0.15%	0.22%	37%	25%
Robe	\$93.97	0.28%	0.42%	46%	31%
Tatiara	\$38.31	0.11%	0.17%	41%	26%
Wattle Range	\$46.99	0.14%	0.21%	46%	33%
<b>Total</b>	<b>\$52.03</b>	<b>0.15%</b>	<b>0.23%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.30 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 2 – median capital values <sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$23.27	0.07%	0.10%	51%	36%
Grant	\$56.96	0.17%	0.25%	33%	22%
Kingston	\$58.17	0.17%	0.26%	49%	36%
Mount Gambier City	\$47.99	0.14%	0.21%	45%	33%
Naracoorte & Lucindale	\$43.63	0.13%	0.20%	37%	25%
Robe	\$73.92	0.22%	0.33%	46%	31%
Tatiara	\$32.72	0.10%	0.15%	41%	26%
Wattle Range	\$41.20	0.12%	0.18%	46%	33%
<b>Total</b>	<b>\$47.23</b>	<b>0.14%</b>	<b>0.21%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.31 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 2 –maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$100.58	0.30%	0.45%	51%	36%
Grant	\$254.49	0.75%	1.14%	33%	22%
Kingston	\$266.61	0.79%	1.19%	49%	36%
Mount Gambier City	\$1,909.76	5.66%	8.54%	45%	33%
Naracoorte & Lucindale	\$563.51	1.67%	2.52%	37%	25%
Robe	\$399.91	1.19%	1.79%	46%	31%
Tatiara	\$203.59	0.60%	0.91%	41%	26%
Wattle Range	\$1,696.59	5.03%	7.59%	46%	33%
<b>Total</b>	<b>\$1,909.76</b>	<b>5.66%</b>	<b>8.54%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.32 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 2 –minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$5.70	0.02%	0.03%	51%	36%
Grant	\$2.42	0.01%	0.01%	33%	22%
Kingston	\$11.51	0.03%	0.05%	49%	36%
Mount Gambier City	\$6.80	0.02%	0.03%	45%	33%
Naracoorte & Lucindale	\$0.27	0.00%	0.00%	37%	25%
Robe	\$9.21	0.03%	0.04%	46%	31%
Tatiara	\$4.00	0.01%	0.02%	41%	26%
Wattle Range	\$3.88	0.01%	0.02%	46%	33%
<b>Total</b>	<b>\$0.27</b>	<b>0.00%</b>	<b>0.00%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.33 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 3 – mean capital values <sup>a</sup>

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$21.36	0.06%	0.10%	51%	36%
Grant	\$49.20	0.15%	0.22%	33%	22%
Kingston	\$54.22	0.16%	0.24%	49%	36%
Mount Gambier City	\$41.89	0.12%	0.19%	45%	33%
Naracoorte & Lucindale	\$40.98	0.12%	0.18%	37%	25%
Robe	\$78.30	0.23%	0.35%	46%	31%
Tatiara	\$31.92	0.09%	0.14%	41%	26%
Wattle Range	\$39.15	0.12%	0.18%	46%	33%
<b>Total</b>	<b>\$43.35</b>	<b>0.13%</b>	<b>0.19%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.34 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 3 – median capital values <sup>a</sup>

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$19.39	0.06%	0.09%	51%	36%
Grant	\$47.46	0.14%	0.21%	33%	22%
Kingston	\$48.47	0.14%	0.22%	49%	36%
Mount Gambier City	\$39.99	0.12%	0.18%	45%	33%
Naracoorte & Lucindale	\$36.35	0.11%	0.16%	37%	25%
Robe	\$61.60	0.18%	0.28%	46%	31%
Tatiara	\$27.26	0.08%	0.12%	41%	26%
Wattle Range	\$34.33	0.10%	0.15%	46%	33%
<b>Total</b>	<b>\$39.36</b>	<b>0.12%</b>	<b>0.18%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis



Table 2.35 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 3 –maximum capital values <sup>a</sup>

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$83.81	0.25%	0.37%	51%	36%
Grant	\$212.05	0.63%	0.95%	33%	22%
Kingston	\$222.15	0.66%	0.99%	49%	36%
Mount Gambier City	\$1,591.30	4.72%	7.12%	45%	33%
Naracoorte & Lucindale	\$469.55	1.39%	2.10%	37%	25%
Robe	\$333.23	0.99%	1.49%	46%	31%
Tatiara	\$169.64	0.50%	0.76%	41%	26%
Wattle Range	\$1,413.69	4.19%	6.32%	46%	33%
<b>Total</b>	<b>\$1,591.30</b>	<b>4.72%</b>	<b>7.12%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.36 Impact of Regional NRM Levy on low personal income, by LGA for Option 1, Scenario 3 –minimum capital values <sup>a</sup>

Local Government Area	Minimum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$4.75	0.01%	0.02%	51%	36%
Grant	\$2.02	0.01%	0.01%	33%	22%
Kingston	\$9.59	0.03%	0.04%	49%	36%
Mount Gambier City	\$5.66	0.02%	0.03%	45%	33%
Naracoorte & Lucindale	\$0.22	0.00%	0.00%	37%	25%
Robe	\$7.67	0.02%	0.03%	46%	31%
Tatiara	\$3.33	0.01%	0.01%	41%	26%
Wattle Range	\$3.23	0.01%	0.01%	46%	33%
<b>Total</b>	<b>\$0.22</b>	<b>0.00%</b>	<b>0.00%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.25.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

## 2.4.2 Option 2

The impact on low income earners of introducing the levy under Option 2 is outlined in Table 2.37 for Scenario 1, Table 2.38 for Scenario 2 and Table 2.39 for Scenario 3.

Key points to note from the data presented in Table 2.37 to Table 2.39 are:

- Option 2, Scenario 1
  - The fixed residential levy of \$120.46 per property would be 0.36 per cent of the full age pension for couples and 0.54 per cent of the full age pension for singles (Table 2.37).
- Option 2, Scenario 2
  - The fixed residential levy of \$89.23 per property would be 0.26 per cent of the full age pension for couples and 0.40 per cent of the full age pension for singles (Table 2.38).
- Option 2, Scenario 3
  - The fixed residential levy of \$74.35 per property would be 0.22 per cent of the full age pension for couples and 0.33 per cent of the full age pension for singles (Table 2.39).

Table 2.37 Impact of Regional NRM Levy on low personal income, by LGA for Option 2, Scenario 1

Local Government Area	Mean NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples <sup>a</sup>	full age pension for singles <sup>b</sup>	\$41,600 <sup>c</sup>	\$31,200 <sup>c</sup>
Coorong	\$120.46	0.36%	0.54%	51%	36%
Grant	\$120.46	0.36%	0.54%	33%	22%
Kingston	\$120.46	0.36%	0.54%	49%	36%
Mount Gambier City	\$120.46	0.36%	0.54%	45%	33%
Naracoorte & Lucindale	\$120.46	0.36%	0.54%	37%	25%
Robe	\$120.46	0.36%	0.54%	46%	31%
Tatiara	\$120.46	0.36%	0.54%	41%	26%
Wattle Range	\$120.46	0.36%	0.54%	46%	33%
<b>Total</b>	<b>\$120.46</b>	<b>0.36%</b>	<b>0.54%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> Full age pension for couples as at 16 September 2015 was \$1,297 per fortnight (combined) or \$33,717 per annum (combined).

<sup>b</sup> Full age pension for singles as at 16 September 2015 was \$860 per fortnight or \$22,365 per annum.

<sup>c</sup> Derived from income distribution reported in 2011 Population Census. These income figures represent the maximum amounts of the annual income bands that the full age pension for couples and for singles is in.

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.38 Impact of Regional NRM Levy on low personal income, by LGA for Option 2, Scenario 2

Local Government Area	Median NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$89.23	0.26%	0.40%	51%	36%
Grant	\$89.23	0.26%	0.40%	33%	22%
Kingston	\$89.23	0.26%	0.40%	49%	36%
Mount Gambier City	\$89.23	0.26%	0.40%	45%	33%
Naracoorte & Lucindale	\$89.23	0.26%	0.40%	37%	25%
Robe	\$89.23	0.26%	0.40%	46%	31%
Tatiara	\$89.23	0.26%	0.40%	41%	26%
Wattle Range	\$89.23	0.26%	0.40%	46%	33%
<b>Total</b>	<b>\$89.23</b>	<b>0.26%</b>	<b>0.40%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.37

Source: ATO (2015a,b), SAILIS and EconSearch analysis

Table 2.39 Impact of Regional NRM Levy on low personal income, by LGA for Option 2, Scenario 3

Local Government Area	Maximum NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
Coorong	\$74.35	0.22%	0.33%	51%	36%
Grant	\$74.35	0.22%	0.33%	33%	22%
Kingston	\$74.35	0.22%	0.33%	49%	36%
Mount Gambier City	\$74.35	0.22%	0.33%	45%	33%
Naracoorte & Lucindale	\$74.35	0.22%	0.33%	37%	25%
Robe	\$74.35	0.22%	0.33%	46%	31%
Tatiara	\$74.35	0.22%	0.33%	41%	26%
Wattle Range	\$74.35	0.22%	0.33%	46%	33%
<b>Total</b>	<b>\$74.35</b>	<b>0.22%</b>	<b>0.33%</b>	<b>43%</b>	<b>31%</b>

<sup>a</sup> See footnotes for Table 2.37

Source: ATO (2015a,b), SAILIS and EconSearch analysis

### 2.4.3 Option 3

The impact on mean income earners of introducing the levy using Option 3 is outlined in Table 2.40. The key points to note from this data are:

- Option 3, Scenario 1
  - The mean levy (\$75.48) would be 0.22 per cent of the full age pension for couples and 0.34 per cent of the full age pension for singles (Table 2.40).
  - The maximum levy (\$2,302.22) would be 6.83 per cent of the full age pension for couples and 10.29 per cent of the full age pension for singles
- Option 3, Scenario 2
  - The mean levy (\$55.92) would be 0.17 per cent of the full age pension for couples and 0.25 per cent of the full age pension for singles (Table 2.40).
  - The maximum levy (\$1,706.40) would be 5.06 per cent of the full age pension for couples and 7.63 per cent of the full age pension for singles
- Option 3, Scenario 3
  - The mean levy (\$46.59) would be 0.14 per cent of the full age pension for couples and 0.21 per cent of the full age pension for singles (Table 2.40).
  - The maximum levy (\$1,422.00) would be 4.22 per cent of the full age pension for couples and 6.36 per cent of the full age pension for singles

Table 2.40 Impact of Regional NRM Levy on low personal income, Option 3<sup>a</sup>

South East Area	Mean NRM Levy/Residential Property	Levy as a % of:		% of households with income below	
		full age pension for couples	full age pension for singles	\$41,600	\$31,200
<b>Scenario 1 (\$4.66m)</b>					
Min	\$4.60	0.01%	0.02%	43%	31%
Max	\$2,302.22	6.83%	10.29%	43%	31%
Mean	\$75.48	0.22%	0.34%	43%	31%
<b>Scenario 2 (\$3.44m)</b>					
Min	\$3.41	0.01%	0.02%	43%	31%
Max	\$1,706.40	5.06%	7.63%	43%	31%
Mean	\$55.92	0.17%	0.25%	43%	31%
<b>Scenario 3 (\$2.86m)</b>					
Min	\$2.84	0.01%	0.01%	43%	31%
Max	\$1,422.00	4.22%	6.36%	43%	31%
Mean	\$46.59	0.14%	0.21%	43%	31%

<sup>a</sup> See footnotes to Table 2.37

Source: ATO (2015a,b), SAILIS and EconSearch analysis

## 2.5 Impact of the Land Based Levy on Dryland Farms

### 2.5.1 Farm financial models

The assessment of the impact of the NRM land levies involved an analysis using representative farm financial models. The representative models that have been used for this analysis were designed to be broadly representative of growers of the main dryland crops and livestock farming in the South East region. However, the diversity of farm size, enterprise mix, cost structures and prices received that are inherent at the farm level cannot be adequately represented in models of this type and caution is required in their interpretation and use.

The dryland farming models were sourced from ABARES by special request for the region 431 which includes the Kangaroo Island, Fleurieu Peninsula, the Adelaide Hills and the South East. Summary physical and financial indicators from the representative farm models are presented in Table 2.41. More detail from the model is provided in Appendix 2 (Appendix Tables 2.1 to 2.3).

Table 2.41 Key indicators for representative dryland farms in the South East region<sup>a</sup>

	Cropping	Cropping - Livestock	Sheep - Beef
Total farm area (ha)	1,508	1,016	1,224
Estimated capital value <sup>b</sup>	3,724,911	3,377,952	4,454,799
Gross income	\$820,483	\$559,048	\$525,421
Variable costs	\$285,926	\$165,193	\$178,310
Fixed costs	\$458,412	\$326,998	\$225,196
EBIT <sup>c</sup>	\$155,326	\$120,217	\$148,431

<sup>a</sup> All dollar values are in 2015 dollars.

