

Interim Report To:

**The NSW Public
Accounts Committee**

for

**Quantitative Modelling of
NSW FSL Funding Methods**



Professional Financial Solutions

ABN: 84 096 646 178

March 2004

Table of Contents

GLOSSARY OF TERMS AND ABBREVIATIONS	3
1 EXECUTIVE SUMMARY	5
2 INTRODUCTION	11
3 FUNDING SYSTEMS UTILISED IN NSW AND OTHER STATES.....	14
4 IMPACT ON CONTRIBUTION BASE OF MOVING TO A PROPERTY-BASED LEVY	17
5 DESIGN ISSUES FOR A PROPERTY-BASED LEVY	19
6 TEST SCENARIOS AND RESULTS	25
7 ANCILLARY RESULTS	36
8 ASSUMPTIONS AND LIMITATIONS	39
9 DATA.....	41
10 BUILDING A MATCHED DATA SET	52
APPENDIX 1: TECHNICAL OVERVIEW OF THE FSL MODEL.....	57
APPENDIX 2: GREATER METROPOLITAN REGION COUNCILS	60
APPENDIX 3: GROWTH IN AVERAGE LAND VALUES TO 2003	61
APPENDIX 4: AVERAGE SUM INSURED LEVELS	64
APPENDIX 5: DETAILED RESULTS FOR THE COMBINED SCENARIO.....	68
APPENDIX 6: NUMBER OF VEHICLES REGISTERED IN NSW	75
APPENDIX 7: MATCHED DATA SCATTER PLOTS	76

Glossary of Terms and Abbreviations

Ad valorem Rate	The rate that is applied to the property value to determine the levy.
Aggregate Calculations	The calculations in the model that incorporate the Valuer General's property database with the test levy structure, to estimate the total amount of revenue collected under a property-based system.
Beneficiary Pays Scenario	The test scenario designed to show a property-based levy that reflects the level of benefit received by property owners from the fire services.
Combined Scenario	The test scenario that combines some of the features of the Beneficiary Pays, Service Standard and User Pays scenarios.
Committee	The Public Accounts Committee.
Data Sheets	The components of the financial model that store the matched datasets for the different property groups.
Flat Levy	A levy that has a value that is independent of the value of the property.
Greater Metropolitan Region	The region, developed by the Department of Infrastructure, Planning and Natural Resources of NSW, that covers the local councils in and around Sydney, Newcastle and Wollongong.
Individual Comparisons	The calculations in the financial model which estimate the number of properties contributing more and less under the scenario tested compared to current contribution levels.
Interface Component	The component of the financial model which allows the user to set the levy structure and view the results of the Aggregate Calculations and the Individual Comparisons.
Levy Structure	The combination of any flat levies, ad valorem levies and levy caps that will determine the amount a property owner would pay under a property-based system.
Matched Dataset	The matched residential, commercial and farmland properties used in the Individual Comparisons.
Service Standard Scenario	The test scenario designed to show a property-based levy that reflects the level of service received by property owners from the fire services.
Timing Adjustment Factors	The factors that could be used to update the land values to 2003 values.
User Pays Scenario	The test scenario designed to show a property-based levy that reflects the utilisation of fire service resources by property owners.
Working Group	The group consisting of members of the PAC secretariat, NSW Treasury, ICA and PFS that provided advice on the development of the financial model and developing the test scenarios.

Abbreviations

FSL	Fire Service Levy
GMR	Greater Metropolitan Region
ICA	Insurance Council of Australia
ISA	Insurance Statistics Australia
NSW DLG	NSW Department of Local Government
NSW FB	NSW Fire Brigades
RFS NSW	Rural Fire Services of NSW
RTA	Roads and Traffic Authority

1 Executive Summary

1.1 Project Objective (section 2)

Professional Financial Solutions (PFS) was appointed to develop a financial model to help the Public Accounts Committee (the Committee) assess the impact of changing the financing arrangements for the NSW Fire Services. The primary functions of the model are:

- To estimate the total revenue that would be collected from a property-based fire service levy (FSL) and
- To compare on an individual basis whether property owners, who currently insure, would contribute more or less under a property-based system.

In addition, the model also:

- Estimates the amount that the NSW State Government and local councils would pay under the property-based FSL and
- Estimates the amount of revenue lost if an exemption was provided to mining properties.

1.2 The Financial Model (sections 9, 10 and Appendix 1)

The financial model was developed using 30 June 2003 land valuation details from the Valuer General's office and insurance policy data from six major general insurance companies operating in NSW.

The Valuer General's database provided a complete list of assessed properties in NSW along with important details such as the type of property.

Following a call for records from the Committee, six insurance companies provided to PFS with in total 2.75 million policy records. This consolidated to approximately 1.39 million records with separate identifiable addresses. PFS then matched the insurance records with the Valuer General's database of land values to produce 900,000 matched records. All matched records showing obvious data errors (eg. negative FSL values) were removed. In addition, all matched records with contents or building only cover were removed, leaving only those matched records with both building and contents cover. The remaining 23,000 commercial and 536,000 residential and farmland properties records were used as the dataset in the Individual Comparisons.

To account for the impact of GST and stamp duty, which are applied on top of the insurance FSL, the FSL figures in the matched dataset were increased by 15.5%.

1.3 Scenarios Tested and Results (section 6)

Four test scenarios were developed to show the Committee the quantitative impact of different property-based systems on the matched dataset. Where a second ad valorem rate applies, it is an additional amount, over the first ad valorem rate, which applies on that part of the land value over \$500,000. The flat levies and ad valorem rates used were set for illustrative purposes only and different rates can be tested if required by the Committee. The Base Levy was set at \$50 for GMR properties, except in sections 1.3.1 and 1.3.3 where a lower

amount raised the required revenue for residential properties in the GMR. The test scenarios are set out overleaf:

1.3.1 Beneficiary Pays

This levy structure is designed to link the property-based FSL contribution to the level of benefit received from the fire services.

Test Levy Structure

Property Type	Base Levy	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)
Residential – GMR	\$34	Nil	Nil
Commercial – GMR	\$50	\$0.32	\$5.60
Residential – Non-GMR	\$50	\$0.25	Nil
Commercial – Non-GMR	\$50	\$0.32	\$42.00

Note1: GMR is the Greater Metropolitan Region.

Note2: A cap of \$200,000 applies for commercial and \$175 for residential properties.

1.3.2 Service Standards

This levy structure is designed to link the property-based FSL contribution to the level of service received from the fire services.

Test Levy Structure

Property Type	Base Levy	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)
Residential – GMR	\$50	\$0.14	Nil
Commercial – GMR	\$50	\$0.32	\$5.30
Residential – Non-GMR	\$30	\$0.08	Nil
Commercial – Non-GMR	\$30	\$0.19	\$3.18

Note: A cap of \$200,000 applies for commercial and \$175 for residential properties in the GMR and \$125,000 and \$105 respectively in the Non-GMR.

1.3.3 User Pays

This levy structure is designed to link the property-based FSL contribution to the level of fire service usage.

Test Levy Structure

Property Type	Base Levy	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)
Residential – GMR	\$38	Nil	Nil
Commercial – GMR	\$50	\$0.32	\$2.35
Residential – Non-GMR	\$50	\$0.58	Nil
Commercial – Non-GMR	\$50	\$14.00	\$42.00

Note: A cap of \$200,000 applies for commercial and \$175 for residential properties.

1.3.4 Combined

This levy structure is designed to combine features of the earlier approaches and treat small commercial properties similarly to residential properties.

Test Levy Structure

Property Type	Base Levy	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)
Residential – GMR	\$50	\$0.13	Nil
Commercial – GMR	\$50	\$0.13	\$5.57
Residential – Non-GMR	\$30	\$0.13	Nil
Commercial – Non-GMR	\$30	\$0.13	\$5.57

Note: A cap of \$200,000 applies for commercial and \$175 for residential properties.

In all four test scenarios, the amount of money to be raised has been set at \$412 million comprising the following components:

1. The insurance levy share of the 02/03 fire services budget (\$375.5 million);
2. The estimated amount needed to compensate the State Government for losses on stamp duty and GST (\$31.0 million) and
3. Assumed administration cost of \$2 per property (\$5.5 million).

1.4 Results of Analysis (sections 6 and 7)

The following tables show the key results from the Aggregate Calculations and Individual Comparisons. The “% Cont. Less” figures in the tables below represent the proportion of properties in that dataset that would contribute less under a property-based system. The final two columns represent the average reduction in contributions for those properties contributing less, and the average additional contribution for those properties contributing more.

1.4.1 Beneficiary Pays

Property Type	Share of Revenue	% Cont. Less	Av. Contribution Reduction	Av. Additional Contribution
Residential – GMR	14.6%	99.8%	\$78	\$13
Commercial – GMR	56.6%	48.5%	\$594	\$2,423
Residential – Non-GMR	14.8%	67.4%	\$28	\$22
Commercial – Non-GMR	14.0%	64.1%	\$259	\$1,601

Under this scenario, the share attributable to commercial properties would increase from the current allocation of 55.6% to over 70%.

This scenario favours GMR residential properties at the expense of commercial properties and, to a lesser extent, Non-GMR residential properties.

1.4.2 Service Standards

Property Type	Share of Revenue	% Cont. Less	Av. Contribution Reduction	Av. Additional Contribution
Residential – GMR	36.6%	71.5%	\$36	\$19
Commercial – GMR	54.1%	48.8%	\$599	\$2,309
Residential – Non-GMR	7.6%	98.8%	\$49	\$11
Commercial – Non-GMR	1.7%	83.3%	\$245	\$201

Under this scenario, GMR properties would contribute over 90% of the property-based FSL.

This scenario favours the Non-GMR properties and produces similar results for Commercial GMR properties to the Beneficiary Pays scenario.

1.4.3 User Pays

Property Type	Share of Revenue	% Cont. Less	Av. Contribution Reduction	Av. Additional Contribution
Residential – GMR	16.2%	99.8%	\$74	\$14
Commercial – GMR	29.0%	52.2%	\$685	\$1,077
Residential – Non-GMR	19.8%	41.6%	\$26	\$44
Commercial – Non-GMR	35.0%	4.7%	\$627	\$2,459

Under this scenario, Non-GMR properties would contribute 54.8% of the target amount of \$412 million, to reflect the higher per unit cost of the fire services in the region.

This scenario favours properties in the GMR over Non-GMR properties with more than 50% of the Non-GMR residential property owners contributing more.

1.4.4 Combined Scenario

Property Type	Share of Revenue	% Cont. Less	Av. Contribution Reduction	Av. Additional Contribution
Residential – GMR	35.6%	75.1%	\$36	\$17
Commercial – GMR	53.3%	59.9%	\$532	\$2,920
Residential – Non-GMR	8.7%	96.9%	\$45	\$16
Commercial – Non-GMR	2.4%	85.8%	\$239	\$420

The results of this scenario show that in all datasets tested, more than 50% of the properties would contribute less. However, some of the commercial properties in the GMR contributing more would contribute significantly more.

Farmland properties were also analysed separately, the results for these groups were similar to the Residential group.

1.4.5 A Hybrid System

The introduction of a hybrid system, in which the current insurance levy is replaced by a property-based system for residential properties, or for commercial properties, would mean that the funding shares between commercial and residential properties would need to be fixed. Therefore, the level at which the allocation is set will determine which groups will contribute more and which will contribute less (refer to section 7.1).