<sup>b</sup> Based on capital improvements but excludes allowance for residence.

<sup>c</sup> Earnings before interest and tax.

Source: Appendix Tables 2.1 to 2.3

### 2.5.2 Impact of the levy on dryland farms

The impact of introducing the land based levy on the financial performance of the representative dryland farms is outlined in Table 2.42 to Table 2.44 for Option 1, Table 2.45 to Table 2.47 for Option 2 and Table 2.48 to Table 2.50 for Option 3. The key points to note from these results are as follows.

- None of the land based levy options or scenarios comprise more than 1.0 per cent of variable costs for any of the dryland farms.
- Logically, the impact on total costs is even smaller with none of the levy options or scenarios comprising more than 0.4 per cent of total costs.

- For Option 1, for dryland farm operations (cropping, cropping-livestock and sheep-beef) the impact on farm profitability would be *minor* (reduces EBIT by less than 1 per cent).
- For Option 2, the land based levy would comprise a very small proportion of variable and total costs and have *minor* impact on farm profitability (reduces EBIT by less than 1 per cent).
- For Option 3, the land based levy would comprise a very small proportion of variable and total costs. Under the assumption that the mean levy calculated for rural properties in the South East is a typical land levy rate, the levy would have *minor* impact on farm profitability (reduces EBIT by less than 1 per cent).

Table 2.42 Financial impact of the land based levy on representative farms in the South East region, Option 1, Scenario 1

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	1,219	1,105	1,458
Levy as a % of variable costs	0.42%	0.66%	0.81%
Levy as a % of total costs	0.16%	0.22%	0.36%
Levy impact on EBIT	-0.78%	-0.91%	-0.97%

Source: EconSearch analysis

Table 2.43 Financial impact of the land based levy on representative farms in the South East region, Option 1, Scenario 2

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	903	819	1,080
Levy as a % of variable costs	0.31%	0.49%	0.60%
Levy as a % of total costs	0.12%	0.17%	0.27%
Levy impact on EBIT	-0.58%	-0.68%	-0.72%

Source: EconSearch analysis

Table 2.44 Financial impact of the land based levy on representative farms in the South East region, Option 1, Scenario 3

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	752	682	900
Levy as a % of variable costs	0.26%	0.41%	0.50%
Levy as a % of total costs	0.10%	0.14%	0.22%
Levy impact on EBIT	-0.48%	-0.56%	-0.60%

Source: EconSearch analysis

Table 2.45 Financial impact of the land based levy on representative farms in the South East region, Option 2, Scenario 1

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	120.46	120.46	120.46
Levy as a % of variable costs	0.04%	0.07%	0.07%
Levy as a % of total costs	0.02%	0.02%	0.03%
Levy impact on EBIT	-0.08%	-0.10%	-0.08%

Source: EconSearch analysis

Table 2.46 Financial impact of the land based levy on representative farms in the South East region, Option 2, Scenario 2

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	89.23	89.23	89.23
Levy as a % of variable costs	0.03%	0.05%	0.05%
Levy as a % of total costs	0.01%	0.02%	0.02%
Levy impact on EBIT	-0.06%	-0.07%	-0.06%

Source: EconSearch analysis

Table 2.47 Financial impact of the land based levy on representative farms in the South East region, Option 2, Scenario 3

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$)	74.35	74.35	74.35
Levy as a % of variable costs	0.03%	0.04%	0.04%
Levy as a % of total costs	0.01%	0.02%	0.02%
Levy impact on EBIT	-0.05%	-0.06%	-0.05%

Source: EconSearch analysis

Table 2.48 Financial impact of the land based levy on representative farms in the South East region, Option 3, Scenario 1

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$) <sup>a</sup>	150.29	150.29	150.29
Levy as a % of variable costs	0.05%	0.09%	0.08%
Levy as a % of total costs	0.02%	0.03%	0.04%
Levy impact on EBIT	-0.10%	-0.12%	-0.10%

<sup>a</sup> Levy represents average levy rate for rural property for Option 3, Scenario 1

Source: EconSearch analysis

Table 2.49 Financial impact of the land based levy on representative farms in the South East region, Option 3, Scenario 2

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$) <sup>a</sup>	111.39	111.39	111.39
Levy as a % of variable costs	0.04%	0.07%	0.06%
Levy as a % of total costs	0.01%	0.02%	0.03%
Levy impact on EBIT	-0.07%	-0.09%	-0.07%

<sup>a</sup> Levy represents average levy rate for rural property for Option 3, Scenario 1

Source: EconSearch analysis

Table 2.50 Financial impact of the land based levy on representative farms in the South East region, Option 3, Scenario 3

	Cropping	Cropping - Livestock	Sheep - Beef
Land based levy (\$) <sup>a</sup>	92.83	92.83	92.83
Levy as a % of variable costs	0.03%	0.06%	0.05%
Levy as a % of total costs	0.01%	0.02%	0.02%
Levy impact on EBIT	-0.06%	-0.08%	-0.06%

<sup>a</sup> Levy represents average levy rate for rural property for Option 3, Scenario 1

Source: EconSearch analysis

## 2.6 Impact on Non-Farm Business Income

The financial impact of the Division 1 land based levy on non-farm business income in the South East region is detailed in Table 2.51 and Table 2.52.

Key points to note are:

- Option 1
  - The mean and median levies per property would be less than 1.0 per cent of median gross operating surplus (GOS) across the majority of industries and therefore would be a *minor* impact.
  - The maximum levy would be *significant* (greater than 5 per cent of median GOS) for the businesses in the construction; transport, postal, warehouse; rental hiring and real estate; education and training; health care and social; arts and recreation; and other services.
  - The maximum levy would be *moderate* (greater than 1 per cent but less than 5 per cent of median GOS) for the businesses in the mining; manufacturing; wholesale trade; retail trade; accommodation and food; information, media, and technology; finance and insurance; and public administration.
  - The minimum levy would be *minor* across all industries.



- Option 2
  - The fixed levy for all scenarios would have a *minor* impact on business profitability across all industries except other services which has a very low median GOS.
- Option 3
  - The mean levy would have a *minor* impact on business profitability for the majority of industries
  - The maximum levy would have a *moderate* impact for businesses in the retail trade; financial and insurance; hiring and real estate; education and training; and arts and recreation services.
  - The maximum levy would have a *significant* impact for businesses in construction; transport, postal and warehousing; health care and social; and other services.
  - The minimum levy would be *minor* across all industries.

Table 2.51 Financial impact of the land based levy on non-farm business income in the South East region, industrial industries.

Industry	Median GOS (\$)	Option 1, Scenario 1				Option 1, Scenario 2				Option 1, Scenario 3				Option 2, Scenario 1	Option 2, Scenario 2	Option 2, Scenario 3	Option 5, Scenario 1			Option 5, Scenario 2			Option 5, Scenario 3		
		Mean levy per property	Median levy per property	Max levy	Min levy	Mean levy per property	Median levy per property	Max levy	Min levy	Mean levy per property	Median levy per property	Max levy	Min levy	Fixed Levy	Fixed Levy	Fixed Levy	Average Levy	Min Levy	Max Levy	Average Levy	Min Levy	Max Levy	Average Levy	Min Levy	Max Levy
Mining	444,617	0.03%	0.01%	4.12%	0.00%	0.02%	0.01%	3.05%	0.00%	0.02%	0.01%	2.54%	0.00%	0.03%	0.02%	0.02%	0.04%	0.00%	0.57%	0.03%	0.00%	0.42%	0.02%	0.00%	0.35%
Manufacturing	1,403,939	0.01%	0.00%	1.31%	0.00%	0.01%	0.00%	0.97%	0.00%	0.01%	0.00%	0.81%	0.00%	0.01%	0.01%	0.01%	0.01%	0.00%	0.18%	0.01%	0.00%	0.13%	0.01%	0.00%	0.11%
Electricity, Gas, Water	3,201,354	0.00%	0.00%	0.57%	0.00%	0.00%	0.00%	0.42%	0.00%	0.00%	0.00%	0.35%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.08%	0.00%	0.00%	0.06%	0.00%	0.00%	0.05%
Construction	16,081	0.86%	0.29%	113.95%	0.00%	0.63%	0.21%	84.40%	0.00%	0.53%	0.18%	70.33%	0.00%	0.75%	0.55%	0.46%	1.02%	0.01%	15.74%	0.75%	0.00%	11.57%	0.62%	0.00%	9.64%

Source: EconSearch analysis

Table 2.52 Financial impact of the land based levy on non-farm business income in the South East region, commercial industries.

Industry	Median GOS (\$)	Option 1, Scenario 1				Option 1, Scenario 2				Option 1, Scenario 3				Option 2, Scenario 1	Option 2, Scenario 2	Option 2, Scenario 3	Option 5, Scenario 1			Option 5, Scenario 2			Option 5, Scenario 3		
		Mean levy per property	Median levy per property	Max levy	Min levy	Mean levy per property	Median levy per property	Max levy	Min levy	Mean levy per property	Median levy per property	Max levy	Min levy	Fixed Levy	Fixed Levy	Fixed Levy	Average Levy	Min Levy	Max Levy	Average Levy	Min Levy	Max Levy	Average Levy	Min Levy	Max Levy
Wholesale Trade	893,135	0.01%	0.01%	1.02%	0.00%	0.01%	0.01%	0.76%	0.00%	0.01%	0.00%	0.63%	0.00%	0.01%	0.01%	0.01%	0.02%	0.00%	0.28%	0.01%	0.00%	0.21%	0.01%	0.00%	0.17%
Retail Trade	211,338	0.05%	0.03%	4.32%	0.00%	0.04%	0.02%	3.20%	0.00%	0.03%	0.02%	2.66%	0.00%	0.06%	0.04%	0.04%	0.08%	0.00%	1.20%	0.06%	0.00%	0.88%	0.05%	0.00%	0.73%
Accommodation and Food	454,949	0.03%	0.01%	2.00%	0.00%	0.02%	0.01%	1.48%	0.00%	0.02%	0.01%	1.24%	0.00%	0.03%	0.02%	0.02%	0.04%	0.00%	0.56%	0.03%	0.00%	0.41%	0.02%	0.00%	0.34%
Transport, Postal and Warehousing	26,606	0.44%	0.25%	34.28%	0.00%	0.32%	0.18%	25.39%	0.00%	0.27%	0.15%	21.16%	0.00%	0.45%	0.34%	0.28%	0.62%	0.00%	9.52%	0.45%	0.00%	6.99%	0.38%	0.00%	5.83%
Information Media and Technology	433,157	0.03%	0.02%	2.11%	0.00%	0.02%	0.01%	1.56%	0.00%	0.02%	0.01%	1.30%	0.00%	0.03%	0.02%	0.02%	0.04%	0.00%	0.58%	0.03%	0.00%	0.43%	0.02%	0.00%	0.36%
Financial and Insurance	218,863	0.05%	0.03%	4.17%	0.00%	0.04%	0.02%	3.09%	0.00%	0.03%	0.02%	2.57%	0.00%	0.06%	0.04%	0.03%	0.07%	0.00%	1.16%	0.05%	0.00%	0.85%	0.05%	0.00%	0.71%
Rental, Hiring and Real Estate	58,878	0.20%	0.11%	15.49%	0.00%	0.15%	0.08%	11.47%	0.00%	0.12%	0.07%	9.56%	0.00%	0.20%	0.15%	0.13%	0.28%	0.00%	4.30%	0.20%	0.00%	3.16%	0.17%	0.00%	2.63%
Professional, Scientific & Technical Serv.	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Administrative and Support Serv.	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Public Administration	535,735	0.02%	0.01%	1.70%	0.00%	0.02%	0.01%	1.26%	0.00%	0.01%	0.01%	1.05%	0.00%	0.02%	0.02%	0.01%	0.03%	0.00%	0.47%	0.02%	0.00%	0.35%	0.02%	0.00%	0.29%
Education and Training	161,465	0.07%	0.04%	5.65%	0.00%	0.05%	0.03%	4.18%	0.00%	0.04%	0.03%	3.49%	0.00%	0.07%	0.06%	0.05%	0.10%	0.00%	1.57%	0.07%	0.00%	1.15%	0.06%	0.00%	0.96%
Health Care and Social	24,226	0.48%	0.27%	37.65%	0.00%	0.35%	0.20%	27.89%	0.00%	0.30%	0.17%	23.24%	0.00%	0.50%	0.37%	0.31%	0.68%	0.00%	10.45%	0.50%	0.00%	7.68%	0.41%	0.00%	6.40%
Arts and Recreation Serv.	109,158	0.11%	0.06%	8.36%	0.00%	0.08%	0.04%	6.19%	0.00%	0.07%	0.04%	5.16%	0.00%	0.11%	0.08%	0.07%	0.15%	0.00%	2.32%	0.11%	0.00%	1.70%	0.09%	0.00%	1.42%
Other Services	5,680	2.04%	1.16%	160.58%	0.00%	1.51%	0.86%	118.95%	0.00%	1.26%	0.72%	99.11%	0.00%	2.12%	1.57%	1.31%	2.88%	0.02%	44.57%	2.12%	0.01%	32.75%	1.77%	0.01%	27.29%

Source: EconSearch analysis

## 3. ANALYSIS OF DIVISION 2 LEVY

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### 3.1 Division 2 Levy

The *Natural Resources Management Act 2004* also sets out a number of ways in which the Division 2 (water based) levy can be determined. Unlike the Division 1 levy, which must be based on just one of the available options, the Division 2 levy may be based on a combination of factors. The Act indicates that the water levy may be based on one or more of the following factors:

- a fixed charge
- the quantity of water allocated
- the quantity of water received or taken
- the quantity of water passing through any works
- the size, type or capacity of any works
- the quantity of water used
- the share of the water that makes up the relevant water resource
- the area of land where the water may be used, or the area of the land where the water is used
- the effect that the taking or using of the water has, or may have, on the environment, or some other effect or impact that, in the opinion of the Minister, is relevant and that is capable of being determined, measured or applied.

For 2016/17, the SENRM Board has resolved that the water levy for all prescribed water resource areas in the SENRM Region will be based on a fixed charge of \$200 per license and a rate on the quantity of water allocated. This is a modification of the approach taken in previous years, which was previously defined as a rate on the quantity of water allocated. For the purpose of the analysis the Board requested the impact assessment of the following options:

1. a fixed charge of \$50 and the quantity of water allocated
2. a fixed charge of \$100 and the quantity of water allocated
3. a fixed charge of \$200 and the quantity of water allocated
4. the quantity of water allocated

The Board has requested that three budget outcomes be analysed for the above listed scenarios:

- the first scenario (1) uses the budget amount for the NRM Water Levy of \$3,956,000
- the second scenario (2) uses a budget amount for the NRM Water Levy of \$5,160,000
- the third scenario (3) uses a budget amount for the NRM Water Levy of \$5,733,620

## 3.2 Farm financial model

The assessment of the impact of the NRM water levies involved an analysis using representative farm financial models updated with the most up-to-date data available. The representative models that have been updated for this analysis were designed to be broadly representative of growers of the main irrigation crops in the South East NRM region. However, the diversity of farm size, enterprise mix, cost structures and prices received that are inherent at the farm level cannot be adequately represented in models of this type and caution is required in their interpretation and use.

A range of data sources were used to compile the detailed farm financial models, in 2015 dollars, as outlined below:

- Winegrape prices and yields for representative vineyards in the region were derived from the 2015 South Australian Winegrape Crush Survey (PGIBSA 2015).
- ABARES commodities data derived from the 2014 Australian Commodities Statistics Report, 2014 (ABARES 2015).
- ABS consumer price index, ABS Cat No. 6401.0 (ABS 2015).

Summary physical and financial indicators from the representative farm models are presented in Table 3.1. More detail from the model is provided in Appendix 2 (Appendix Tables 2.4 and 2.10).

Table 3.1 Key indicators for representative irrigation farms in the South East NRM Board Region <sup>a</sup>

	Dairy	Potatoes	Lucerne (unconfined)	Lucerne (confined)	Winegrapes	Sheep (unconfined)	Sheep (confined)
Total farm area (ha)	280	300	250	250	70	1,200	1,200
Irrigated area (ha)	45	50	60	60	54	60	60
Estimated capital value <sup>b</sup>	\$2,109,922	\$925,000	\$775,000	\$775,000	\$2,470,000	\$3,150,000	\$3,150,000
Irrigation rate - water taken (ML/ha)							
Base component	3.2	1.4	6.6	2.8	0.6	2.1	2.4
Delivery supplement	0.2	0.0	7.5	3.1	0.0	2.0	2.4
Water taken (ML)							
Base component	143	69	394	166	32	125	147
Delivery supplement	11	0	448	189	0	121	142
Irrigation rate - allocation (ML/ha)							
Base component	7.2	6.6	10.3	10.3	2.5	9.1	9.1
Delivery supplement	0.6	0.0	11.7	11.7	0.0	8.8	8.8
Water allocation (ML)							
Base component	325	329	616	616	133	544	544
Delivery supplement	25	0	700	700	0	526	526
Gross Income	\$987,644	\$1,388,497	\$167,069	\$167,069	\$823,484	\$400,191	\$400,191
Variable costs	\$372,794	\$621,227	\$34,806	\$30,777	\$255,762	\$222,707	\$223,111
Fixed costs	\$274,641	\$115,326	\$110,504	\$110,504	\$298,994	\$80,191	\$80,191
EBIT <sup>c</sup>	\$362,684	\$651,943	\$28,793	\$32,823	\$268,728	\$97,293	\$96,889

<sup>a</sup> All dollar values are in 2015 dollars. Only Includes the levy on the quantity of water allocated.

<sup>b</sup> Based on irrigated area and capital improvements but excludes allowance for residence.

<sup>c</sup> Earnings before interest and tax.

Source: Appendix Tables 2.4 and 2.10

### 3.3 Impact of the Levies on Irrigation Farms

The rate for the four scenarios are described for each of the budget scenarios below. Budget Scenario 1 (\$3.95m) is described in Table 3.2, Budget Scenario 2 (\$5.16m) is described in Table 3.3 and Budget Scenario 3 (\$5.73m) is described in Table 3.4.

The key points to note from these results are as follows.

- with profitable enterprises (dairy, winegrapes and potatoes) the levy has a *minor* impact (reduces EBIT by less than 1 per cent) on farm profitability. However, the levy has a *moderate* impact (reduces EBIT by more than 1 per cent but less than 5 per cent) with some profitable industries (sheep).
- For marginal operations the impact on farm profitability would be *significant* (reduces EBIT by more than 5 per cent). The analysis showed that the lower profit margin and higher water using industries (lucerne<sup>4</sup>) are the industries where the water based levy would have a *significant* impact on enterprise profitability.

<sup>4</sup> Costs are modelled for the Tintinara PWA, where licensees pump water from the aquifer. The cost of extracting water would be less in other regions (such as Kingston) where there are no costs for pumping as the water is artesian. Lower pumping costs would result in a greater EBIT for these enterprises resulting in a lower levy impact.

**Table 3.2 NRM Water Levy rates (\$/ML) and financial impact of water based levy on representative farms in the South East, Budget Scenario 1**

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1 (Fixed charge \$50 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Base component	\$3.09	\$3.09	\$3.09	\$3.09	\$3.09	\$3.09	\$3.09
Delivery supplement	\$0.31	\$0.31	\$0.31	\$3.09	\$0.31	\$0.31	\$3.09
Total levy payment (\$)	\$1,063	\$1,065	\$2,171	\$4,117	\$461	\$1,894	\$3,357
Levy as a % of variable costs	0.3%	0.2%	5.9%	11.8%	0.2%	0.8%	1.5%
Levy as a % of total costs	0.2%	0.1%	1.5%	2.8%	0.1%	0.6%	1.1%
Levy Impact on EBIT	-0.3%	-0.2%	-7.0%	-11.1%	-0.2%	-1.9%	-3.3%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
Base component	\$2.76	\$2.76	\$2.76	\$2.76	\$2.76	\$2.76	\$2.76
Delivery supplement	\$0.28	\$0.28	\$0.28	\$2.76	\$0.28	\$0.28	\$2.76
Total levy payment (\$)	\$1,005	\$1,007	\$1,994	\$3,733	\$467	\$1,747	\$3,053
Levy as a % of variable costs	0.3%	0.2%	5.4%	10.8%	0.2%	0.8%	1.4%
Levy as a % of total costs	0.2%	0.1%	1.4%	2.6%	0.1%	0.6%	1.0%
Levy Impact on EBIT	-0.3%	-0.2%	-6.5%	-10.2%	-0.2%	-1.8%	-3.1%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
Base component	\$2.58	\$2.58	\$2.58	\$2.58	\$2.58	\$2.58	\$2.58
Delivery supplement	\$0.26	\$0.26	\$0.26	\$2.58	\$0.26	\$0.26	\$2.58
Total levy payment (\$)	\$1,046	\$1,048	\$1,971	\$3,596	\$543	\$1,740	\$2,961
Levy as a % of variable costs	0.3%	0.2%	5.4%	10.5%	0.2%	0.8%	1.3%
Levy as a % of total costs	0.2%	0.1%	1.3%	2.5%	0.1%	0.6%	1.0%
Levy Impact on EBIT	-0.3%	-0.2%	-6.4%	-9.9%	-0.2%	-1.8%	-3.0%
<b>Option 4 (Water allocation alone)</b>							
Water based levy (\$/ML)							
Base component	\$3.26	\$3.26	\$3.26	\$3.26	\$3.26	\$3.26	\$3.26
Delivery supplement	\$0.33	\$0.33	\$0.33	\$3.26	\$0.33	\$0.33	\$3.26
Total levy payment (\$)	\$1,068	\$1,071	\$2,237	\$4,291	\$433	\$1,946	\$3,489
Levy as a % of variable costs	0.3%	0.2%	6.0%	12.2%	0.2%	0.9%	1.5%
Levy as a % of total costs	0.2%	0.1%	1.5%	2.9%	0.1%	0.6%	1.1%
Levy Impact on EBIT	-0.3%	-0.2%	-7.2%	-11.6%	-0.2%	-2.0%	-3.5%

Source: NR South East and EconSearch analysis

**Table 3.3 NRM Water Levy rates (\$/ML) and financial impact of water based levy on representative farms in the South East, Budget Scenario 2**

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1 (Fixed charge \$50 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Base component	\$4.08	\$4.08	\$4.08	\$4.08	\$4.08	\$4.08	\$4.08
Delivery supplement	\$0.41	\$0.41	\$0.41	\$4.08	\$0.41	\$0.41	\$4.08
Total levy payment (\$)	\$1,387	\$1,390	\$2,850	\$5,420	\$592	\$2,485	\$4,416
Levy as a % of variable costs	0.4%	0.2%	7.6%	15.0%	0.2%	1.1%	1.9%
Levy as a % of total costs	0.2%	0.2%	1.9%	3.7%	0.1%	0.8%	1.4%
Levy Impact on EBIT	-0.4%	-0.2%	-9.0%	-14.2%	-0.2%	-2.5%	-4.4%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
Base component	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95
Delivery supplement	\$0.40	\$0.40	\$0.40	\$3.95	\$0.40	\$0.40	\$3.95
Total levy payment (\$)	\$1,394	\$1,398	\$2,811	\$5,299	\$625	\$2,458	\$4,327
Levy as a % of variable costs	0.4%	0.2%	7.5%	14.7%	0.2%	1.1%	1.9%
Levy as a % of total costs	0.2%	0.2%	1.9%	3.6%	0.1%	0.8%	1.4%
Levy Impact on EBIT	-0.4%	-0.2%	-8.9%	-13.9%	-0.2%	-2.5%	-4.3%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
Base component	\$3.57	\$3.57	\$3.57	\$3.57	\$3.57	\$3.57	\$3.57
Delivery supplement	\$0.36	\$0.36	\$0.36	\$3.57	\$0.36	\$0.36	\$3.57
Total levy payment (\$)	\$1,370	\$1,373	\$2,650	\$4,899	\$674	\$2,331	\$4,020
Levy as a % of variable costs	0.4%	0.2%	7.1%	13.7%	0.3%	1.0%	1.8%
Levy as a % of total costs	0.2%	0.2%	1.8%	3.4%	0.1%	0.8%	1.3%
Levy Impact on EBIT	-0.4%	-0.2%	-8.4%	-13.0%	-0.3%	-2.3%	-4.0%
<b>Option 4 (Water allocation alone)</b>							
Water based levy (\$/ML)							
Base component	\$4.25	\$4.25	\$4.25	\$4.25	\$4.25	\$4.25	\$4.25
Delivery supplement	\$0.43	\$0.43	\$0.43	\$4.25	\$0.43	\$0.43	\$4.25
Total levy payment (\$)	\$1,393	\$1,396	\$2,917	\$5,594	\$565	\$2,537	\$4,548
Levy as a % of variable costs	0.4%	0.2%	7.7%	15.4%	0.2%	1.1%	2.0%
Levy as a % of total costs	0.2%	0.2%	2.0%	3.8%	0.1%	0.8%	1.5%
Levy Impact on EBIT	-0.4%	-0.2%	-9.2%	-14.6%	-0.2%	-2.5%	-4.5%

Source: NR South East and EconSearch analysis

**Table 3.4 NRM Water Levy rates (\$/ML) and financial impact of water based levy on representative farms in the South East, Budget Scenario 3**