1.4.6 Impact on State Government

Public Trading Enterprises (PTEs) have been modelled separately to the other State Government properties. The results under the four scenarios show that estimated contributions on all these properties, if they were subject to the levy, would vary between \$9.9 million and \$15.0 million with PTE properties responsible for between \$0.8 and \$1.5 million (refer to section 7.5).

1.4.7 Impact on Local Councils

The total estimated contribution under the four scenarios for local government properties, if they are subject to the levy, range between \$6.1 million (Service Standards scenario) to \$53.1 million (User Pays scenario). The data provided

to PFS indicated that a large proportion of local council properties are in the Non-GMR region, therefore the cost to local councils is very sensitive to amount levied on commercial Non-GMR properties (refer to section 7.6).

For the purposes of this report, it has been assumed that the level of direct contributions from local councils remains unchanged as the report focuses on the impact of removing the current insurance levy. It is up to the Committee to consider whether the councils should continue to make direct contributions or to pay a levy on their properties.

1.4.8 Value of Exemption to Mines

As some mines are required to have their own fire services, PFS has modelled the impact of providing all mining properties an exemption from the property-based levy. The results show that the total value of this exemption ranges from \$0.6 million under the Service Standards scenario to \$5.2 million under the User Pays scenario (refer to section 7.4).

1.4.9 Impact of Motor Vehicle Levy

As at 30 June 2003 there were 4.6 million registered vehicles in NSW. Therefore a flat levy of \$10 per vehicle would reduce the amount needed from a property-based FSL by \$46 million (refer to section 7.2).

1.4.10 Impact of a Pensioner Discount

Data from the Department of Local Government shows that in the financial year 2002/03, 524,000 householders claimed the Pensioner Rebate. Using these figures, the cost of providing a 50% discount to this group has been estimated at between \$10.0 million under the Beneficiary Pays scenario and \$16.8 million under the Combined scenario (refer to section 7.3).

1.5 Limitations of Calculations and Analysis (section 8)

The following limitations should be considered when reading this report.

- Local Councils currently operate on a three year cycle; therefore the actual values currently used by Councils may be up to three years behind the values used in this model. Timing Adjustment Factors could be produced to compensate for the average growth of out of date land values for different property types for each local council.
- The results of the Individual Comparisons for commercial properties will understate the amount currently paid under the insurance-based FSL system. This is particularly the case for large commercial property owners where, for example, tenants purchase business insurance policies or where large businesses pay the FSL on non-property related insurance (eg. consequential loss cover).
- The model only allows for direct impacts. Therefore, possible secondary impacts, such as a body corporate passing on the savings from removing the FSL on the building insurance cover to unit owners, or a commercial building owner passing on higher FSL payments on to tenants, are not reflected in the results.
- Due to the difficulties in matching the addresses of unit and townhouses and allocating the building cover to individual owners, units and townhouses have not been included in the Individual Comparisons.

- Only those residential and farmland properties with both building and contents cover have been included in the analysis.

Signed
Doug Drysdale BSc FIAA Thach Huynh BEc AIAA
Principal Consultant

Date:

Professional Financial Solutions Pty Limited
ABN: 84 096 646 178

2 Introduction

2.1 Terms of Reference

Following a recommendation of the Owen Royal Commission into the collapse of the HIH Insurance Group, Mr Michael Egan, the Treasurer of NSW, issued the Terms of Reference for an inquiry by the Public Accounts Committee (the Committee) into the current and alternative methods of funding the fire services in NSW.

The Terms of Reference included under item 3(e) to “*undertake modelling of the impact of the proposed funding arrangements on taxpayers to assist in determining proposed funding arrangements*”.

Other Terms of Reference included:

- Requiring the recommendations on future funding to be as near as possible to cost neutral;
- That consideration be given as to how the State Government’s contribution to funding should be determined within any new funding network and
- That consideration is given to the implications of changed fire services funding arrangements on local governments.

2.2 Objectives of Modelling Project

Professional Financial Solutions (PFS) was appointed as financial modellers for this project in July 2003, by a selection committee comprising of representatives from NSW Treasury, NSW Emergency Services and the Insurance Council of Australia (ICA).

The project is to develop a financial model which provides factual information to help the Committee assess the impact of changing the financing arrangements for the NSW Fire Brigades (NSW FB) and the Rural Fire Services of NSW (RFS NSW). Currently, the major source of funding for the fire services is a levy on general insurance companies, which is recouped through a fire services levy (FSL) on certain types of insurance policies. The change proposed is to replace this insurance-based levy with a property-based levy.

The primary objectives, as set out by the selection committee, of the model developed by PFS are as follows:

1. *To determine the expected total revenue generated under various scenarios with a new property-based levy (the Aggregate Calculations) and*
2. *To determine the potential number, and percentage, of individual properties which will contribute more and contribute less following the proposed change, by geographic regions and in aggregate (the Individual Comparisons).*

In addition to the primary objectives outlined above, PFS was asked to develop a model that can provide the following information:

- (i) The average dollar amount by which properties contributing less have benefited from the change;
- (ii) The average dollar amount by which properties contributing more have suffered from the change;
- (iii) Assess whether variations existed between property types and local council areas;
- (iv) Estimate the cost to local councils if the property-based FSL is applied to local council properties;
- (v) Estimate the cost to the NSW Government if the property-based FSL is applied to NSW Government properties;
- (vi) Estimate the amount that would be raised if a motor vehicle levy was incorporated with the property-based FSL;
- (vii) Estimate the cost of providing a discount to pensioners; and
- (viii) Estimate the value if mining properties were exempt under the property-based system.

It is our belief that the model meets the objectives outlined above.

2.3 Project Working Group

An unofficial Working Group was established to:

- Provide advice on the development of the model;
- Assist PFS in obtaining the required data and
- Provide direction in developing the scenarios to be tested by the model.

The Working Group consists of representatives of the secretariat of the Public Accounts Committee, NSW Treasury and ICA along with Doug Drysdale and Thach Huynh of PFS.

PFS wish to thank the other members of the Working Group for their assistance over the course of the project.

2.4 Privacy

As part of this project PFS was given confidential data from insurance companies and the Valuer General's office and also from other organisations as set out in section 9.2. Prior to commencing the project, all PFS staff involved signed a confidentiality agreement which covered the treatment and handling of data from the insurance companies. The insurance companies provided the data to PFS following a call for records issued by the Committee to those companies. To protect the identity of policy owners, names were not provided and once the addresses were matched with the Valuer General's database; those addresses were deleted from the final model.

PFS signed another confidentiality agreement with NSW Treasury covering the data issued by the Valuer General's office.

On the completion of this project, PFS will destroy all discs containing data provided by all participating insurance companies and the Valuer General.

Aggregate data will be maintained on the PFS server for a period of six months after the project is completed, in case any further work is necessary, and then deleted.

2.5 Disclosures and Disclaimers

Figures produced in this report, are best estimates based on the data provided and on the assumptions used in the model, as set out in section 8. Hence, the actual results with regards to total revenue collected and numbers of properties contributing more and contributing less will differ, if actual experience differs from that assumed in the model experience.

There are various issues relating to the veracity of the data received for this project, which consequently places limitations on the use of that data for the model. These are detailed in section 8 and 9. These qualifications and limitations should be taken into account in interpreting the results of the model.

PFS was commissioned to develop the financial model for the project. The various scenarios set out in section 6 were developed with the direction of the Working Group, to assist the members of the Committee in developing their recommendations.

PFS's professional fees for this service were paid in part by the ICA and in part by NSW Treasury. The results of the model have in no way been modified by or to the benefit of ICA or any other organisation or group.

3 Funding Systems Utilised in NSW and Other States

3.1 The Current System in NSW

At present the NSW FB and the RFS NSW are funded primarily by a levy on general insurance companies which they pass on by means of a levy on certain types of policies. This system originated over 100 years ago to replace the system of insurance companies operating their own fire services for the benefit of their own policyowners.

For the financial year 2003/04 this levy on insurance companies is estimated to produce \$381.9 million; this represents 73.7% of the total budget of the fire services.

Under the *Fire Brigades Act 1989*, general insurance companies are required to complete a return every 6 months, listing their premiums received under various classes of policies covering risks in NSW. These premiums are multiplied by fixed percentages varying from nil to 80% for the different classes of commercial properties, to determine the “premiums subject to contributions”. The fire services invoice the individual insurance companies quarterly for their contribution to the overall insurance industry’s share of the fire service budget. The individual companies are levied based on their proportion of the total insurance industry’s “premiums subject to contributions”.

The ICA each year estimates the levy rates to be applied to certain classes of policies to produce the insurance industry’s share of the fire services budget. In its calculations, ICA grosses up the “premiums subject to contributions” to 100% of premiums and recommends percentage levies to be applied to those gross premiums for some, but not all, of the classes of policies making up the “premiums subject to contributions”.

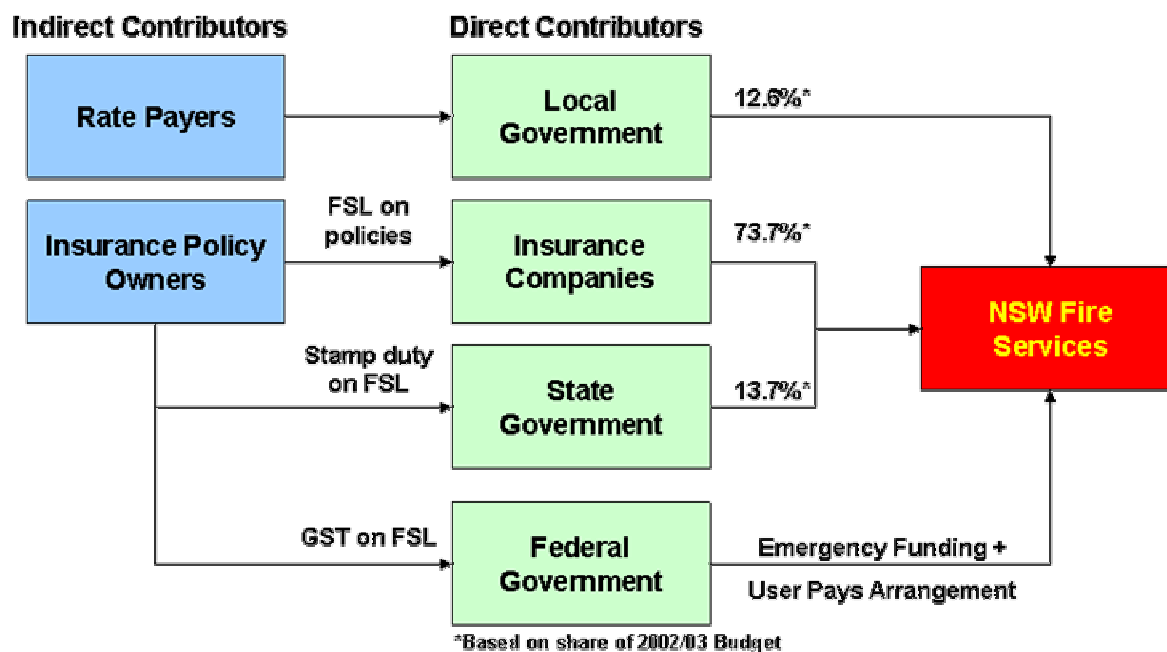
The levy rates are recommended by the ICA in February each year for use in the following year. The percentages recommended in February 2003 were: 17% for residential policies, 30% for commercial policies (including industrial special risks policies) and 1% for motor vehicles. Based on these rates and assuming that the allocation to motor vehicle cover is allocated evenly between residential and commercial cover, approximately 56% of the total FSL collected will come from commercial properties and 44% from residential policies. Insurance companies, however, can set their own levy rates and we understand that most do not levy motor policies but incorporate that amount in their levies on residential and commercial policies.

In February, the ICA’s recommended FSL rates were updated for 2004. The rate on residential policies has fallen to 14% and the rate on commercial policies to 24%. The reason for the reduction in the recommended rates is because of the increase in premiums over 2003, due partly to the introduction of the terrorism premium in June 2003. This applies to commercial insurance policies within the CBD and is set at a rate of 20% of the underlying premium. This terrorism premium is then subject to the FSL, as well as GST and stamp duty.

Although the levy percentages have decreased, the average dollar amount of the levy is expected to increase.

The diagram below provides an overview of the current insurance-based system showing the interaction between the different direct and indirect contributors.

The Current Insurance Based System



3.2 Current Systems in Other States

3.2.1 Queensland

In 1985, Queensland moved from its insurance-based system to a flat dollar property-based system. The levy is based on the building category and four geographic classifications. The geographic classifications relate to the standard of fire service provided (ie. Area A has fire service 24 hours a day, Area B 12 hours etc). For commercial properties there are 16 risk categories based on the risk of fire and the cost of providing assistance. Motor vehicles are not included and a 20% pensioner rebate is provided.

3.2.2 South Australia

South Australia changed its system in 1999. The new levy has a flat charge of \$50 plus an ad valorem rate based on the capital value of the land adjusted for location and land use. The levy also varies on a regional basis depending on the range of services offered and cost structures within each region. There is also a charge on motor vehicles and a pensioner rebate of up to \$40 is provided.

3.2.3 Western Australia

Western Australia moved from an insurance-based levy to a property-based levy in 2003. The levy is based on the "gross rental value" of the property and is subject to a minimum charge of \$30 and a maximum charge of \$175 for residential and \$100,000 for commercial properties. There are 5 geographic categories based on the standard of the fire service with the highest proportion being .0088 per dollar of gross rental value and the lowest is nil. Motor vehicles are excluded but a pensioner rebate is provided.

3.2.4 Victoria

Victoria reviewed its funding of fire services in 2002/03 and decided to retain an insurance-based levy with some refinements on the previous system. Motor vehicles are excluded under this system.

3.2.5 Tasmania

Tasmania funds its fire services through a combination of a levy on commercial insurance policies, a property-based levy collected by local councils and a levy on motor vehicle registrations.

4 Impact on Contribution Base of Moving to a Property-Based Levy

4.1 A Fundamental Change

Under the current funding system, there is a significant degree of discretion with regards to contribution levels. Firstly, insurance companies have discretion as to which policies to apply the FSL on and what FSL rates will be applied to each product type. In addition, consumers have discretion as to whether to purchase insurance and what level of cover is appropriate. A change to a property-based approach, which only raises revenue from properties, will change the system fundamentally by making it more prescriptive and therefore change the contribution base.

If the contribution base is widened, then on average, property owners currently contributing will contribute less and vice versa. The results of the analysis in this report will provide an insight into whether a change to a property-based system will widen the contribution base. The results however are very dependent on the quality of the data and the experience may differ significantly between different population groups.

4.2 Impact on Residential Properties

As the details of a new system, if applicable, have not been finalised, the impact of the change on residential properties is unknown. However, under a property-based system property owners who elect not to purchase any insurance cover (ie. non-insurance) will, in future, be required to contribute to the funding of the fire services. This will have the impact of widening the contribution base. The size of the impact will depend on the level of non-insurance in NSW, which is discussed in section 9.4.2.

Vacant landowners, who generally have no need to insure but who have access to fire services, could also be asked to contribute under a property-based system; therefore further widening the contribution base.

Some property owners may, intentionally or unintentionally, under-insure their properties to reduce the amount of premium payable. For the purpose of this report, under-insurance is considered to occur in the following instances:

1. When the sum insured is low when compared to the value of the insured property and
2. When a significant excess applies to the product.

A property-based system will remove the option to under-insure and therefore it should reduce the contribution required by property owners who insure fully.

The introduction of a property-based system will also have the impact of removing some groups from the contribution base. This will occur when a population group is currently paying the FSL on insurance policies but do not actually own the property. These groups will include the following:

- a) Body corporates for residential unit blocks;
- b) Tenants who purchase contents cover and
- c) Building contractors on residential properties.

The effect of removing these groups will be to reduce the contribution base and offset, in part, the widening effects listed previously. The table below provides a summary of the above factors.

Impact on Residential Properties

Factors that will tend to widen the contribution base	Factors that will tend to reduce the contribution base
Inclusion of property owners who do not insure: • Non-unit properties with no cover; • Unit properties with no contents cover; • Vacant land owners with no cover and • No building or contents cover.	Insureds who do not own the property: • Body corporates; • Tenants with contents cover and • Contractors.
Inclusion of property owners who underinsure: • Low level of insurance and • Large excesses on policies.	

4.3 Commercial Properties

The introduction of a property-based system on commercial properties will also address the problems of non-insurance and under-insurance. In addition it will force any companies insuring overseas (or self-insuring) and not contributing directly, to contribute to the system in NSW and widen the base.

However, for commercial properties there are two main factors that will act to reduce the contribution base, these are:

1. Based on aggregate FSL commercial returns provided to PFS by two major insurance companies and from discussions with others, it is likely that a significant proportion of FSL collected from large commercial policies come from non-property related insurance policies (eg. Consequential loss cover). Therefore under a property-based system these amounts must be reallocated back to commercial property owners, or shifted to residential property owners, in order to generate the same amount of levy revenue as under the current system.
2. For commercial properties with multiple units (eg. a large office block or a retail centre) the owner of the building is normally a single organisation / individual. The FSL is currently paid on both the property insurance and the individual tenants' insurances. A property-based system would remove the levy from the tenants, thereby shifting the burden from both the building owner and its insured tenants, to just the owner. In these cases, the direct contribution base would be narrowed significantly (although increased costs for the owner may eventually be passed on to the tenants by negotiating increases in rent as leases permit).

These two factors are likely to have a narrowing effect on the direct contribution base for large commercial property owners. Hence, unlike for residential property owners, where it would be reasonable to assert that the property-based FSL would widen the contribution base, it is uncertain as to whether the contribution base would widen or contract for commercial property owners.

5 Design Issues for a Property-Based Levy

5.1 Introduction

Should the Committee recommend a change to a property-based system, it will need to decide on a levy structure and therefore determine:

- a) The amount to be raised under the property-based FSL;
- b) If a flat levy and/or ad valorem rate will apply;
- c) If an ad valorem rate is applied, what basis it will be applied on;
- d) Whether different property types will be treated differently and, if so, how properties are classified;
- e) Whether properties in different regions will be treated differently and, if so, how and
- f) Whether caps should be applied to limit the amount any single property would pay.

The following details these issues and sets out how the Working Group went about addressing these issues to develop the financial model and the four test scenarios.

5.2 Total Revenue to be Raised

In 2002/3, the insurance component of the fire service budget was \$375.5 million. This amount increased in 2003/04 to \$381.9 million in line with the overall budget growth. For the purposes of this project, the 2002/03 figure was used to set the desired revenue to be collected under an insurance-based FSL to match, as well as possible, the timing of the insurance data received.

In addition, the desired revenue target was increased by \$31.0 million to account for the State Government's expected loss of stamp duty and GST revenues. This was calculated using the NSW share of total GST revenue of 29.1%.

A \$2 per property administration cost was also allowed for, which increased the desired revenue target by \$5.5 million.

Therefore the total revenue target, used in the test scenarios was set at \$412.0 million.

5.3 Flat Levy versus Ad valorem Rates

A flat levy approach, (eg. \$80 per property) has the following benefits:

1. It is simple to understand and implement;
2. Revenue collection is more predictable as it is not subject to movements in land values and
3. It reflects the "public good" aspect of the fire services with a significant amount of time dedicated to training, preparation and on stand by.

A flat levy approach however does not:

1. Account for the property owner's capacity to pay;

2. Reflect the fire risks of the property;
3. Reflect the standard of fire service and
4. Reflect the potential fire service usage.

More than one flat levy could be applied to address points 2 and 3 above and possibly this could be considered for residential properties. However, due to the wide spread of current commercial contributions, any flat fee approach would result in a large number of small commercial property owners paying much more and a relatively small number of large commercial property owners contributing much less.

The use of an ad valorem rate on land values would have the benefit of being relatively simple and also address the issue of matching contribution levels with the ability to pay and/or potential fire risk. However, it would not take into account the fixed costs associated with the fire services. This would also result in a large number of properties in country areas paying very small levies and properties in higher valued areas paying relatively large levies. If a pure ad valorem approach was adopted, then the rate on commercial properties would be in the order of \$2.75 per \$1,000 of land value and for residential properties \$0.30 per \$1,000 of land value.

In the test scenarios two ad valorem rates have been applied to commercial properties to reflect the current system whereby larger businesses contribute larger FSL amounts through additional insurances. For the purposes of this report, the second ad valorem has been applied only on the land value in excess of \$500,000. This is based on the rationale, that commercial properties with a land value less than \$500,000 are likely to be small premises with a fire risk similar to residential properties. Based on the Valuer General's database the number of commercial properties with a land value in excess of \$500,000 for the GMR and Non-GMR are shown below:

Commercial Properties

	Below \$500,000	Over \$500,000	Total
GMR	147,164	24,816	171,980
NON-GMR	38,197	2,491	40,688

5.4 Value Basis for a Property Levy

A key issue when developing a property-based levy is the value to which the levy will be based. The two values considered by the Working Group were:

1. The rate paid on the property and
2. The land value as assessed by the Valuer General.

Councils receive the land value, as advised by the Valuer General, and these are used to determine the rates applicable in that council area.

Using council rates as the basis for the property value gave rise to the following problems:

- a) Some councils have a variety of rate charges in their council area, which are generally unrelated to the fire risk;

- b) Some councils have fixed dollar charges for services (such as domestic waste collection, sewage etc.) whereas others incorporate these charges in the rate. With a cap in the increase in rates in recent years, the amount raised under fixed charges has increased and
- c) The level of rates reflects, to some degree, the level of services provided by the council. Different levels of council services do not reflect the different level of fire risk between the council areas.

Therefore it was decided that using the Valuer General's land values would give a more consistent basis for a property-based levy than using the actual rates charged on those properties.

The use of the Valuer General's figures, however, brings in the issue of changes in land values from year to year. Land values reflect the property market at that time and changes in land values will not be at the same rate as changes in the cost of the fire services. Under the current system, insurance companies contribute their required share of the fire service budget and any over or under-collections from their policyholders remain with the insurance companies. However, under a property-based system, any over or under-collections would flow through to the fire services, unless a mechanism was put in place to smooth out difference between the amounts required and the amounts actually collected. It will be necessary to review the levy rates on a regular basis to minimise these mismatches and ensure that the allocations of the revenue raised between geographic regions and property types remains consistent with desired objectives.

5.5 Differentiation by Property Type

By applying a different levy structure to different property types, the contribution amount can be set to match the fire risk of the property or the assumed level of fire service usage.

At present local councils classify properties into 19 different property types (called Zones). These zones are determined by local councils and are not entirely consistent across the State (eg. Some local councils utilise a zone called Mixed Residential/Commercial whilst other councils may elect to classify buildings as either Residential or Commercial depending on its main use).

For simplicity, it was decided that four different property types would be used, these are: residential, commercial, farmland and vacant land. Therefore the 19 local council property zones were assessed and classified into the four property types as shown overleaf.