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1 (Fixed charge \$50 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Base component	\$4.55	\$4.55	\$4.55	\$4.55	\$4.55	\$4.55	\$4.55
Delivery supplement	\$0.46	\$0.46	\$0.46	\$4.55	\$0.46	\$0.46	\$4.55
Total levy payment (\$)	\$1,541	\$1,545	\$3,173	\$6,038	\$655	\$2,766	\$4,919
Levy as a % of variable costs	0.4%	0.2%	8.4%	16.4%	0.3%	1.2%	2.2%
Levy as a % of total costs	0.2%	0.2%	2.1%	4.1%	0.1%	0.9%	1.6%
Levy Impact on EBIT	-0.4%	-0.2%	-9.9%	-15.5%	-0.2%	-2.8%	-4.8%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
Base component	\$4.38	\$4.38	\$4.38	\$4.38	\$4.38	\$4.38	\$4.38
Delivery supplement	\$0.44	\$0.44	\$0.44	\$4.38	\$0.44	\$0.44	\$4.38
Total levy payment (\$)	\$1,535	\$1,539	\$3,106	\$5,865	\$682	\$2,714	\$4,787
Levy as a % of variable costs	0.4%	0.2%	8.2%	16.0%	0.3%	1.2%	2.1%
Levy as a % of total costs	0.2%	0.2%	2.1%	4.0%	0.1%	0.9%	1.6%
Levy Impact on EBIT	-0.4%	-0.2%	-9.7%	-15.2%	-0.3%	-2.7%	-4.7%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>							
Water based levy (\$/ML)							
Fixed charge	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00
Base component	\$4.04	\$4.04	\$4.04	\$4.04	\$4.04	\$4.04	\$4.04
Delivery supplement	\$0.40	\$0.40	\$0.40	\$4.04	\$0.40	\$0.40	\$4.04
Total levy payment (\$)	\$1,524	\$1,527	\$2,973	\$5,517	\$737	\$2,611	\$4,523
Levy as a % of variable costs	0.4%	0.2%	7.9%	15.2%	0.3%	1.2%	2.0%
Levy as a % of total costs	0.2%	0.2%	2.0%	3.8%	0.1%	0.9%	1.5%
Levy Impact on EBIT	-0.4%	-0.2%	-9.4%	-14.4%	-0.3%	-2.6%	-4.5%
<b>Option 4 (Water allocation alone)</b>							
Water based levy (\$/ML)							
Base component	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72	\$4.72
Delivery supplement	\$0.47	\$0.47	\$0.47	\$4.72	\$0.47	\$0.47	\$4.72
Total levy payment (\$)	\$1,547	\$1,551	\$3,239	\$6,212	\$627	\$2,817	\$5,051
Levy as a % of variable costs	0.4%	0.2%	8.5%	16.8%	0.2%	1.2%	2.2%
Levy as a % of total costs	0.2%	0.2%	2.2%	4.2%	0.1%	0.9%	1.6%
Levy Impact on EBIT	-0.4%	-0.2%	-10.1%	-15.9%	-0.2%	-2.8%	-5.0%

Source: NR South East and EconSearch analysis



## 4. ANALYSIS OF DIVISION 1 AND 2 LEVIES COMBINED

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### 4.1 Impact of the Levies on Irrigation Farms

#### 4.1.1 Water and Land Based Levy

Understandably, with 12 different land and water scenarios confusion can occur to which combination is being viewed. To assist in this each table contains the 3 different land options (Option 1 (capital value), Option 2 (flat rate) and Option 3 (purpose and area)) and each table has one of the four water levy options applied to it. The tables have also been grouped according to the budget scenario that applies. For the combined land and water based levy the scenarios are:

- Scenario 1 (\$8.6m): land levy (\$4.64) and water levy (\$3.96)
- Scenario 2 (\$8.6m): land levy (\$3.44) and water levy (\$5.16)
- Scenario 3 (\$8.6m): land levy (\$2.87) and water levy (\$5.73)

Table 4.1 to Table 4.4 outlines the impact of the Scenario 1, Table 4.5 to Table 4.8 outlines the impact of Scenario 2 and Table 4.9 to Table 4.12 outlines the impact of Scenario 3.

It should be noted that for Land Option 3 (purpose and area) a rural property rate (\$/Ha) was applied to the mean area given for each of the main irrigation crops in the South East NRM region. This rate was based on the mean \$/m<sup>2</sup> rate provided by SENRMB. As the diversity of farm size cannot be adequately represented in models of this type caution is required in their interpretation and use.

The key point to note from the results is that the land based levy does increase the aggregate levy paid by landholders but only marginally increases the impact of both levies.

**Budget Scenario 1: Land levy (\$4.64m) + Water levy (\$3.96m)**

Table 4.1 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 1, Water Option 1 (fixed charge \$50 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,063	\$1,065	\$2,171	\$4,117	\$461	\$1,894	\$3,357
Land based levy (\$)	\$690	\$303	\$254	\$254	\$808	\$1,031	\$1,031
Total levy payment (\$)	\$1,753	\$1,368	\$2,424	\$4,370	\$1,269	\$2,925	\$4,387
Levies as a % of variable costs	0.5%	0.4%	0.6%	1.2%	0.3%	0.8%	1.2%
Levies as a % of total costs	0.3%	0.2%	0.4%	0.7%	0.2%	0.4%	0.7%
Levies impact on EBIT	-0.5%	-0.2%	-7.8%	-11.8%	-0.5%	-2.9%	-4.3%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,063	\$1,065	\$2,171	\$4,117	\$461	\$1,894	\$3,357
Land based levy (\$)	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Total levy payment (\$)	\$1,183	\$1,186	\$2,291	\$4,237	\$581	\$2,015	\$3,477
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.1%	0.2%	0.5%	0.9%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.7%	0.1%	0.3%	0.5%
Levies impact on EBIT	-0.3%	-0.2%	-7.4%	-11.4%	-0.2%	-2.0%	-3.5%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,063	\$1,065	\$2,171	\$4,117	\$461	\$1,894	\$3,357
Land based levy (\$)	\$220	\$94	\$47	\$47	\$542	\$691	\$691
Total levy payment (\$)	\$1,283	\$1,159	\$2,218	\$4,164	\$1,002	\$2,585	\$4,048
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.1%	0.3%	0.7%	1.1%
Levies as a % of total costs	0.2%	0.2%	0.3%	0.6%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.4%	-0.2%	-7.2%	-11.3%	-0.4%	-2.6%	-4.0%

Source: EconSearch analysis

Table 4.2 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 1, Water Option 2 (fixed charge \$100 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,005	\$1,007	\$1,994	\$3,733	\$467	\$1,747	\$3,053
Land based levy (\$)	\$690	\$303	\$254	\$254	\$808	\$1,031	\$1,031
Total levy payment (\$)	\$1,695	\$1,309	\$2,248	\$3,986	\$1,275	\$2,778	\$4,084
Levies as a % of variable costs	0.5%	0.4%	0.6%	1.1%	0.4%	0.8%	1.1%
Levies as a % of total costs	0.3%	0.2%	0.3%	0.6%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.5%	-0.2%	-7.2%	-10.8%	-0.5%	-2.8%	-4.0%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,005	\$1,007	\$1,994	\$3,733	\$467	\$1,747	\$3,053
Land based levy (\$)	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Total levy payment (\$)	\$1,125	\$1,127	\$2,115	\$3,853	\$587	\$1,868	\$3,174
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.0%	0.2%	0.5%	0.8%
Levies as a % of total costs	0.2%	0.2%	0.3%	0.6%	0.1%	0.3%	0.5%
Levies impact on EBIT	-0.3%	-0.2%	-6.8%	-10.5%	-0.2%	-1.9%	-3.2%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,005	\$1,007	\$1,994	\$3,733	\$467	\$1,747	\$3,053
Land based levy (\$)	\$220	\$94	\$47	\$47	\$542	\$691	\$691
Total levy payment (\$)	\$1,224	\$1,101	\$2,042	\$3,780	\$1,008	\$2,438	\$3,744
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.0%	0.3%	0.7%	1.0%
Levies as a % of total costs	0.2%	0.2%	0.3%	0.6%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.3%	-0.2%	-6.6%	-10.3%	-0.4%	-2.4%	-3.7%

Source: EconSearch analysis

Table 4.3 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 1, Water Option 3 (fixed charge \$200 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,046	\$1,048	\$1,971	\$3,596	\$543	\$1,740	\$2,961
Land based levy (\$)	\$690	\$303	\$254	\$254	\$808	\$1,031	\$1,031
Total levy payment (\$)	\$1,736	\$1,350	\$2,224	\$3,849	\$1,351	\$2,771	\$3,992
Levies as a % of variable costs	0.5%	0.4%	0.6%	1.1%	0.4%	0.8%	1.1%
Levies as a % of total costs	0.3%	0.2%	0.3%	0.6%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.5%	-0.2%	-7.2%	-10.5%	-0.5%	-2.8%	-4.0%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,046	\$1,048	\$1,971	\$3,596	\$543	\$1,740	\$2,961
Land based levy (\$)	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Total levy payment (\$)	\$1,166	\$1,168	\$2,091	\$3,716	\$663	\$1,860	\$3,081
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.0%	0.2%	0.5%	0.8%
Levies as a % of total costs	0.2%	0.2%	0.3%	0.6%	0.1%	0.3%	0.5%
Levies impact on EBIT	-0.3%	-0.2%	-6.8%	-10.2%	-0.2%	-1.9%	-3.1%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,046	\$1,048	\$1,971	\$3,596	\$543	\$1,740	\$2,961
Land based levy (\$)	\$220	\$94	\$47	\$47	\$542	\$691	\$691
Total levy payment (\$)	\$1,265	\$1,142	\$2,018	\$3,643	\$1,085	\$2,431	\$3,652
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.0%	0.3%	0.7%	1.0%
Levies as a % of total costs	0.2%	0.2%	0.3%	0.6%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.3%	-0.2%	-6.5%	-10.0%	-0.4%	-2.4%	-3.6%

Source: EconSearch analysis

Table 4.4 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 1, Water Option 4 (water allocation alone)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,068	\$1,071	\$2,237	\$4,291	\$433	\$1,946	\$3,489
Land based levy (\$)	\$690	\$303	\$254	\$254	\$808	\$1,031	\$1,031
Total levy payment (\$)	\$1,759	\$1,374	\$2,491	\$4,544	\$1,241	\$2,976	\$4,519
Levies as a % of variable costs	0.5%	0.4%	0.7%	1.2%	0.3%	0.8%	1.2%
Levies as a % of total costs	0.3%	0.2%	0.4%	0.7%	0.2%	0.5%	0.7%
Levies impact on EBIT	-0.5%	-0.2%	-8.0%	-12.2%	-0.5%	-3.0%	-4.5%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,068	\$1,071	\$2,237	\$4,291	\$433	\$1,946	\$3,489
Land based levy (\$)	\$120	\$120	\$120	\$120	\$120	\$120	\$120
Total levy payment (\$)	\$1,189	\$1,191	\$2,358	\$4,411	\$554	\$2,066	\$3,609
Levies as a % of variable costs	0.3%	0.3%	0.6%	1.2%	0.1%	0.6%	1.0%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.7%	0.1%	0.3%	0.6%
Levies impact on EBIT	-0.3%	-0.2%	-7.6%	-11.8%	-0.2%	-2.1%	-3.6%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,068	\$1,071	\$2,237	\$4,291	\$433	\$1,946	\$3,489
Land based levy (\$)	\$220	\$94	\$47	\$47	\$542	\$691	\$691
Total levy payment (\$)	\$1,288	\$1,165	\$2,285	\$4,338	\$975	\$2,637	\$4,180
Levies as a % of variable costs	0.4%	0.3%	0.6%	1.2%	0.3%	0.7%	1.1%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.7%	0.2%	0.4%	0.6%
Levies impact on EBIT	-0.4%	-0.2%	-7.4%	-11.7%	-0.4%	-2.6%	-4.1%

Source: EconSearch analysis

**Budget Scenario 2: Land levy (\$3.44m) + Water levy (\$5.16m)**

Table 4.5 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 2, Water Option 1 (Fixed charge \$50 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,387	\$1,390	\$2,850	\$5,420	\$592	\$2,485	\$4,416
Land based levy (\$)	\$511	\$224	\$188	\$188	\$599	\$763	\$763
Total levy payment (\$)	\$1,898	\$1,615	\$3,038	\$5,608	\$1,191	\$3,249	\$5,179
Levies as a % of variable costs	0.5%	0.4%	0.8%	1.5%	0.3%	0.9%	1.4%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-9.5%	-14.6%	-0.4%	-3.2%	-5.1%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,387	\$1,390	\$2,850	\$5,420	\$592	\$2,485	\$4,416
Land based levy (\$)	\$89	\$89	\$89	\$89	\$89	\$89	\$89
Total levy payment (\$)	\$1,476	\$1,480	\$2,939	\$5,509	\$681	\$2,574	\$4,505
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.5%	0.2%	0.7%	1.2%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.8%	0.1%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.3%	-14.4%	-0.3%	-2.6%	-4.4%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,387	\$1,390	\$2,850	\$5,420	\$592	\$2,485	\$4,416
Land based levy (\$)	\$163	\$70	\$35	\$35	\$401	\$512	\$512
Total levy payment (\$)	\$1,550	\$1,460	\$2,885	\$5,455	\$994	\$2,997	\$4,928
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.4%	0.3%	0.8%	1.3%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.8%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.4%	-0.2%	-9.1%	-14.3%	-0.4%	-3.0%	-4.8%

Source: EconSearch analysis

Table 4.6 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 2, Water Option 2 (Fixed charge \$100 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,394	\$1,398	\$2,811	\$5,299	\$625	\$2,458	\$4,327
Land based levy (\$)	\$511	\$224	\$188	\$188	\$599	\$763	\$763
Total levy payment (\$)	\$1,906	\$1,622	\$2,999	\$5,487	\$1,224	\$3,221	\$5,090
Levies as a % of variable costs	0.5%	0.4%	0.8%	1.5%	0.3%	0.9%	1.4%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.8%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-9.4%	-14.3%	-0.5%	-3.2%	-5.0%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,394	\$1,398	\$2,811	\$5,299	\$625	\$2,458	\$4,327
Land based levy (\$)	\$89	\$89	\$89	\$89	\$89	\$89	\$89
Total levy payment (\$)	\$1,484	\$1,487	\$2,900	\$5,388	\$714	\$2,547	\$4,416
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.4%	0.2%	0.7%	1.2%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.8%	0.1%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.2%	-14.1%	-0.3%	-2.6%	-4.4%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,394	\$1,398	\$2,811	\$5,299	\$625	\$2,458	\$4,327
Land based levy (\$)	\$163	\$70	\$35	\$35	\$401	\$512	\$512
Total levy payment (\$)	\$1,557	\$1,467	\$2,846	\$5,334	\$1,026	\$2,970	\$4,839
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.4%	0.3%	0.8%	1.3%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.8%	0.2%	0.5%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.0%	-14.0%	-0.4%	-3.0%	-4.8%

Source: EconSearch analysis

Table 4.7 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 2, Water Option 3 (Fixed charge \$200 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,370	\$1,373	\$2,650	\$4,899	\$674	\$2,331	\$4,020
Land based levy (\$)	\$511	\$224	\$188	\$188	\$599	\$763	\$763
Total levy payment (\$)	\$1,881	\$1,597	\$2,838	\$5,086	\$1,273	\$3,094	\$4,784
Levies as a % of variable costs	0.5%	0.4%	0.8%	1.4%	0.3%	0.8%	1.3%
Levies as a % of total costs	0.3%	0.2%	0.4%	0.8%	0.2%	0.5%	0.7%
Levies impact on EBIT	-0.5%	-0.2%	-9.0%	-13.4%	-0.5%	-3.1%	-4.7%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,370	\$1,373	\$2,650	\$4,899	\$674	\$2,331	\$4,020
Land based levy (\$)	\$89	\$89	\$89	\$89	\$89	\$89	\$89
Total levy payment (\$)	\$1,459	\$1,462	\$2,739	\$4,988	\$764	\$2,420	\$4,109
Levies as a % of variable costs	0.4%	0.4%	0.7%	1.3%	0.2%	0.6%	1.1%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.8%	0.1%	0.4%	0.6%
Levies impact on EBIT	-0.4%	-0.2%	-8.7%	-13.2%	-0.3%	-2.4%	-4.1%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,370	\$1,373	\$2,650	\$4,899	\$674	\$2,331	\$4,020
Land based levy (\$)	\$163	\$70	\$35	\$35	\$401	\$512	\$512
Total levy payment (\$)	\$1,533	\$1,443	\$2,685	\$4,934	\$1,076	\$2,843	\$4,532
Levies as a % of variable costs	0.4%	0.4%	0.7%	1.3%	0.3%	0.8%	1.2%
Levies as a % of total costs	0.2%	0.2%	0.4%	0.8%	0.2%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-8.5%	-13.1%	-0.4%	-2.8%	-4.5%

Source: EconSearch analysis



**Table 4.8** Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 2, Water Option 4 (water allocation alone)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,393	\$1,396	\$2,917	\$5,594	\$565	\$2,537	\$4,548
Land based levy (\$)	\$511	\$224	\$188	\$188	\$599	\$763	\$763
Total levy payment (\$)	\$1,904	\$1,620	\$3,104	\$5,781	\$1,163	\$3,300	\$5,311
Levies as a % of variable costs	0.5%	0.4%	0.8%	1.6%	0.3%	0.9%	1.4%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-9.7%	-15.0%	-0.4%	-3.3%	-5.2%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,393	\$1,396	\$2,917	\$5,594	\$565	\$2,537	\$4,548
Land based levy (\$)	\$89	\$89	\$89	\$89	\$89	\$89	\$89
Total levy payment (\$)	\$1,482	\$1,485	\$3,006	\$5,683	\$654	\$2,626	\$4,637
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.5%	0.2%	0.7%	1.2%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.9%	0.1%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.5%	-14.8%	-0.2%	-2.6%	-4.6%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,393	\$1,396	\$2,917	\$5,594	\$565	\$2,537	\$4,548
Land based levy (\$)	\$163	\$70	\$35	\$35	\$401	\$512	\$512
Total levy payment (\$)	\$1,556	\$1,466	\$2,952	\$5,629	\$966	\$3,049	\$5,060
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.5%	0.3%	0.8%	1.4%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.9%	0.1%	0.5%	0.8%
Levies impact on EBIT	-0.4%	-0.2%	-9.3%	-14.6%	-0.4%	-3.0%	-5.0%

Source: EconSearch analysis

**Budget Scenario 1: Land levy (\$4.64m) + Water levy (\$3.96m)**

Table 4.9 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 3, Water Option 1 (Fixed charge \$50 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,541	\$1,545	\$3,173	\$6,038	\$655	\$2,766	\$4,919
Land based levy (\$)	\$426	\$187	\$157	\$157	\$499	\$636	\$636
Total levy payment (\$)	\$1,967	\$1,732	\$3,329	\$6,195	\$1,154	\$3,402	\$5,555
Levies as a % of variable costs	0.5%	0.3%	8.7%	16.8%	0.4%	1.5%	2.4%
Levies as a % of total costs	0.3%	0.3%	0.5%	0.9%	0.2%	0.5%	0.9%
Levies impact on EBIT	-0.5%	-0.3%	-10.4%	-15.9%	-0.4%	-3.4%	-5.4%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,541	\$1,545	\$3,173	\$6,038	\$655	\$2,766	\$4,919
Land based levy (\$)	\$74	\$74	\$74	\$74	\$74	\$74	\$74
Total levy payment (\$)	\$1,615	\$1,619	\$3,247	\$6,113	\$729	\$2,840	\$4,993
Levies as a % of variable costs	0.4%	0.4%	0.9%	1.6%	0.2%	0.8%	1.3%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.9%	0.1%	0.4%	0.8%
Levies impact on EBIT	-0.4%	-0.2%	-10.1%	-15.7%	-0.3%	-2.8%	-4.9%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,541	\$1,545	\$3,173	\$6,038	\$655	\$2,766	\$4,919
Land based levy (\$)	\$136	\$58	\$29	\$29	\$335	\$427	\$427
Total levy payment (\$)	\$1,677	\$1,603	\$3,202	\$6,068	\$989	\$3,193	\$5,346
Levies as a % of variable costs	0.4%	0.3%	8.4%	16.5%	0.4%	1.4%	2.3%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-10.0%	-15.6%	-0.4%	-3.2%	-5.2%

Source: EconSearch analysis

Table 4.10 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 3, Water Option 2 (Fixed charge \$100 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,535	\$1,539	\$3,106	\$5,865	\$682	\$2,714	\$4,787
Land based levy (\$)	\$426	\$187	\$157	\$157	\$499	\$636	\$636
Total levy payment (\$)	\$1,962	\$1,726	\$3,262	\$6,021	\$1,181	\$3,350	\$5,423
Levies as a % of variable costs	0.5%	0.5%	0.9%	1.6%	0.3%	0.9%	1.5%
Levies as a % of total costs	0.3%	0.3%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.3%	-10.2%	-15.5%	-0.4%	-3.3%	-5.3%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,535	\$1,539	\$3,106	\$5,865	\$682	\$2,714	\$4,787
Land based levy (\$)	\$74	\$74	\$74	\$74	\$74	\$74	\$74
Total levy payment (\$)	\$1,610	\$1,613	\$3,180	\$5,939	\$756	\$2,789	\$4,861
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.6%	0.2%	0.7%	1.3%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.9%	0.1%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.9%	-15.3%	-0.3%	-2.8%	-4.8%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,535	\$1,539	\$3,106	\$5,865	\$682	\$2,714	\$4,787
Land based levy (\$)	\$136	\$58	\$29	\$29	\$335	\$427	\$427
Total levy payment (\$)	\$1,671	\$1,597	\$3,135	\$5,894	\$1,017	\$3,141	\$5,214
Levies as a % of variable costs	0.5%	0.4%	0.9%	1.6%	0.3%	0.9%	1.4%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-9.8%	-15.2%	-0.4%	-3.1%	-5.1%

Source: EconSearch analysis

**Table 4.11** Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 3, Water Option 3 (Fixed charge \$200 + water allocation)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,524	\$1,527	\$2,973	\$5,517	\$737	\$2,611	\$4,523
Land based levy (\$)	\$426	\$187	\$157	\$157	\$499	\$636	\$636
Total levy payment (\$)	\$1,950	\$1,714	\$3,129	\$5,674	\$1,236	\$3,247	\$5,159
Levies as a % of variable costs	0.5%	0.5%	0.9%	1.5%	0.3%	0.9%	1.4%
Levies as a % of total costs	0.3%	0.3%	0.5%	0.9%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.3%	-9.8%	-14.7%	-0.5%	-3.2%	-5.1%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,524	\$1,527	\$2,973	\$5,517	\$737	\$2,611	\$4,523
Land based levy (\$)	\$74	\$74	\$74	\$74	\$74	\$74	\$74
Total levy payment (\$)	\$1,598	\$1,602	\$3,047	\$5,592	\$811	\$2,686	\$4,598
Levies as a % of variable costs	0.4%	0.4%	0.8%	1.5%	0.2%	0.7%	1.2%
Levies as a % of total costs	0.2%	0.2%	0.5%	0.9%	0.1%	0.4%	0.7%
Levies impact on EBIT	-0.4%	-0.2%	-9.6%	-14.6%	-0.3%	-2.7%	-4.5%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,524	\$1,527	\$2,973	\$5,517	\$737	\$2,611	\$4,523
Land based levy (\$)	\$136	\$58	\$29	\$29	\$335	\$427	\$427
Total levy payment (\$)	\$1,660	\$1,585	\$3,002	\$5,546	\$1,072	\$3,038	\$4,950
Levies as a % of variable costs	0.5%	0.4%	0.8%	1.5%	0.3%	0.8%	1.3%
Levies as a % of total costs	0.3%	0.2%	0.5%	0.8%	0.2%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-9.4%	-14.5%	-0.4%	-3.0%	-4.9%

Source: EconSearch analysis

Table 4.12 Financial impact of the water based plus land based levy on representative irrigation farms in the SENRM region, Budget Scenario 3, Water Option 4 (water allocation alone)

	Dairy	Potatoes	Lucerne	Lucerne (confined)	Winegrapes	Sheep	Sheep (confined)
<b>Option 1: Capital value</b>							
Water based levy (\$)	\$1,547	\$1,551	\$3,239	\$6,212	\$627	\$2,817	\$5,051
Land based levy (\$)	\$426	\$187	\$157	\$157	\$499	\$636	\$636
Total levy payment (\$)	\$1,973	\$1,737	\$3,396	\$6,369	\$1,126	\$3,453	\$5,687
Levies as a % of variable costs	0.5%	0.5%	0.9%	1.7%	0.3%	0.9%	1.5%
Levies as a % of total costs	0.3%	0.3%	0.5%	1.0%	0.2%	0.5%	0.9%
Levies impact on EBIT	-0.5%	-0.3%	-10.5%	-16.2%	-0.4%	-3.4%	-5.5%
<b>Option 2: Flat rate</b>							
Water based levy (\$)	\$1,547	\$1,551	\$3,239	\$6,212	\$627	\$2,817	\$5,051
Land based levy (\$)	\$74	\$74	\$74	\$74	\$74	\$74	\$74
Total levy payment (\$)	\$1,621	\$1,625	\$3,314	\$6,286	\$702	\$2,892	\$5,125
Levies as a % of variable costs	0.4%	0.4%	0.9%	1.7%	0.2%	0.8%	1.4%
Levies as a % of total costs	0.2%	0.3%	0.5%	1.0%	0.1%	0.4%	0.8%
Levies impact on EBIT	-0.4%	-0.2%	-10.3%	-16.1%	-0.3%	-2.9%	-5.0%
<b>Option 3: Purpose and area</b>							
Water based levy (\$)	\$1,547	\$1,551	\$3,239	\$6,212	\$627	\$2,817	\$5,051
Land based levy (\$)	\$136	\$58	\$29	\$29	\$335	\$427	\$427
Total levy payment (\$)	\$1,683	\$1,609	\$3,269	\$6,241	\$962	\$3,244	\$5,478
Levies as a % of variable costs	0.5%	0.4%	0.9%	1.7%	0.3%	0.9%	1.5%
Levies as a % of total costs	0.3%	0.2%	0.5%	1.0%	0.1%	0.5%	0.8%
Levies impact on EBIT	-0.5%	-0.2%	-10.2%	-16.0%	-0.4%	-3.2%	-5.4%

Source: EconSearch analysis

## 4.2 Impact of the Levies on Forestry

The analysis of the impact of the water based levy on forestry licence holders was based on an industry level rather than an enterprise level analysis. Enterprise level cost and return data were not available for this analysis; however forestry and logging industry level data was available from RISE models developed by EconSearch for the Limestone Coast Government region. Industry level earnings and costs were extracted from the base data from these models (Table 4.13).