For the purposes of this report it was also decided by the Working Group to apply the same fee structure to farmland and to vacant land as to residential properties.

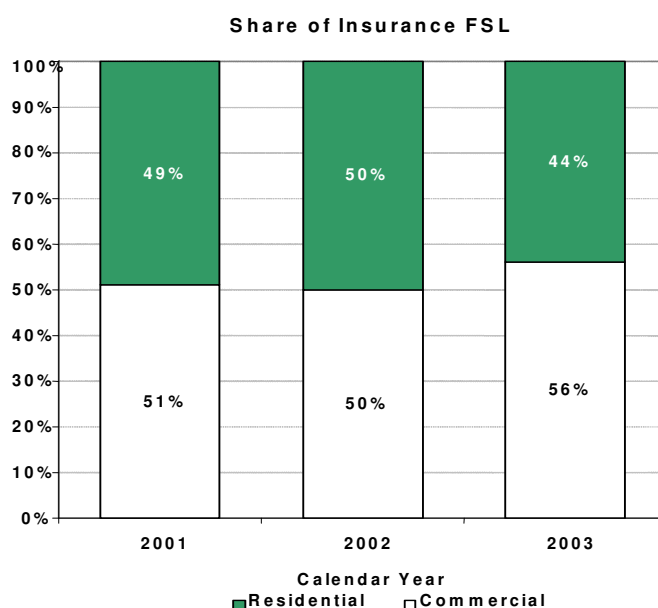
Mining properties are valued separately as a number of mines provide their own fire services. Hence, the model also examines, separately, the cost of giving these mines an exemption from the proposed FSL.

Property Type	Zone Code	Group
Residential	A	Residential
Business	B	Commercial
City of Sydney County Centre	C	Commercial
Sustainable Mixed Use Development	D	Commercial
Employment Area (Business Park)	E	Commercial
Industrial	I	Commercial
Mixed Residential/Commercial	M	Commercial
National Parks*	N	Vacant
Open Space	O	Vacant
Scenic Protection*	P	Vacant
Non Urban/Rural	R	Farmland
Special Uses	S	Commercial
North Sydney Business	T	Commercial
Unknown 1*	U	Vacant
Unknown 2*	V	Vacant
Reserve Open Space*	W	Vacant
Reserved Roads*	X	Vacant
Reserved Special Uses*	Y	Vacant
Undetermined, Or Zoning Being Changed	Z	Residential if land value < 1 \$M otherwise Commercial

*These property groups were assumed not to contribute under the property-based levy.

5.5.1 Apportionment of Costs between Commercial and Residential Properties

As advised in section 3.1, the ICA estimates that in 2003 commercial insurance policies produced 56% (\$208.7 million) of the total FSL and residential insurance produced 44% (\$166.8 million). The ratios over recent years are set out below and show an increase in the allocation towards commercial policies.



Based on the Valuer General's data (adjusted for State and Federal properties and the heritage listing adjustments) commercial properties represent approximately 12% of the total value in NSW, and 8% of the total number of properties in NSW. Therefore, a shift to a property-based system that retains the current ratio between commercial and residential would mean that 56% of the levy would be collected from 8% of the properties. On a per property basis, if two flat levies were applied, this would equate to an average FSL of **\$72** per residential, farmland and vacant land properties and **\$1,085** per commercial property.

Of the four test scenarios, two assume that the ratio of 56:44 remains unchanged under a new system. The other two scenarios tested use alternative ratios to show the impact of changing this critical assumption.

5.6 Geographic Issues

A major issue is whether to apply the same levy structure to all properties in the State or apply a different levy structure to properties in different regions. A property-based levy could for example:

- a) Charge more in areas with a higher level of service; or
- b) Charge based on the usage of the service in that area; or
- c) Charge more for areas with a high fire risk; or
- d) Charge more for industries with a high risk of fire.

It was decided not to base the levy on the risk classification of different industries, but to allow for differentiation based on geographic regions using either: the standard of fire service, the usage of fire service resources or the benefits provided by the fire services in those regions.

The model was initially developed to allow for 3 geographic regions so that different levy structures could be applied to each region. The Working Group analysed the State by the standard of fire service available in each local council. Six levels of service were developed (based on staffing levels ranging from permanent fire-fighters to retained fire-fighters on call) for each fire region. The results were then summarised by local council area into two levels of service, higher level and lower level. The result of this analysis was quite close to having 2 service levels split geographically, based on the Greater Metropolitan Region (GMR) and the rest of the State (Non-GMR).

Therefore, it was decided that the GMR and Non-GMR classification was appropriate for the scenarios examined in the model where there is a geographic apportionment.

5.7 Minimum and Maximum Levy Amounts

If an ad valorem levy applies under a property-based system, the question arises, "should there be a minimum and a maximum levy charged?" The Working Group considered it appropriate to have a base levy given the "public good" nature of the fire services provided. By having a base levy there is automatically a minimum amount for all properties and avoids producing very small levy amounts from properties with small land values.

Maximum fees, or caps, ensure that no single property pays over a certain amount. It also has the benefit of tapering the effects of recent large land value increases on certain residential properties. Therefore, the Working Group was

inclined towards having a base levy, an ad valorem rate applied on the land value, and a maximum levy on properties over a certain land value.

In Western Australia, a maximum of \$175 for residential properties and \$100,000 for commercial properties apply. The Working Group decided to apply the residential maximum of \$175 as well as increase the maximum for commercial properties to \$200,000 in order to generate a greater proportion of the required revenue from large commercial properties.

6 Test Scenarios and Results

6.1 Introduction

Four scenarios were tested using the financial model developed for this project. The first three scenarios reflect funding approaches concentrating on only one factor, and the fourth, the Combined scenario, was developed to provide a more balanced approach for the Committee to consider. Additional scenarios with different levy structures can be run through the financial model, if desired by the Committee.

Abbreviated results are set out in this section for the four scenarios tested and the full results for the Combined scenario are set out in Appendix 5. The levy structures in the scenarios tested are not recommendations from the Working Group. Rather, the scenarios and their associated results aim to help the Committee understand the issues underlying the development of a levy structure for a property-based levy and to assist in determining the most appropriate structure, if a change in funding arrangements is recommended.

6.2 Beneficiary Pays Scenario

6.2.1 Introduction

One approach to developing a levy structure is to match the contributions under a property-based levy with the benefit received by the property owners. As a proxy¹ for the overall benefit received, fire insurance claims data has been used. Insurance Statistics Australia (ISA) was approached for data on commercial and residential fire insurance claims in NSW. The table below summarises the combined ISA experience data for 2001 and 2002.

Share of Fire Insurance Claims in NSW for 2001 and 2002

Residential GMR	Commercial GMR	Residential Non-GMR	Commercial Non-GMR
14.5%	56.7%	14.8%	14.0%

The figures show that based on the insurance claims surveyed, approximately 70% of those total claim payments in 2001 and 2002 relate to commercial properties. This is significantly higher than the current insurance-based share of 56%. However, the data for earlier years shows a lower share of total claims from commercial properties. Also, the percentage of total claims for Non-GMR residential properties appears to be very high when compared to GMR residential properties given that the number of GMR residential and farmland properties is over 2 times that of Non-GMR properties.

To develop the test levy structure for this scenario, these proportions were applied to the target revenue amount (refer to section 5.2) to obtain the amount of revenue to be collected for each of the four sectors. A base levy of \$50 per property was applied but, as the weighting is heavily towards commercial, the

¹ Using fire claims data does not reflect all the benefits of the fire services in NSW (eg. their rescue services)

GMR residential levy is only \$34 per property with no ad valorem rate required. For Non-GMR residential properties, the ad valorem rate was set at \$0.25 per \$1,000 of land value to raise the required revenue (ie. 14.8% of the \$412 million). For all commercial properties, a slightly higher ad valorem rate of \$0.32 per \$1,000 of land value was set with an additional rate applying on land values above \$500,000 to raise the required amounts in the GMR and Non-GMR.

6.2.2 Levy Structure

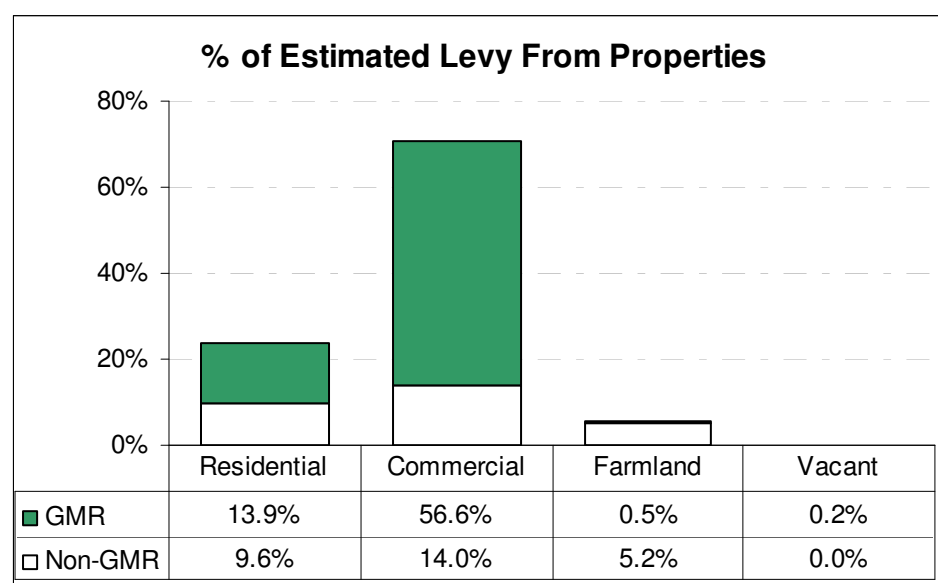
Property Type GMR	Base Levy (per property)	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)	Levy Cap
GMR Properties				
Residential	\$34	Nil	Nil	Nil
Commercial	\$50	\$0.32	\$5.60	\$200,000
Non-GMR Properties				
Residential	\$50	\$0.25	Nil	\$175
Commercial	\$50	\$0.32	\$42.00	\$200,000

Note: The ad valorem rate 2 only applies on the value of the property in excess of \$500,000 and would be in addition to ad valorem rate 1.

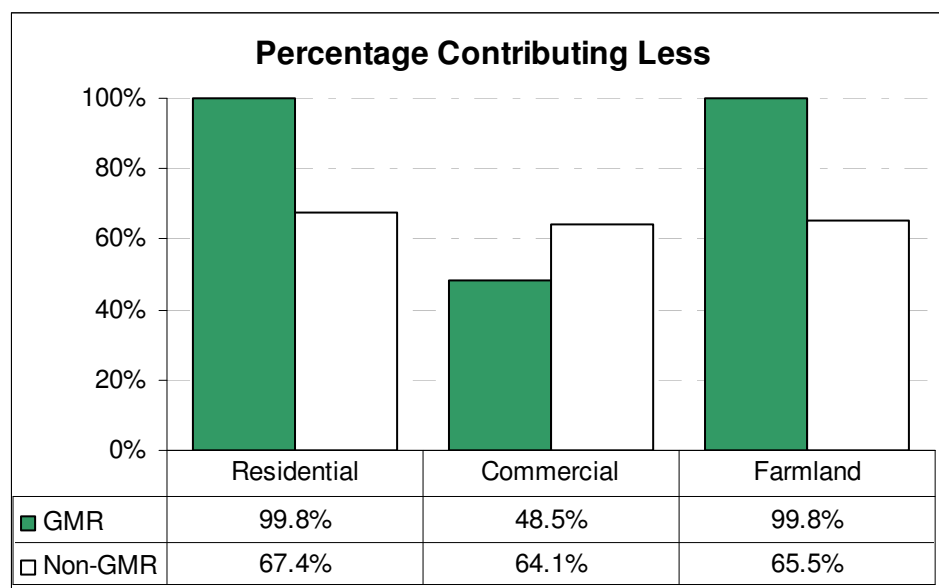
Using this levy structure, residential properties in the Non-GMR with land values exceeding \$0.5 million would pay the maximum of \$175. For commercial properties the maximum levy of \$200,000 would apply at \$34.2 million for GMR and \$5.2 million for Non-GMR properties.