Table 4.13 Forestry data, South East, 2013/14

	2013/14 <sup>a</sup>
	(\$m)
<b>Output - Forestry and logging (A)</b>	376.0
Local purchases of goods and services (B)	91.0
Regional imports (C)	74.3
<b>Total purchases of goods and services (D=B+C)</b>	165.3
<b>Industry gross margin (E=A-D)</b>	210.7
Wages and salaries (F)	48.4
<b>Estimated Industry EBITD<sup>b</sup> (G=E-F)</b>	<b>162.2</b>

<sup>a</sup> Derived from Limestone Coast RISE model and EconSearch analysis.

<sup>b</sup> Earnings before interest, tax and depreciation.

Forestry water licence and allocation data was provided by the Board and is summarised in Table 4.14.

Table 4.14 Forestry water license and allocation data, South East, 2013/14

	Total
Forestry water licences	165
Water allocations (ML)	307,018

Source: NR South East

Based on the estimates described in Table 4.13 and Table 4.14, the impact of the water based levy is presented in Table 4.15. The impact of the water and land based levy options on forestry water licence holders in aggregate is presented in Table 4.16 for Scenario 1 (\$8.6m): land levy (\$4.64) and water levy (\$3.96), Table 4.17 for Scenario 2 (\$8.6m): land levy (\$3.44) and water levy (\$5.16) and Table 4.18 for Scenario 3: (\$8.6m): land levy (\$2.87) and water levy (\$5.73).

For the water levy alone, all options have a *minor* impact on the industry as a whole (reduces EBITD by less than 1 per cent). Option 4 (water allocation alone) applied to budget Scenario 3 (\$5.73m) has the greatest impact while Option 3 (\$200 fixed charge + water allocation) applied to budget Scenario 1 has the least impact.

The combined impact of the land and water based levy has a *minor* impact across all options across the industry as a whole. The combination of Land Option 1 and Water Option 4 under Scenario 3 is the only exception, resulting in a *moderate* impact. For all scenarios the land and water levy combination of Option 1 (capital value) + Option 4 (water allocation alone) has the greatest impact and the combination of Option 2 (flat rate) + Option 3 (\$200 fixed charge + water allocation) has the least impact.

As the EBITD calculation was developed from an industry wide data set caution should be taken when interpreting these results. With an industry wide perspective the EBITD value calculated may be an inflated representation of the true earnings of the forestry sector in the South East. This is likely as the data used to calculate the EBITD represents the regional activity of both the forestry and the logging industries in the Limestone Coast Government region. An inflated EBITD would result in a lesser levy impact being reported and so we would expect the true impact on the forestry sector to be slightly higher than the numbers reported below.

Table 4.15 Financial impact of the water based levy on the forestry industry in the South East <sup>a</sup>

	Water Levy		
	Scenario 1	Scenario 2	Scenario 3
<b>Option 1 (Fixed charge \$50 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$50.00	\$50.00	\$50.00
Forest Water Levy - base component (\$/ML)	\$3.09	\$4.08	\$4.55
Aggregate Levy payment	\$956,936	\$1,260,883	\$1,405,182
Levy impact on EBITD <sup>a</sup>	-0.6%	-0.8%	-0.9%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$100.00	\$100.00	\$100.00
Forest Water Levy - base component (\$/ML)	\$2.76	\$3.95	\$4.38
Aggregate Levy payment	\$863,870	\$1,229,221	\$1,361,239
Levy impact on EBITD <sup>a</sup>	-0.5%	-0.8%	-0.8%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$200.00	\$200.00	\$200.00
Forest Water Levy - base component (\$/ML)	\$2.58	\$3.57	\$4.04
Aggregate Levy payment	\$825,106	\$1,129,054	\$1,273,353
Levy impact on EBITD <sup>a</sup>	-0.5%	-0.7%	-0.8%
<b>Option 4 (Water allocation only)</b>			
Forest Water Levy - base component (\$/ML)	\$3.26	\$4.25	\$4.72
Aggregate Levy payment	\$1,000,879	\$1,304,827	\$1,449,125
Levy impact on EBITD <sup>a</sup>	-0.6%	-0.8%	-0.9%

<sup>a</sup> Earnings before interest, tax and depreciation.

Source: EconSearch analysis

Table 4.16 Financial impact of the water and land based levy on the forestry industry in the South East, Scenario 1 <sup>a</sup>

	Land Scenario 1 (\$4.64m)		
	Option 1	Option 2	Option 3
<b>Option 1 (Fixed charge \$50 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$50.00	\$50.00	\$50.00
Forest Water Levy - base component (\$/ML)	\$3.09	\$3.09	\$3.09
Aggregate Land Levy (\$)	\$219,105	\$20,955	\$117,196
Aggregate Levy payment	\$1,176,041	\$977,891	\$1,074,131
Levy impact on EBITD <sup>a</sup>	-0.7%	-0.6%	-0.7%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$100.00	\$100.00	\$100.00
Forest Water Levy - base component (\$/ML)	\$2.76	\$2.76	\$2.76
Aggregate Land Levy (\$)	\$219,105	\$20,955	\$117,196
Aggregate Levy payment	\$1,082,975	\$884,825	\$981,065
Levy impact on EBITD <sup>a</sup>	-0.7%	-0.5%	-0.6%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$200.00	\$200.00	\$200.00
Forest Water Levy - base component (\$/ML)	\$2.58	\$2.58	\$2.58
Aggregate Land Levy (\$)	\$219,105	\$20,955	\$117,196
Aggregate Levy payment	\$1,044,212	\$846,061	\$942,302
Levy impact on EBITD <sup>a</sup>	-0.6%	-0.5%	-0.6%
<b>Option 4 (Water allocation only)</b>			
Forest Water Levy - base component (\$/ML)	\$3.26	\$3.26	\$3.26
Aggregate Land Levy (\$)	\$219,105	\$20,955	\$117,196
Aggregate Levy payment	\$1,219,984	\$1,021,834	\$1,118,074
Levy impact on EBITD <sup>a</sup>	-0.8%	-0.6%	-0.7%

<sup>a</sup> Earnings before interest, tax and depreciation.

Source: EconSearch analysis



Table 4.17 Financial impact of the water and land based levy on the forestry industry in the South East, Scenario 2 <sup>a</sup>

	Land Scenario 2 (\$3.44m)		
	Option 1	Option 2	Option 3
<b>Option 1 (Fixed charge \$50 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$50.00	\$50.00	\$50.00
Forest Water Levy - base component (\$/ML)	\$4.08	\$4.08	\$4.08
Aggregate Land Levy (\$)	\$162,300	\$15,507	\$86,865
Aggregate Levy payment	\$1,423,184	\$1,276,390	\$1,347,749
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.8%	-0.8%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$100.00	\$100.00	\$100.00
Forest Water Levy - base component (\$/ML)	\$3.95	\$3.95	\$3.95
Aggregate Land Levy (\$)	\$162,300	\$15,507	\$86,865
Aggregate Levy payment	\$1,391,521	\$1,244,728	\$1,316,086
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.8%	-0.8%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$200.00	\$200.00	\$200.00
Forest Water Levy - base component (\$/ML)	\$3.57	\$3.57	\$3.57
Aggregate Land Levy (\$)	\$162,300	\$15,507	\$86,865
Aggregate Levy payment	\$1,291,354	\$1,144,561	\$1,215,919
Levy impact on EBITD <sup>a</sup>	-0.8%	-0.7%	-0.7%
<b>Option 4 (Water allocation only)</b>			
Forest Water Levy - base component (\$/ML)	\$4.25	\$4.25	\$4.25
Aggregate Land Levy (\$)	\$162,300	\$15,507	\$86,865
Aggregate Levy payment	\$1,467,127	\$1,320,333	\$1,391,692
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.8%	-0.9%

<sup>a</sup> Earnings before interest, tax and depreciation.

Source: EconSearch analysis

Table 4.18 Financial impact of the water and land based levy on the forestry industry in the South East, Scenario 3 <sup>a</sup>

	Land Scenario 3 (\$2.87m)		
	Option 1	Option 2	Option 3
<b>Option 1 (Fixed charge \$50 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$50.00	\$50.00	\$50.00
Forest Water Levy - base component (\$/ML)	\$4.55	\$4.55	\$4.55
Aggregate Land Levy (\$)	\$135,237	\$12,839	\$72,388
Aggregate Levy payment	\$1,540,418	\$1,418,021	\$1,477,570
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.9%	-0.9%
<b>Option 2 (Fixed charge \$100 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$100.00	\$100.00	\$100.00
Forest Water Levy - base component (\$/ML)	\$4.38	\$4.38	\$4.38
Aggregate Land Levy (\$)	\$135,237	\$12,839	\$72,388
Aggregate Levy payment	\$1,496,475	\$1,374,077	\$1,433,626
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.8%	-0.9%
<b>Option 3 (Fixed charge \$200 + water allocation)</b>			
Forest Water Levy - fixed charge (\$)	\$200.00	\$200.00	\$200.00
Forest Water Levy - base component (\$/ML)	\$4.04	\$4.04	\$4.04
Aggregate Land Levy (\$)	\$135,237	\$12,839	\$72,388
Aggregate Levy payment	\$1,408,589	\$1,286,191	\$1,345,740
Levy impact on EBITD <sup>a</sup>	-0.9%	-0.8%	-0.8%
<b>Option 4 (Water allocation only)</b>			
Forest Water Levy - base component (\$/ML)	\$4.72	\$4.72	\$4.72
Aggregate Land Levy (\$)	\$135,237	\$12,839	\$72,388
Aggregate Levy payment	\$1,584,361	\$1,461,964	\$1,521,513
Levy impact on EBITD <sup>a</sup>	-1.0%	-0.9%	-0.9%

<sup>a</sup> Earnings before interest, tax and depreciation.

Source: EconSearch analysis

### 4.3 Impact of Aggregate Levies on GRP

Gross regional product (GRP) for the SENRM region for 2013/14 was estimated to be \$3.66 billion, which represents 4 per cent of South Australia's Gross State Product (\$96.97 billion).

The various levy amounts to be collected under the Division 1 and 2 levies as a proportion of GRP are detailed in Table 4.19. It shows that the total amount to be collected under all scenarios would be less than 0.3 per cent of SENRM region GRP. As Scenario 2 illustrates, this amount would be reduced if the aggregate levy income were reduced by \$500,000.

Table 4.19 Aggregate levy income as a proportion of gross regional product (GRP)

Levy Scenario	Division 1 Levy	Division 2 Levy	Total Amount	Total Amount/GRP
Scenario 1	\$4,644,000	\$3,956,000	\$8,600,000	0.235%
Scenario 2	\$3,440,000	\$5,160,000	\$8,600,000	0.235%
Scenario 3	\$2,866,380	\$5,733,620	\$8,600,000	0.235%
Scenario 2A	-	-	\$8,100,000	0.222%
Scenario 2B	-	-	\$8,100,000	0.222%
Scenario 2C	-	-	\$8,100,000	0.222%

Source: ABS (2015) and EconSearch analysis

## 5. SENSITIVITY ANALYSIS

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The Board has requested that commentary is provided on the sensitivity of the levy impacts if budgets were reduced by \$500,000. If this were to occur the total budget would shift from \$8.6 million, as modelled in this report, to \$8.1 million.

How the levy impacts individuals will be determined by how the \$500,000 reduction is spread between the Division 1 levy and Division 2 levy. While this presents a myriad of options, the scenarios presented in the report do provide some guidance on extreme cases.

Under an extreme example, the \$500,000 would be reduced entirely from either the Division 1 levy or the Division 2 levy. If it were the Division 1 levy this would create a regional NRM land based levy of \$4.14m (Scenario A), \$2.94m (Scenario B) and \$2.36m (Scenario C).