6.2.3 Results

Aggregate Calculations



Individual Comparisons



	Av. Reduction in Contribution		Av. Additional Contribution	
	GMR(\$)	Non-GMR(\$)	GMR(\$)	Non-GMR(\$)
Residential	78.0	27.8	12.8	21.8
Commercial	593.6	259.4	2,423.2	1,600.9
Farmland	93.3	45.4	15.7	24.9

6.2.4 Commentary

- Using the insurance claims data the proportion of the total costs allocated to commercial properties was higher than the other scenarios and much higher than under the current system. Consequently, the share of the cost allocated to residential in the GMR was very low.
- The results show that almost 100% of residential properties in the GMR would contribute less and the reduction is on average \$78 per property.
- Non-GMR residential properties pay significantly more than GMR properties to reflect the higher level of claims per residential property.
- Under the two tier ad valorem rate structure the rate on commercial properties over \$500,000 land value needs to be very high in order to raise the required revenue. In particular, in the Non-GMR region, because of the small number of properties over \$500,000 land value, the additional rate is \$42 per \$1,000 of land value.
- This levy structure, disadvantages larger commercial properties to the benefit of GMR residential properties and small commercial properties.
- When viewing the results of this scenario, it is important to bear in mind that the qualifications outlined previously in section 6.2.1.

6.3 Service Standards Scenario

6.3.1 Introduction

This scenario aims to match the contributions to the level of service provided by the fire services.

Using the analysis described in section 5.6, the Working Group determined that on average the ratio of 100:60 was appropriate for the service standard in the GMR region compared to the service standard in the Non-GMR region. This is consistent with the figures used in other States.

Therefore, if a base levy of \$50 was set for the GMR, then a base levy of \$30 should apply to Non-GMR properties. In setting the ad valorem rates, a rate that is 60% of the GMR rate was also used for Non-GMR properties.

It could, however, be argued that the lower level of service in the Non-GMR is already allowed for by the lower land values applying in the Non-GMR compared with the GMR. In fact, the average land value in the Non-GMR is only 35% of the average land value in the GMR for residential properties and 40% for commercial properties. To apply a lower ad valorem to these lower values advantages Non-GMR properties further.

The maximum levy amounts in the Non-GMR were also set at 60% of the levels set for GMR properties.

The percentage of total revenue raised from commercial was assumed to be 56%; this criterion was used with the 100:60 criterion to set the ad valorem rates shown below.

6.3.2 Levy Structure

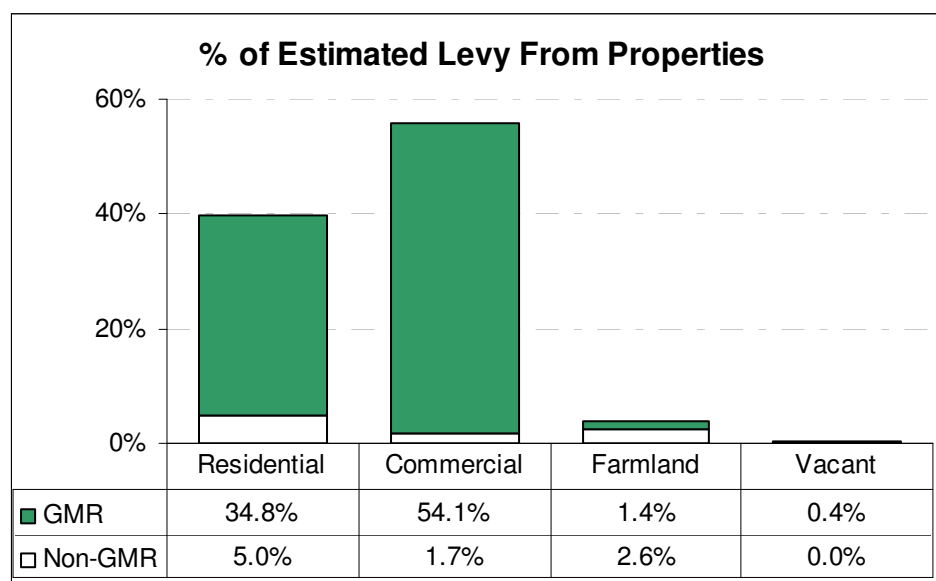
Property Type GMR	Base Levy (per property)	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)	Levy Cap
GMR Properties				
Residential	\$50	\$0.14	Nil	\$175
Commercial	\$50	\$0.32	\$5.30	\$200,000
Non-GMR Properties				
Residential	\$30	\$0.08	Nil	\$105
Commercial	\$30	\$0.19	\$3.18	\$120,000

Note: The ad valorem rate 2 only applies on the value of the property in excess of \$500,000 and would be in addition to ad valorem rate 1.

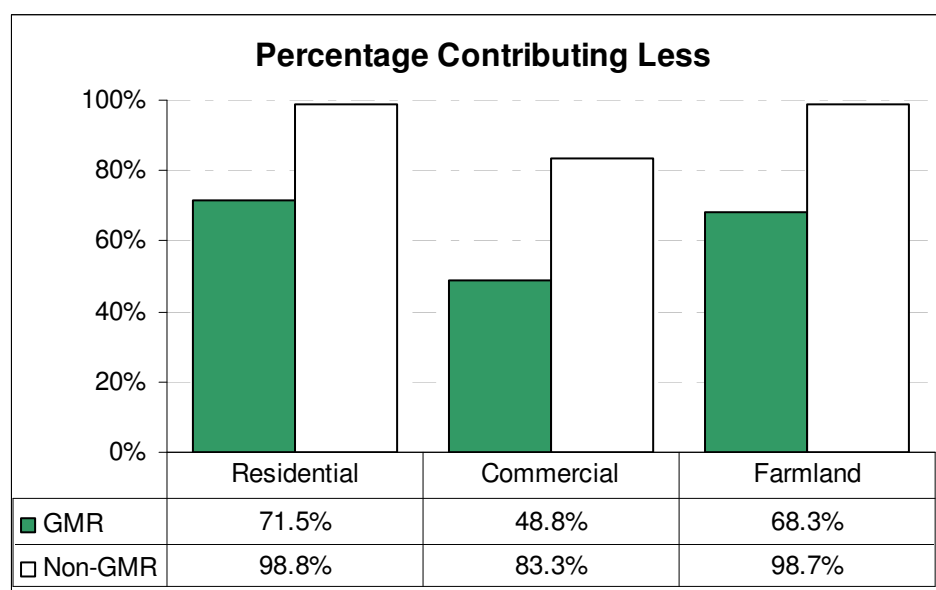
Using this levy structure, residential properties in both regions with land values exceeding \$0.9 million would pay the maximum levy of \$175. For commercial properties the maximum levy would apply at \$36.0 million in both regions.

6.3.3 Results

Aggregate Calculations



Individual Comparisons



	Av. Reduction in Contribution		Av. Additional Contribution	
	GMR(\$)	Non-GMR(\$)	GMR(\$)	Non-GMR(\$)
Residential	35.7	48.6	18.7	10.7
Commercial	599.3	244.8	2,309.2	200.7
Farmland	45.6	66.3	25.2	15.1

6.3.4 Commentary

- As would be expected, this scenario favours properties in the Non-GMR at the expense of the GMR.

- Almost 100% of residential properties in the Non-GMR would contribute less but the equivalent percentage in the GMR reduces to 71.5%.
- With commercial properties, the results again favour the Non-GMR with the average additional contribution from GMR commercial properties estimated at \$2,309.

6.4 User Pays Scenarios

6.4.1 Introduction

This scenario aims to match contributions to the cost of resources of the fire services.

Using figures for 2002/03 provided by NSW Treasury, the average cost per property to cover the full budget cost of the fire services was determined as follows:

Fire Service Budget 2002/03

	GMR	Non-GMR
Budget cost	\$230.3 million	\$279.2 million
Total number of properties	1,948,495	843,058
Average cost per property	\$118	\$331

Note: These figures cover the whole budgeted cost of the fire services and do not directly compare with the revenue target amount, \$412 million, used in these scenarios.

Source: NSW Treasury

These results show the average cost for a Non-GMR property being almost three times the cost of a GMR property and reflects the greater size and smaller population in the Non-GMR.

In order to develop a ratio that reflects the usage of resources between residential and commercial properties in each region, information on incidence of call outs and personnel utilisation was obtained from the both NSW FB and the RFS NSW. Consolidating this information produced the following ratios:

	NSW FB		RFS NSW	
	GMR	Non-GMR	GMR	Non-GMR
Residential%	46%	43%	6%	9%
Commercial%	54%	57%	94%	91%

Note: This analysis excludes a large proportion of the total callouts that could not readily be classified as either commercial or residential. These include, for example, callouts to false alarms, motor vehicle incidents and grass fires.

Source: NSW FB and RFS NSW

In this scenario the commercial share of the target revenue was determined as the weighted average of the figures provided above, with the weights based on the fire service budgets for the NSW FB and RFS NSW, the calculations are set out below:

Weighted Average Share for GMR Commercial =

$$(\$388 \text{ mil} \times 54\% + \$121 \text{ mil} \times 94\%) / (\$388 \text{ mil} + \$121 \text{ mil}) = 63.5\%$$

Weighted Average Share for Non-GMR Commercial

$$= (\$388 \text{ mil} \times 57\% + \$121 \text{ mil} \times 91\%) / (\$388 \text{ mil} + \$121 \text{ mil}) = 65.1\%$$

Given that both figures were very similar, a target ratio of 64% was used for commercial properties overall. This ratio was applied to the target revenue based on the GMR and Non-GMR allocations as given in the table headed "Fire Service Budget 2002/03" above.

Using the allocations above, a base levy of \$38 is sufficient to generate the required revenue for GMR residential properties. For Non-GMR residential properties, an additional ad valorem rate was set at \$0.58 per \$1,000 land value to generate the required revenue amount. For commercial properties in the GMR the \$0.32 ad valorem rate was maintained. In addition, a \$2.35 per \$1,000 additional rate was set to generate the required amount. For Non-Commercial properties, both ad valorem rates had to be set at very high levels to generate the required revenue (\$14 and \$42 per \$1,000 of land value).