Conveniently, Scenario B (\$2.94m) is similar to Scenario 3 in this analysis (\$2.86m). Using the analysis in this report for Scenario 3 (\$2.86m) the difference in impacts created by the new combination of water and land based levies can be observed. Under this new budget Scenario (\$8.1m) the impacts of the NRM land based levy (\$2.94m) would be similar to the impacts in this report for Scenario 3 (\$8.6m, with a \$2.86m land based levy). The Division 2 impacts would remain the same as the figures in this report as the water levy budget would remain unchanged.

If the Division 2 levy was reduced by \$500,000 the NRM Water Levy scenarios would be \$3.45m (Scenario A), \$4.66m (Scenario B) and \$5.23m (Scenario C). As the new Scenario C has a water levy (\$5.23m), which is similar to the water levy for Scenario 2 provided in this report (\$5.16m), the impacts for this scenario can be readily observed. As \$5.23m is slightly higher, the impacts can be expected to be slightly higher than those reported for Scenario 2 (\$5.16m). The difference between the impacts reported for Scenario 2 (\$5.16m) and Scenario 3 (5.73m) is indicative of the change in impact that would occur if the budget were reduced by \$500,000.

These cases represent an extreme, where the total amount is taken from either levy. If the \$500,000 reduction was applied proportionally across both levies the impact of the levies would fall from the extreme in line with the proportional change in the quantum of buy collected.

If the Board is interested in particular examples- in particular, if it considers certain examples are close to levy impact tipping points, further analysis would be needed to be undertaken. This would generate results for these new scenarios in the same format provided in this report.

## REFERENCES

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### Disclaimer

We have prepared the above report exclusively for the use and benefit of our client. Neither the firm nor any employee of the firm undertakes responsibility in any way whatsoever to any person (other than to the above mentioned client) in respect of the report including any errors or omissions therein however caused.

# APPENDIX 1 AVERAGE PERSONAL INCOME BY LGA

Appendix Table 1-1 Average personal income in the SENRM region, by LGA, 2012/13 <sup>a</sup>

Local Government Area	Mean Taxable Income <sup>a</sup>	Mean Tax on Income <sup>b</sup>	Mean After Tax Income <sup>c</sup>	Mean Wages & Salaries (gross) <sup>d</sup>	Mean Wages & Salaries (net) <sup>e</sup>
Coorong	\$53,582	\$9,489	\$44,094	\$46,581	\$39,196
Grant	\$64,653	\$14,277	\$50,376	\$53,356	\$43,668
Kingston (Lacepede)	\$53,006	\$9,742	\$43,264	\$46,150	\$38,912
Mt Gambier City	\$57,040	\$11,185	\$45,855	\$52,285	\$42,961
Naracoorte & Lucindale	\$54,990	\$10,428	\$44,562	\$47,981	\$40,121
Robe	\$56,121	\$11,044	\$45,076	\$46,087	\$38,870
Tatiara	\$52,703	\$9,326	\$43,377	\$46,542	\$39,171
Wattle Range	\$57,870	\$11,311	\$46,559	\$51,673	\$42,557
<b>Total</b>	<b>\$56,688</b>	<b>\$11,000</b>	<b>\$45,688</b>	<b>\$50,507</b>	<b>\$41,787</b>

<sup>a</sup> Mean for taxable individuals, as reported by the ATO for 2012/13.

<sup>b</sup> Mean net tax paid, as reported by the ATO for 2012/13.

<sup>c</sup> Mean taxable income less mean net tax paid for 2012/13.

<sup>d</sup> Mean wages and salaries (gross) is the average before tax income of wage and salary earners reported by the ATO for 2012/13.

<sup>e</sup> Mean salaries and wages (net) is the estimated average after tax income of wage and salary earners and has been calculated based on average tax rates and the reported gross wages and salaries.

Source: ATO (2015a,b), and EconSearch analysis

# APPENDIX 2 DETAILED REPRESENTATIVE FARM FINANCIAL MODELS

Appendix Table 2.1 Cropping, dryland, 2013/14 <sup>a</sup>

<b>Farm Characteristics</b>		
Total Farm Area	ha	1,508
Area harvested - wheat	ha	289
Area harvested - barley	ha	160
No. of Sheep	no.	933
Sheep sold	no.	528
Wool produced	kg	5,235
Cattle sold	no.	24
		<b>Total</b>
<b>Income</b>		
Grain		\$475,543
Wool		\$31,240
Livestock Sales		\$129,414
Other Income		\$184,286
<b>Gross Income</b>		<b>\$820,483</b>
<b>Variable Costs</b>		
Purchases - sheep		\$31,361
Purchases - beef cattle		\$703
Handling and marketing		\$3,556
Hired labour		\$14,303
Shearing and crutching		\$4,302
Fertiliser		\$90,613
Fodder		\$190
Crop and pasture chemicals		\$85,857
Fuel, oil and grease		\$55,040
<b>Total Variable Costs</b>		<b>\$285,926</b>
<b>Overheads</b>		
Repairs and maintenance		\$52,969
Administration		\$27,547
Contracts		\$21,013
Rates		\$22,404
Interest		\$79,182
Payment to sharefarmers		\$0
Other cash costs		\$92,662
Operator & family labour		\$62,765
Depreciation		\$99,870
<b>Total Overheads</b>		<b>\$458,412</b>
<b>EBIT</b>		<b>\$155,326</b>
<b>Total Farm Capital</b>		<b>\$4,656,139</b>

<sup>a</sup> Values represent the average (mean) of the survey sample in ABARES region 431 for 2013/14.

Source: ABARES special request, Farm Surveys Report for region 431

Appendix Table 2.2 Cropping-livestock, dryland, 2013/14 <sup>a</sup>

<b>Farm Characteristics</b>		
Total Farm Area	ha	1,016
Area harvested - wheat	ha	106
Area harvested - barley	ha	76
No. of Sheep	no.	1,952
Sheep sold	no.	1,367
Wool produced	kg	8,904
Cattle sold	no.	50
		<b>Total</b>
<b>Income</b>		
Grain		\$298,344
Wool		\$58,539
Livestock Sales		\$180,555
Other Income		\$21,610
<b>Gross Income</b>		<b>\$559,048</b>
<b>Variable Costs</b>		
Purchases - sheep		\$27,825
Purchases - beef cattle		\$2,100
Handling and marketing		\$9,457
Hired labour		\$10,122
Shearing and crutching		\$10,174
Fertiliser		\$41,221
Fodder		\$6,076
Crop and pasture chemicals		\$25,654
Fuel, oil and grease		\$32,563
<b>Total Variable Costs</b>		<b>\$165,193</b>
<b>Overheads</b>		
Repairs and maintenance		\$39,105
Administration		\$12,130
Contracts		\$15,085
Rates		\$13,999
Interest		\$53,360
Payment to sharefarmers		\$6,901
Other cash costs		\$60,821
Operator & family labour		\$66,473
Depreciation		\$59,125
<b>Total Overheads</b>		<b>\$326,998</b>
<b>EBIT</b>		<b>\$120,217</b>
<b>Total Farm Capital</b>		<b>\$4,222,440</b>

<sup>a</sup> Values represent the average (mean) of the survey sample in ABARES region 431 for 2013/14.

Source: ABARES special request, Farm Surveys Report for region 431



Appendix Table 2.3 Sheep- Beef, dryland, 2013/14 <sup>a</sup>

<b>Farm Characteristics</b>		
Total Farm Area	ha	1,224
Area harvested - wheat	ha	0
Area harvested - barley	ha	1
No. of Sheep	no.	3,589
Sheep sold	no.	2,259
Wool produced	kg	15,725
Cattle sold	no.	257
		Total
<b>Income</b>		
Grain		\$3,929
Wool		\$103,276
Livestock Sales		\$394,419
Other Income		\$23,797
<b>Gross Income</b>		<b>\$525,421</b>
<b>Variable Costs</b>		
Purchases - sheep		\$22,948
Purchases - beef cattle		\$29,240
Handling and marketing		\$14,731
Hired labour		\$19,283
Shearing and crutching		\$29,153
Fertiliser		\$27,637
Fodder		\$18,088
Crop and pasture chemicals		\$4,055
Fuel, oil and grease		\$13,176
<b>Total Variable Costs</b>		<b>\$178,310</b>
<b>Overheads</b>		
Repairs and maintenance		\$18,667
Administration		\$10,823
Contracts		\$10,731
Rates		\$12,941
Interest		\$26,515
Payment to sharefarmers		\$0
Other cash costs		\$60,743
Operator & family labour		\$51,395
Depreciation		\$33,380
<b>Total Overheads</b>		<b>\$225,196</b>
<b>EBIT</b>		<b>\$148,431</b>
<b>Total Farm Capital</b>		<b>\$5,568,498</b>

<sup>a</sup> Values represent the average (mean) of the survey sample in ABARES region 431 for 2013/14.

Source: ABARES special request, Farm Surveys Report for region 431

Appendix Table 2.4 Dairy: centre pivot irrigation, 2013/14 <sup>a</sup>

Total area	ha	280	
Irrigated area	ha	45	
Total cows	no.	361	
Milk production/cow	litres	5,351	
Milk price	\$/litre	\$0.50	
Irrigation - base component	ML/ha	3.2	
Irrigation - delivery supplement	ML/ha	0.2	
Water use - base component	ML	143	
Water use - delivery supplement	ML	11	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Milk income	\$/cow	\$2,654.10	\$957,976
Stock sales	\$/cow	\$54.10	\$19,529
Other			\$10,139
<b>Gross Income</b>			<b>\$987,644</b>
<b>Variable Costs</b>			
Stock purchases	\$/cow	\$35.52	\$12,820
Livestock materials	\$/cow	\$51.54	\$18,602
Other materials	\$/cow	\$65.58	\$23,671
Fodder	\$/cow	\$540.77	\$195,187
Fertiliser	\$/ha	\$98.87	\$27,682
Fuel & oil	\$/cow	\$99.21	\$35,810
Crop & pasture chemicals	\$/ha	\$10.80	\$3,025
Power & heating	\$/cow	\$112.98	\$40,778
Dairy supplies	\$/cow	\$39.92	\$14,408
Irrigation pumping costs	\$/ML	\$74.23	\$810
<b>Total Variable Costs</b>			<b>\$372,794</b>
<b>Gross Margin</b>			<b>\$614,850</b>
<b>Overheads</b>			
Repairs & maintenance			
vehicles & plant			\$29,340
irrigation equipment			\$1,043
Labour			\$116,154
Depreciation			\$37,197
Interest			\$22,476
Administration & other			\$68,431.18
<b>Total Overheads</b>			<b>\$274,641</b>
<b>EBIT</b>			<b>\$362,684</b>
<b>Total Farm Capital</b>			<b>\$2,109,922</b>

<sup>a</sup> The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

Source: EconSearch analysis

Appendix Table 2.5 Potatoes: centre pivot irrigation, 2013/14 <sup>a</sup>

Irrigated area	ha	50	
Potato price	\$/t	\$598	
Potato yield	t/ha	46	
Irrigation - base component	ML/ha	1.4	
Irrigation - delivery supplement	ML/ha	0.0	
Water use - base component	ML	69	
Water use - delivery supplement	ML	0	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Sale of potatoes	\$/ha	\$27,769.93	\$1,388,497
<b>Gross Income</b>			<b>\$1,388,497</b>
<b>Variable Costs</b>			
Ground preparation and planting	\$/ha	\$1,686	\$84,307
Disease sprays	\$/ha	\$571.13	\$28,557
Pest sprays	\$/ha	\$197.26	\$9,863
Nutrient sprays	\$/ha	\$61.97	\$3,098
Herbicides	\$/ha	\$206.56	\$10,328
Fertiliser	\$/ha	\$643.51	\$32,176
Contract operations	\$/ha	\$3,515.73	\$175,787
Freight	\$/ha	\$1,078.89	\$53,944
Fuel	\$/ha	\$1,643.06	\$82,153
Labour	\$/ha	\$4,404.01	\$220,201
Irrigation pumping costs	\$/ML	\$74.23	\$5,121
<b>Total Variable Costs</b>			<b>\$621,227</b>
<b>Gross Margin</b>			<b>\$767,269</b>
<b>Overheads</b>			
Labour			\$53,773
Consumables			\$8,803
Maintenance			\$7,824
Depreciation			\$19,964
Insurance			\$7,944
Professional services			\$5,868
Office/administration			\$11,150
<b>Total Overheads</b>			<b>\$115,326</b>
<b>EBIT</b>			<b>\$651,943</b>