6.4.2 Levy Structure

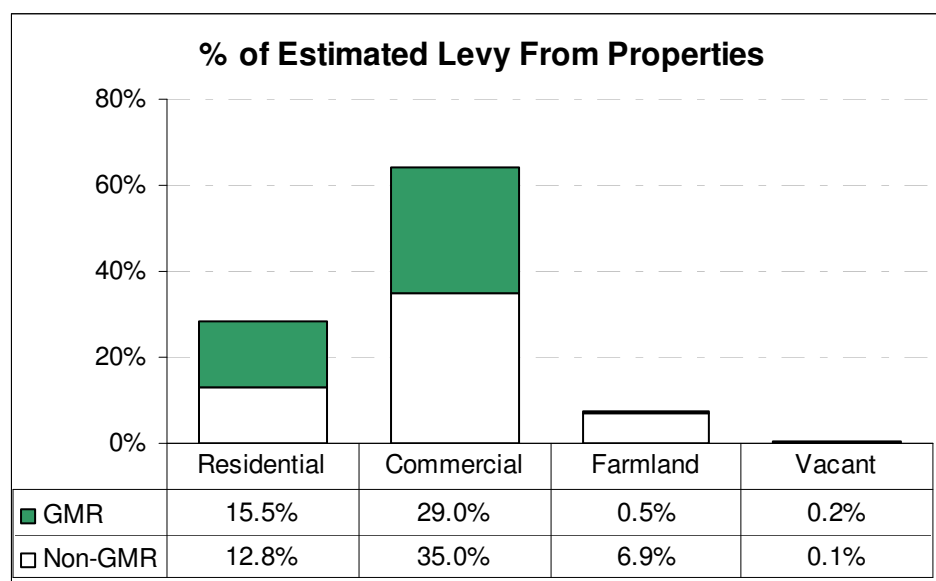
Property Type GMR	Base Levy (per property)	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)	Levy Cap
GMR Properties				
Residential	\$38	Nil	Nil	Nil
Commercial	\$50	\$0.32	\$2.35	\$200,000
Non-GMR Properties				
Residential	\$50	\$0.58	Nil	\$175
Commercial	\$50	\$14.0	\$42.00	\$200,000

Note: The ad valorem rate 2 only applies on the value of the property in excess of \$500,000 and would be in addition to ad valorem rate 1.

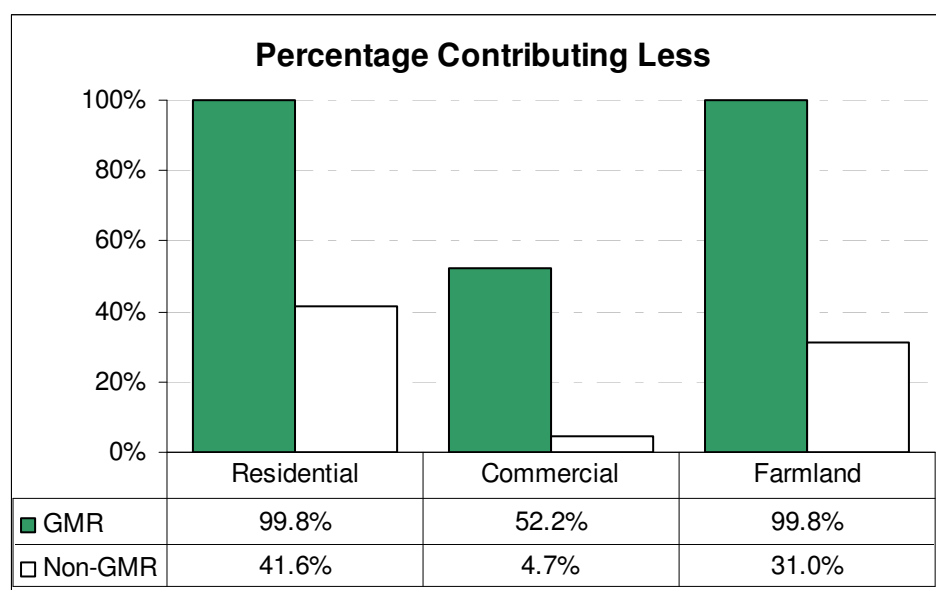
Using this levy structure, residential properties in the Non-GMR with land values exceeding \$0.2 million would pay the maximum levy of \$175. For commercial properties the maximum levy of \$200,000 would apply at \$75.3 million for GMR and \$3.9 million for Non-GMR properties.

6.4.3 Results

Aggregate Calculations



Individual Comparisons



	Av. Reduction in Contribution		Av. Additional Contribution	
	GMR(\$)	Non-GMR(\$)	GMR(\$)	Non-GMR(\$)
Residential	74.1	26.0	13.7	44.2
Commercial	684.6	626.6	1,077.0	2,458.7
Farmland	89.3	56.4	16.3	46.2

6.4.4 Commentary

- Under this scenario, as the actual fire service costs in the GMR and the Non-GMR are used, there is a large increase in the amount raised from the Non-GMR.
- For residential properties in the GMR, almost 100% of properties contribute less under this scenario.
- However for commercial properties in the Non-GMR, this scenario gives rise to a large additional levy of \$42 per \$1,000 of land values over \$500,000. This produces an average additional contribution figure of over \$2,400 per property.
- Overall the results are weighted in favour of the GMR.

6.5 Combined Scenario

6.5.1 Introduction

This scenario combines some of the features of the earlier scenarios. There is a base levy for the two regions in the ratio 100:60 reflecting the service standards. The maximum amounts however, are the same for GMR and Non-GMR properties.

The amount raised from commercial properties is 56% of the target revenue amount, as currently applies. This scenario treats small commercial properties in a similar manner to residential properties therefore the same ad valorem rate (\$0.13 per \$1,000 of land value) is applied to both residential and commercial properties, up to \$500,000 land value, in both regions. For commercial properties over \$500,000 in land value, there is an additional ad valorem at the level required to raise the balance of revenue required (\$5.57 per \$1,000 land value for both GMR and Non-GMR).

6.5.2 Levy Structure

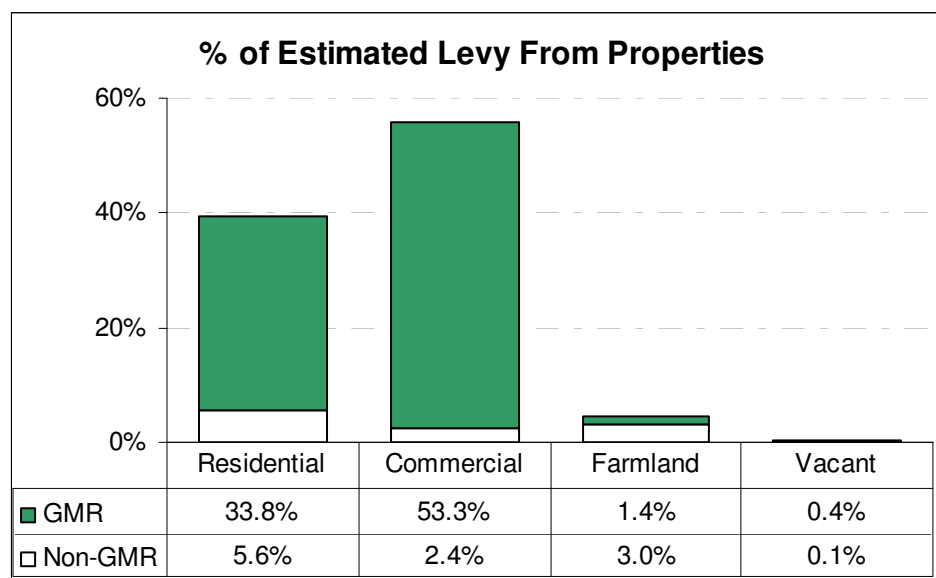
Property Type	Base Levy (per property)	Ad valorem Rate 1 (per \$1,000 of LV)	Ad valorem Rate 2 (per \$1,000 of LV)	Levy Cap
GMR Properties				
Residential	\$50	\$0.13	Nil	\$175
Commercial	\$50	\$0.13	\$5.57	\$200,000
Non-GMR Properties				
Residential	\$30	\$0.13	Nil	\$175
Commercial	\$30	\$0.13	\$5.57	\$200,000

Note: The ad valorem rate 2 only applies on the value of the property in excess of \$500,000 and would be in addition to the ad valorem rate 1.

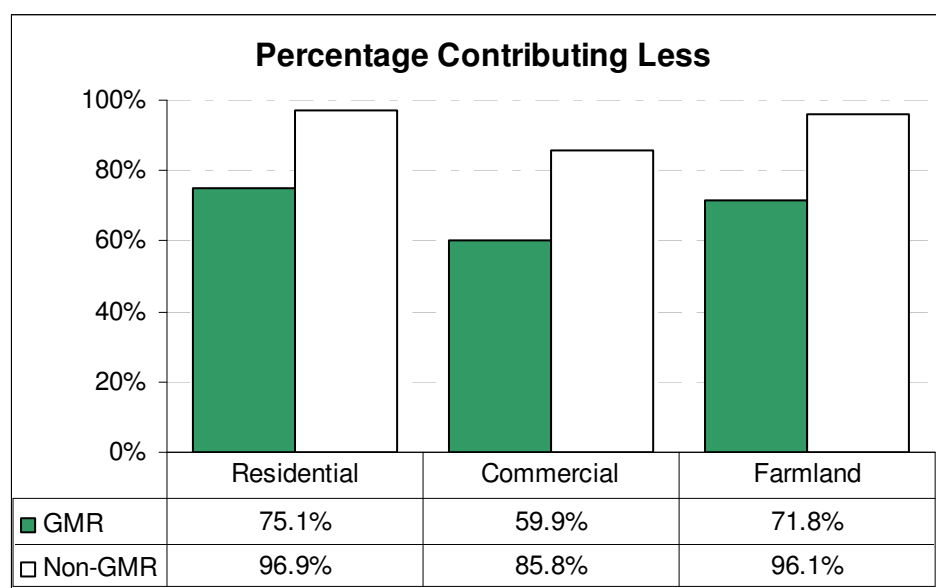
Using this levy structure, residential properties in both regions with land values exceeding approximately \$1.0 million would pay the maximum levy of \$175. For commercial properties the maximum levy of \$200,000 would apply at \$35.5 million for both regions.

6.5.3 Results

Aggregate Calculations



Individual Comparisons



	Av. Reduction in Contribution		Av. Additional Contribution	
	GMR(\$)	Non-GMR(\$)	GMR(\$)	Non-GMR(\$)
Residential	36.4	45.1	17.4	15.6
Commercial	532.1	239.4	2,920.2	420.2
Farmland	46.4	61.1	23.7	18.5

6.5.4 Commentary

- This scenario produces the best overall results in terms of properties contributing less under the property-based scenario with well over 50% of properties in each category contributing less.

- The results for residential properties in the GMR were less favourable than in the Non-GMR because of the differential in the base levy and the higher property values in the GMR.
- There is a relatively high average additional contribution for commercial properties in the GMR of over \$2,900.

A schedule showing the full results for this scenario is contained in Appendix 5.

6.5.5 Adjustment for FSL paid on Large Commercial Policies

As discussed earlier in section 4.3, the matched dataset for large commercial properties does not include a significant part of the FSL currently being collected. This needs to be borne in mind in interpreting the commercial property results. From the information obtained from two large insurance companies on their overall FSL collections by policy type, we estimate that the current FSL amounts in the matched dataset may only represent 50%-70% of the total amounts collected on large commercial policies. The missing amounts include, for example, the levy on tenants' business insurance policies in large commercial or office buildings or consequential loss on policies for large businesses.

Therefore, we reproduced the results using the Combined scenario levy structure but with insurance FSL amounts 50% higher for commercial properties over \$500,000 in land value. This change increased the percentage contributing less for commercial GMR from 59.9% to 62.3% and for commercial Non-GMR from 85.8% to 86.1%. The impact on the Average Reduction and Additional Contribution levels are also set out below.

	Av. Reduction in Contribution		Av. Additional Contribution	
	GMR(\$)	Non-GMR(\$)	GMR(\$)	Non-GMR(\$)
Commercial	693.7	251.4	2,703.2	376.5

The results show that even with these higher current FSL levels, the Average Additional Contribution amount under this levy structure is still over \$2,700.