<sup>a</sup> The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

Source: EconSearch analysis

Appendix Table 2.6 Lucerne: flood irrigation, 2013/14<sup>a</sup>

Hay price	\$/tonne	\$245	
Hay yield	tonne/ha	2.7	
Seed price	\$/kg	\$4.24	
Seed yield	kg/ha	500	
Irrigated area	ha	60	
Hay production	tonnes	163	
Seed production	kg	30,000	
Irrigation - base component	ML/ha	6.6	
Irrigation - delivery supplement	ML/ha	7.5	
Water use - base component	ML	394	
Water use - delivery supplement	ML	448	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Hay	\$/ha	\$665.35	\$39,921
Seed	\$/ha	\$2,119.13	\$127,148
<b>Gross Income</b>			<b>\$167,069</b>
<b>Variable Costs</b>			
Seed cleaning	\$/ha	\$29.73	\$1,784
Fertiliser	\$/ha	\$82.54	\$4,952
Chemicals			
post emergents	\$/ha	\$36.85	\$2,211
dessicant	\$/ha	\$38.99	\$2,340
insecticides	\$/ha	\$8.48	\$509
Fuel & Oil	\$/ha	\$7.20	\$432
Freight			
seed/grain	\$/ha	\$3.00	\$180
fertiliser	\$/ha	\$1.70	\$102
hay	\$/ha	\$51.47	\$3,088
Aerial spraying	\$/ha	\$14.30	\$858
Hay mowing	\$/ha	\$50.04	\$3,003
Hay raking	\$/ha	\$33.60	\$2,016
Hay baling	\$/ha	\$102.94	\$6,177
Insurance - hay			
hay	\$/ha	\$2.88	\$173
seed	\$/ha	\$0.20	\$12
Irrigation pumping costs	\$/ML	\$17.67	\$6,971
<b>Total Variable Costs</b>			<b>\$34,806</b>
<b>Gross Margin</b>			<b>\$132,262</b>
<b>Overheads</b>			
Repairs & maintenance:			
vehicles & plant			\$19,561
irrigation infrastructure			\$1,043
Administration & other			\$4,831
Rates			\$5,507
Interest			\$7,035
Labour			\$61,879
Depreciation			\$10,647
<b>Total Overheads</b>			<b>\$110,504</b>
<b>EBIT</b>			<b>\$28,793</b>

<sup>a</sup> Values represent the costs and returns from a typical lucerne enterprise which, in most cases, will be part of a larger, whole farm operation. The overhead costs for the representative grower model were derived taking into account the fact that many farms run two or more enterprises. The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

Source: EconSearch analysis

Appendix Table 2.7 Lucerne: flood irrigation, contained aquifer 2013/14<sup>a b</sup>

Hay price	\$/tonne	\$245	
Hay yield	tonne/ha	2.7	
Seed price	\$/kg	\$4.24	
Seed yield	kg/ha	500	
Irrigated area	ha	60	
Hay production	tonnes	163	
Seed production	kg	30,000	
Irrigation - base component	ML/ha	2.8	
Irrigation - delivery supplement	ML/ha	3.1	
Water use - base component	ML	166	
Water use - delivery supplement	ML	189	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Hay	\$/ha	\$665.35	\$39,921
Seed	\$/ha	\$2,119.13	\$127,148
<b>Gross Income</b>			<b>\$167,069</b>
<b>Variable Costs</b>			
Seed cleaning	\$/ha	\$29.73	\$1,784
Fertiliser	\$/ha	\$82.54	\$4,952
Chemicals			
post emergents	\$/ha	\$36.85	\$2,211
dessicant	\$/ha	\$38.99	\$2,340
insecticides	\$/ha	\$8.48	\$509
Fuel & Oil	\$/ha	\$7.20	\$432
Freight			
seed/grain	\$/ha	\$3.00	\$180
fertiliser	\$/ha	\$1.70	\$102
hay	\$/ha	\$51.47	\$3,088
Aerial spraying	\$/ha	\$14.30	\$858
Hay mowing	\$/ha	\$50.04	\$3,003
Hay raking	\$/ha	\$33.60	\$2,016
Hay baling	\$/ha	\$102.94	\$6,177
Insurance - hay			
hay	\$/ha	\$2.88	\$173
seed	\$/ha	\$0.20	\$12
Irrigation pumping costs	\$/ML	\$17.67	\$2,941
<b>Total Variable Costs</b>			<b>\$30,777</b>
<b>Gross Margin</b>			<b>\$136,292</b>
<b>Overheads</b>			
Repairs & maintenance:			
vehicles & plant			\$19,561
irrigation infrastructure			\$1,043
Administration & other			\$4,831
Rates			\$5,507
Interest			\$7,035
Labour			\$61,879
Depreciation			\$10,647
<b>Total Overheads</b>			<b>\$110,504</b>
<b>EBIT</b>			<b>\$32,823</b>

<sup>a</sup> Values represent the costs and returns from a typical lucerne enterprise which, in most cases, will be part of a larger, whole farm operation. The overhead costs for the representative grower model were derived taking into account the fact that many farms run two or more enterprises. The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

<sup>b</sup> Costs are modelled for the Tintinara PWA, where licensees pump water from the aquifer. The cost of extracting water would be less in other regions (such as Kingston) where there are no costs for pumping as the water is artesian.

Source: EconSearch analysis

Appendix Table 2.8 Winegrapes: drip irrigation, 2013/14 <sup>a</sup>

Grape price	\$/t	\$1,307	
Grape yield	t/ha	11.7	
Irrigated area	ha	54	
Irrigation - base component	ML/ha	0.6	
Irrigation - delivery supplement	ML/ha	0.0	
Water use - base component	ML	32	
Water use - delivery supplement	ML	0	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Sale of grapes	\$/ha	\$15,249.71	\$823,484
<b>Gross Income</b>		<b>\$15,249.71</b>	<b>\$823,484</b>
<b>Variable Costs</b>			
Disease sprays	\$/ha	\$357.35	\$19,297
Pest sprays	\$/ha	\$53.71	\$2,900
Nutrient sprays	\$/ha	\$115.67	\$6,246
Herbicides	\$/ha	\$97.08	\$5,242
Fertiliser	\$/ha	\$1,264.68	\$68,293
Contract operations	\$/ha	\$2,023.99	\$109,295
Fuel	\$/ha	\$275.89	\$14,898
Labour	\$/ha	\$504.12	\$27,223
Irrigation pumping costs	\$/ML	\$74.23	\$2,368
<b>Total Variable Costs</b>			<b>\$255,762</b>
<b>Gross Margin</b>			<b>\$567,723</b>
<b>Overheads</b>			
Labour			\$147,876
Consumables			\$5,999
Maintenance			\$32,602
Depreciation			\$86,843
Insurance			\$5,811
Professional services			\$9,129
Office/administration			\$10,736
<b>Total Overheads</b>			<b>\$298,994</b>
<b>EBIT</b>			<b>\$268,728</b>

<sup>a</sup> Estimates of winegrape price were derived from information published by the Phylloxera and Grape Industry Board of South Australia in their *2009 South Australian Winegrape Utilisation and Pricing Survey*. These are weighted average values (price) across all wine growing regions in the South East from the 2009 vintage. The cost, yield and vineyard size data were based on EconSearch (2013) and on work undertaken for the PGIBSA by EconSearch and SRHS (2002), for PIRSA by EconSearch and SRHS (2004).

Source: Phylloxera and Grape Industry Board of South Australia (2015) and EconSearch analysis

Appendix Table 2.9 Sheep: flood irrigation, 2013/14 <sup>a</sup>

No. of sheep	no.	2,289	
Total DSE	no.	4,212	
Average DSE	DSE/sheep	1.84	
Total area	ha	1,200	
Irrigated area	ha	60	
Irrigation - base component	ML/ha	2.1	
Irrigation - delivery supplement	ML/ha	2.0	
Water use - base component	ML	125	
Water use - delivery supplement	ML	121	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Wool	\$/sheep	\$37.31	\$85,404
Livestock sales	\$/sheep	\$132.26	\$302,776
Other Income			\$12,011
<b>Gross Income</b>			<b>\$400,191</b>
<b>Variable Costs</b>			
Shearing			
sheep	\$/sheep	\$2.60	\$5,947
rams	\$/sheep	\$0.10	\$230
shed labour	\$/sheep	\$0.81	\$1,865
woolclasser	\$/sheep	\$0.27	\$625
work cover	\$/sheep	\$0.21	\$477
wool packs	\$/sheep	\$0.40	\$919
shed sundries	\$/sheep	\$0.26	\$585
Dipping	\$/sheep	\$0.10	\$240
Crutching			
adult sheep	\$/sheep	\$0.73	\$1,662
lambs	\$/sheep	\$0.75	\$1,711
Animal health			
drench	\$/sheep	\$0.35	\$797
vaccine	\$/sheep	\$0.61	\$1,385
Stock purchases	\$/sheep	\$41.78	\$95,634
Freight			
livestock	\$/sheep	\$8.35	\$19,126
wool	\$/sheep	\$0.33	\$761
Stock selling charges			
commission	\$/sheep	\$6.81	\$15,595
yard fees	\$/sheep	\$0.65	\$1,490
levy-sheep	\$/sheep	\$0.20	\$458
levy-lambs	\$/sheep	\$1.50	\$3,434
Fodder			
hay	\$/sheep	\$2.07	\$4,742
grain	\$/sheep	\$4.04	\$9,248
Insurance	\$/sheep	\$0.15	\$346
Fertiliser	\$/ha	\$43.53	\$52,231
Fuel, oil & grease	\$/sheep	\$0.38	\$877
Irrigation pumping costs	\$/ML	\$18.56	\$2,323
<b>Total Variable Costs</b>			<b>\$222,707</b>
<b>Gross Margin</b>			<b>\$177,484</b>
<b>Overheads</b>			
Repairs & maintenance:			
vehicle & plant			\$7,215
irrigation infrastructure			\$1,043
Rates			\$2,257
Interest			\$3,062
Labour			\$55,136
Depreciation			\$11,477
<b>Total Overheads</b>			<b>\$80,191</b>
<b>EBIT</b>			<b>\$97,293</b>

<sup>a</sup> Values represent the costs and returns from a typical sheep grazing enterprise which, in most cases, will be just part of a larger, whole farm operation. The overhead costs for the representative grower model were derived taking into account the fact that many farms run two or more enterprises. The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

Source: EconSearch analysis

Appendix Table 2.10 Sheep: flood irrigation, contained aquifer, 2013/14 <sup>a</sup>

No. of sheep	no.	2,289	
Total DSE	no.	4,212	
Average DSE	DSE/sheep	1.84	
Total area	ha	1,200	
Irrigated area	ha	60	
Irrigation - base component	ML/ha	2.4	
Irrigation - delivery supplement	ML/ha	2.4	
Water use - base component	ML	147	
Water use - delivery supplement	ML	142	
		<b>\$/unit</b>	<b>Total</b>
<b>Income</b>			
Wool	\$/sheep	\$37.31	\$85,404
Livestock sales	\$/sheep	\$132.26	\$302,776
Other Income			\$12,011
<b>Gross Income</b>			<b>\$400,191</b>
<b>Variable Costs</b>			
Shearing			
sheep	\$/sheep	\$2.60	\$5,947
rams	\$/sheep	\$0.10	\$230
shed labour	\$/sheep	\$0.81	\$1,865
woolclasser	\$/sheep	\$0.27	\$625
work cover	\$/sheep	\$0.21	\$477
wool packs	\$/sheep	\$0.40	\$919
shed sundries	\$/sheep	\$0.26	\$585
Dipping	\$/sheep	\$0.10	\$240
Crutching			
adult sheep	\$/sheep	\$0.73	\$1,662
lambs	\$/sheep	\$0.75	\$1,711
Animal health			
drench	\$/sheep	\$0.35	\$797
vaccine	\$/sheep	\$0.61	\$1,385
Stock purchases	\$/sheep	\$41.78	\$95,634
Freight			
livestock	\$/sheep	\$8.35	\$19,126
wool	\$/sheep	\$0.33	\$761
Stock selling charges			
commission	\$/sheep	\$6.81	\$15,595
yard fees	\$/sheep	\$0.65	\$1,490
levy-sheep	\$/sheep	\$0.20	\$458
levy-lambs	\$/sheep	\$1.50	\$3,434
Fodder			
hay	\$/sheep	\$2.07	\$4,742
grain	\$/sheep	\$4.04	\$9,248
Insurance	\$/sheep	\$0.15	\$346
Fertiliser	\$/ha	\$43.53	\$52,231
Fuel, oil & grease	\$/sheep	\$0.38	\$877
Irrigation pumping costs	\$/ML	\$18.56	\$2,727
<b>Total Variable Costs</b>			<b>\$223,111</b>
<b>Gross Margin</b>			<b>\$177,080</b>
<b>Overheads</b>			
Repairs & maintenance:			
vehicle & plant			\$7,215
irrigation infrastructure			\$1,043
Rates			\$2,257
Interest			\$3,062
Labour			\$55,136
Depreciation			\$11,477
<b>Total Overheads</b>			<b>\$80,191</b>
<b>EBIT</b>			<b>\$96,889</b>

<sup>a</sup> Values represent the costs and returns from a typical sheep grazing enterprise which, in most cases, will be just part of a larger, whole farm operation. The overhead costs for the representative grower model were derived taking into account the fact that many farms run two or more enterprises. The cost and return data were based on EconSearch (2013) and work undertaken for PIRSA by EconSearch and SRHS (2004) and were updated and modified for this study.

Source: EconSearch analysis