7 Ancillary Results

7.1 A Hybrid System

It would be possible to apply any of the above scenarios to just residential (including farmland and vacant land) and leave commercial properties on the current system or vice versa. Under this system, the proportions to be collected from commercial insurance policies and non-commercial properties would need to be set in advance rather than left to the discretion of insurance companies, as is currently the case. This allocation will largely determine which groups would contribute more or less.

7.2 Impact of a Motor Vehicle Levy

Based on data provided by the fire brigades approximately 10-15% of fire service callouts, excluding false alarms, relate to motor vehicle incidents. The possibility of a motor vehicle levy has been included in the financial modelling on an aggregate basis only. Data on the number of vehicle registrations in NSW as at 30 June 2003 was obtained from the RTA showing that there were approximately 4.6 million registered vehicles in NSW, 3.1 million of these being passenger vehicles (refer to Appendix 6).

Therefore a flat \$1 charge on every registered motor vehicle would generate approximately \$4.6 million. Assuming a \$10 flat charge does not reduce the number of registered vehicles, the amount generated by this levy would be over \$46 million or approximately 9.0% of the total budgeted amount of \$509 million needed in 2002/03. This assumes that no pensioner or other discounts are given.

Individual Comparisons are not possible as the address of every vehicle owner is not available and it is not possible to determine whether the vehicle owner was also the owner of the property. Therefore, if a levy were applied to motor vehicles, this would not be taken into account in the results showing the properties contributing more or less under the property-based system.

7.3 Impact of a Pensioner Rebate

Figures provided by the Department of Local Government show that in the financial year 2002/03, approximately 524,000 property owners received a Pensioner Rebate on their rates.

This is equivalent to 20.7% of all residential and farming properties. Currently, the rebate is calculated as 50% of the rates payable subject to a maximum of \$250 and is available to all Pensioner Concession Cardholders. Assuming that the average pensioner's property is the same as the average non-pensioner's property, the cost of giving a 50% Pensioner Discount ranges from \$10.0 million under the Beneficiary Pays scenario to \$16.8 million under the Combined scenario.

7.4 Impact of an Exemption for Mining Properties

PFS was asked to examine the impact of giving mining properties an exemption from levy payments. The Valuer General was able to provide PFS with a list of mining sites in Australia by Local Council region. In total there are 2,493 mining

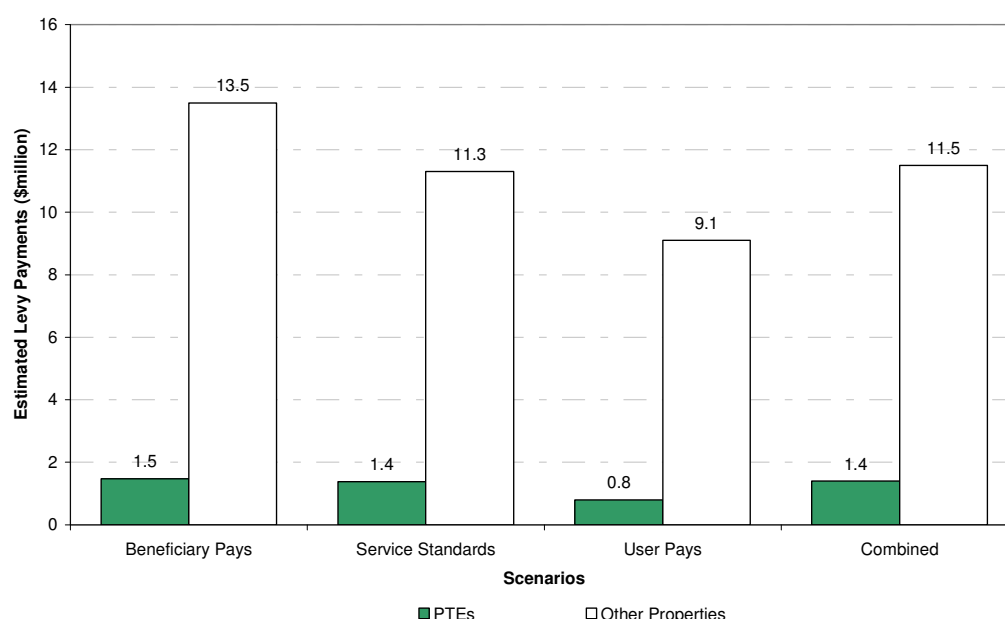
sites listed in NSW. The total land value of these properties as of 30 June 2003 was \$219 million. Of the 2,493 mining properties, 101 properties are coal mines.

The estimated value of a full exemption to the 2,493 mining properties under the test scenarios ranges from \$0.6 million under the Service Standard scenario to \$5.2 million under the User Pays scenario. This shows that most mines are outside the GMR and also that there is a relatively low average value for the mining properties listed with many mining sites having values below \$1,000.

7.5 Impact on NSW State Government

As set out in the Terms of Reference, PFS was asked to model the potential impact of a property-based system on the NSW State Government. Section 5.2 discusses the potential loss of stamp duty and GST related revenues from the removal of the FSL from insurance policies. PFS has also modelled separately, the potential cost of a property-based system on Public Trading Enterprises (PTEs) and State Owned Corporations (SOCs). In addition, the potential cost if all NSW Government properties were included in the property-based levy was modelled.

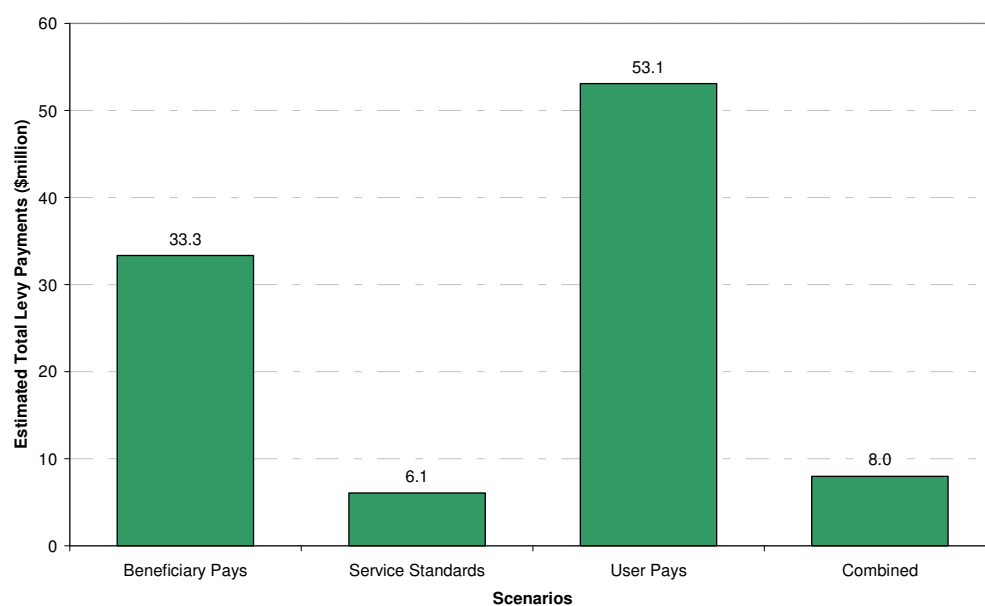
The results of this analysis are shown in the chart below.



7.6 Impact on Local Councils

For the purposes of this modelling exercise, it has been assumed that all local council properties (other than those zoned as O, U to Y) will fall under any new property-based system. Based on this assumption, there were 10,328 local council properties individually assess with a total land value of \$8.4 billion as at 30 June 2003.

The estimated cost for local councils under the four scenarios ranges from \$6.1 million to \$53.1 million and is set out in the chart overleaf.



The results indicate that the amounts paid by the local councils under a property-based system will depend largely on the relative treatment of Non-GMR properties to GMR properties as the majority of local council properties are in the Non-GMR.

For comparison purposes, it has been assumed that the direct contribution level of 12.6% from local councils is unchanged. It is up to the Committee to consider whether councils should continue to make direct contributions or pay a levy on their properties.

8 Assumptions and Limitations

8.1 Reduction in Insurance Premiums

The Individual Comparisons determine those property owners contributing more and those contributing less by comparing the current FSL amount, including the GST and stamp duty arising from the FSL share of the insurance premium, against the proposed levy for every matched property record. This implicitly assumes that if a new property-based system were introduced, insurance premiums would fall by the amount that is currently charged for the FSL and the associated government imposts.

8.2 Administration Charge

It has been assumed that an administration cost of \$2 per property will apply. This equates to a figure of approximately \$5.5 million as at 30 June 2003.

8.3 NSW Government Share of Total Cost

As set out in the Terms of Reference of the Inquiry (refer to section 2.1), the aggregate cost to the NSW Government of funding the fire services, after taking into account the loss of stamp duty and GST, is not to increase under a property-based levy.

As mentioned above, it has been assumed that the removal of the levy from insurance premiums will lower premiums by the levy amount grossed up for the reduction in GST and stamp duty. To ensure any change is revenue neutral for the NSW Government, the model also calculates a figure for the total loss of GST and stamp duty revenues. A figure of \$10.9 million has been calculated as the loss on GST, using the expected insurance contribution for 2002/2003 of \$375.5 million (73.7% of \$509.5 million) and the NSW allocation of total GST collections of 29.1%.

The reduction in stamp duty collections has been calculated as the expected insurance contribution grossed up for GST and multiplied by the stamp duty rate of 5%. This produces an estimated figure of \$20.7 million ($375.5 \times 1.1 \times 0.05$). In total the expected impact is \$31.8 million.

To offset this loss of revenue, the model assumes that the direct contribution from the NSW State Government will fall by the amount necessary to ensure the change is revenue neutral. The reduction in the NSW State Government's direct contribution therefore needs to be met by an increase in the new property-based levy. The following table shows the assumed changes in funding contributions from the three major sources.

	Current	Assumed
Cost of NSW Fire Services for: 2002/03	\$509,515,000	\$509,515,000
% Funded by Insurance FSL	73.7%	0.0%
% Funded by NSW State Government	13.7%	7.6%
% Funded by Local Councils	12.6%	12.6%
% Funded by Property FSL	0.0%	79.8%

Source: NSW Treasury

8.4 Timing of Land Values

Local Councils currently operate on a three year cycle; therefore the actual values currently used may be up to three years behind the values used in this model. Therefore, if the rates used in the test scenarios were adopted, the total revenue collected would be less than the target revenue amount.

Timing adjustment factors could be produced to compensate for the likely shortfall in revenue from local councils using non 2003 land values (refer to section 9.4.1).

8.5 Direct Impact Analysis

The financial model developed for this project only allows for the direct impact(s) of the proposed change. Possible secondary impacts (such as body corporates passing on to unit owners the saving from removing the FSL on building cover or a building owner passing on an increased property-based FSL by increasing rent to tenants) are not reflected in the results produced in this report.

9 Data

9.1 Background

The financial model has been developed using data from various sources. This section details the information obtained from each organisation, how each dataset was used to develop the final model and the various scenarios tested.

9.2 Sources

9.2.1 Valuer General via the Department of Lands

PFS was provided with a database containing valuation information on every assessed property in NSW. Key valuation details provided were:

- The full address;
- The land value;
- The local council's zone classification and
- Where applicable, the number of units on the site.

This information was used in the Aggregate Calculations to estimate the amount of revenue to be collected under the test scenarios. The above information was also used in the Individual Comparisons to produce the matched dataset.

The land values provided are the values determined by the Valuer General as at 30 June 2003. These figures differ from the values used by councils in their 2003 rates notices, as the land values used by councils are usually updated from the Valuer General's records on a 3 yearly cycle. This issue is a key limitation of the model and is discussed in more detail in section 9.4.1. A summary of the Valuer General's data split between the GMR and Non-GMR is set out below.

Summary of Valuer General Database

GMR	Residential	Commercial	Farmland	Vacant	Total
Total Land Value	\$441,957m	\$71,176m	\$23,758m	\$10,716m	\$547,607m
No. of Properties	1,680,351	171,980	58,086	38,078	1,948,495
Average Value	\$263,015	\$413,862	\$409,010	\$281,428	\$281,041
Non- GMR	Residential	Commercial	Farmland	Vacant	Total
Total Land Value	\$50,739m	\$6,788m	\$44,795m	\$3,002m	\$105,324m
No. of Properties	551,067	40,688	238,415	12,888	843,058
Average Value	\$92,075	\$166,838	\$187,887	\$232,913	\$124,931
All Regions	Residential	Commercial	Farmland	Vacant	Total

Total Land Value	\$492,697m	\$77,964m	\$68,553 m	\$13,718 m	\$652,932 m
No. of Properties	2,231,418	212,668	296,501	50,966	2,791,553
Average Value	\$220,800	\$366,601	\$231,206	\$269,160	\$233,896

Source: Valuer General's Office

PFS was also provided with some ancillary databases from the Valuer General that provided information on:

- The allocations used to apportion the land value between the units, townhouses and any other property on the original database which receives more than one council rate notice;
- Heritage listed properties where a concessional land value applies which is lower than the land value on the original database provided;
- A list of estimated local government properties in NSW;
- A list of estimated State and Federal government properties in NSW and
- A list of mining properties in NSW.

Summary schedules of aggregate property values and numbers of properties as at 30 June 2000, 30 June 2001 and 30 June 2002 were also provided. These aggregate figures are used to determine the average increase/decrease in land values and illustrate the importance of taking this issue into account.

All of the Aggregate Calculations and Individual Comparisons in this report are based on the land values as at 30 June 2003.

The Valuer General's office advised that, except for heritage listed properties and for some properties where minor adjustments apply, all properties are assessed on the "highest and best" use of the land.

The Valuer General's database was also modified to remove the State and Federal Government properties that would not be levied under a property-based system.

9.2.2 Insurance Companies

In order to calculate the Individual Comparisons, information on the current dollar value of FSL on insurance premiums was required on an individual property basis. This information was provided, in the main, by the following insurance companies for virtually all of their residential policies and some of their commercial policies:

- IAG (includes CGU);
- Allianz;
- Promina (includes Australian Pensioners' Insurance Agency, AAMI and VERO);
- Suncorp Metway (includes GIO);
- QBE (including the book of business it purchased from Mercantile Mutual) and
- Catholic Churches Insurance.

The effective date of the insurance data varied between insurers due the different systems used. In the main, most insurers were able to provide the most up-to-date information stored on their respective information systems at the time the information was requested.

The table overleaf summaries the insurance records provided.

	Residential	Commercial	Total
No. of Records	2,411,000	314,000	2,725,000
Total FSL	\$133.9 million	\$54.3 million	\$188.2 million

It should be noted that some insurance companies store the details of contents cover on a separate record to the building cover. In addition, some insurance companies also provided details of their contractors' policies which do not relate to a particular property but for a region (eg. "All of NSW" appears as the address). Therefore, the number of properties covered by the insurance data would be significantly less than 2,725,000.

Comparing the amount of FSL on the insurance records provided against the expected industry collection amounts, from the ICA, gives an estimate of the coverage of the insurance records.

	Residential	Commercial	Total
Total FSL (02/03)	\$133.9 million	\$54.3 million	\$188.2 million
Estimated FSL for Calendar 2002	\$167.8 million	\$168.5 million	\$336.3 million
Estimated FSL for Calendar 2003	\$166.8 million	\$208.7 million	\$375.5 million
Estimated Data Coverage	80%	32% - 26%	50% - 56%

Note: Allocations to motor insurance have been allocated evenly between residential and commercial properties.

The figures above indicate that for residential properties the insurance records provided covered most of the market in NSW. However, for commercial policies, the records provided only cover approximately a third of the FSL collected. One reason for the relatively low coverage of commercial FSL collection is the lack of data on ISR and non-property related risk policies.

9.2.3 NSW Fire Departments

Information on incident levels and personnel usage was obtained from the NSW FB and the RFS NSW. PFS was provided with figures showing the number of incidents attended to by both fire services in NSW broken down by type of property and also the average time spent dealing with the incident. This information was used to establish the assumptions used in the User Pays scenario (refer to section 6.4).

9.2.4 NSW Treasury

NSW FB and RFS NSW budget figures for the financial year ending 30 June 2004 were provided by NSW Treasury. NSW Treasury also provided lists of all State Government entities split between those which are likely to be individually assessed under a property-based FSL and those not likely to be individually assessed. These lists were passed on to the Valuer General's office to extract the State and Federal Government properties.

NSW Treasury also provided the information on the fire services budgets and the shares of the three major funding groups (State Government, local councils and insurance companies). These figures are used to set the revenue targets for the Aggregate Calculations.

9.2.5 NSW Department of Local Government (NSW DLG)

The NSW DLG provided PFS with figures on the number of residences in NSW receiving a pensioner rebate. This data was used in the model to calculate the impact of providing discounts to pensioners. This calculation can only be done at an aggregate level, as we did not obtain details of the individual pensioners or their addresses.

9.2.6 Property Council of Australia and ARIMA Ltd

Due to the shortage of data on large commercial properties, The Property Council of Australia and ARIMA were asked to provide PFS with data on the amount of FSL currently being paid by their members in NSW. This information served to increase the number of matched records relating to large commercial properties and therefore improved the relevance of the Individual Comparison results.

9.2.7 NSW Roads and Traffic Authority (RTA)

The RTA provided PFS with the number of motor vehicle registrations in NSW split by the type of vehicle and whether or not a pensioner discount applied. This information was used to determine the impact of charging an FSL on motor vehicles. Appendix 6 contains the table provided by the RTA.

9.2.8 The Department of Infrastructure, Planning and Natural Resources of NSW

This department has developed a list of councils which it classifies as being in the Greater Metropolitan Region. This classification was used in the model to develop the pricing regions so that a different levy structure could be applied to councils within and outside of this region to reflect possible variations in service.

A list of the Greater Metropolitan Region councils is provided in Appendix 2 of this report.

9.2.9 Insurance Statistics Australia (ISA)

ISA were asked to provide insurance fire claims payments data split between residential and commercial and between Greater Metropolitan Area and the rest of the State. This was used to develop the Beneficiaries Pays scenario (refer to section 6.2).

9.3 Data Veracity

The results produced by the Aggregate Calculations and the Individual Comparisons rely heavily on the quality of data used in the model. PFS has endeavoured to check all pieces of data provided by testing the information against known aggregates and benchmarks. Where possible, PFS has also compared the data against other similar data sets from other organisations (eg. the Valuer General's database against known property statistics issued by the NSW DLG and the Australian Bureau of Statistics).

The following sets out some of data issues discovered during the process of checking the data sources.

9.3.1 Negative FSL Values

In total, PFS was provided with over 2.7 million insurance records from the major general insurance companies in NSW. PFS requested that each record contain a figure for the amount of annual FSL currently paid on each insurance policy. In the process of checking the data, some insurance records were found to have negative FSL values. Negative FSL values can occur when a rebate on the policy has been paid during the period in which the data was extracted but the original premium occurred before the start of the extraction period. As outlined in section 10.1, any matched records with negative FSL values were removed from the Individual Comparisons.

9.3.2 Property Addresses

One of the key stages in developing the financial model was the matching of the Valuer General's database (which contained the land value of properties) with the insurance records (which contained the current FSL amounts) to produce a single database. This link was established using the property addresses contained in both databases. Hence, in order for a property to come into the model for the Individual Comparisons, it was necessary for it to:

- a) Have an insurance policy record and a Valuer General record and
- b) Have an insured address identical to the address in the Valuer General's database.

Whilst the Valuer General uses a consistent address naming protocol, the property addresses stored by insurance companies is the address which policyowners provide on their applications. Therefore, the way in which insurance addresses were provided varied significantly and hence not all insurance policies could be matched. This was particularly a problem with units where the actual address of the block varied as well as the description of the individual unit and for larger properties which often have more than one valid address (eg. where there is more than one street frontage).

The table overleaf shows the main issues relating to addresses which prevented the complete matching of the insurance data base.

Issues with Insurance Addresses

Error Type	Explanation	Example (addresses are fictitious)
1. Typographical error	Where the policyowner has written the wrong address.	1 George St, Coogee NSW 2026 instead of 1 George St, Coogee NSW 2027
2. Different suburb	Where an address is on the edge of one suburb, the property owner may believe that they live in one suburb but the Valuer General may assessment them as living in the other	10 Smith St, Surrey Hills NSW 2001 instead of 10 Smith St, Paddington NSW 2001
3. Modified suburb	Some insurance addresses had modified suburbs which had references to "North", "Heights", etc.	25 Jones Rd, Killara Heights NSW 2300 instead of 25 Jones Rd, Killara NSW 2300
4. Use of abbreviations	References to road, street, drive etc were not consistent in the insurance data.	Variations of "Street" include "St", "Str" and "Stret"
5. Corner properties	Some addresses were written as being on the corner of two streets instead of a specific number on one street.	Cnr Smith & Jones St, Balmain NSW 2400 instead of 1 Smith St, Balmain NSW 2400
6. Inclusion of name	Some addresses had the policyowner's name incorporated into the address.	(Mr G Williams) 45 Harold Drive, Queanbeyan NSW 2512
7. Generic policy	Some policies, such as contractors' risk products, attract FSL but do not relate to specific building but to a region.	The address may be: ALL NSW 2000
8. Multiple addresses	Some buildings, in particular large commercial buildings with more than one street frontage, are known under two or more addresses.	1 Market Street, NSW 2000 instead of 377-400 Kent St, Sydney NSW 2000
9. Rural addresses with PH	This is an abbreviation for Parrish and appears on the Valuer General's database where some properties are not using conventional addresses.	

9.3.3 Issues with Commercial Insurance Policies

The following table shows the level of coverage of the commercial data received and the matched dataset.

Commercial	Number	Total FSL ('mil)	Average of Data
Total Properties	213,000	\$168.5 to 208.7	\$791 to \$980 per property
Commercial Records	314,000	\$54.3	\$173 per record
Matched Records	23,000	\$13.0	\$565 per matched record

The table highlights the following issues with regards to the original commercial insurance received and the commercial dataset produced by the matching process:

- The number of records is greater than the number of properties as more than one policy can be purchased on a single property.
- The total FSL, contained in the insurance records provided, represents only about 30% of the estimated total FSL collected from commercial policies. A significant proportion of the total FSL on commercial policies is paid on Industrial Special Risks (ISR) policies. These policies are purchased by businesses and can cover a number of properties and also a variety of business risks such as loss of profits, business interruption, consequential loss and contents. ISR policies are generally stored separately from the more standard business policies that were initially provided to PFS.

Because of the limited FSL information provided on large commercial properties in the initial data received from insurance companies, the Property Council of Australia and ARIMA were approached for information on the FSL currently being paid on some of the larger commercial properties of their members.

- For commercial properties, the total FSL on commercial policies in the matched dataset is only \$13 million representing 6.2% - 7.7% of the estimated FSL collected on NSW commercial policies.
- The average FSL per matched record of \$565 is significantly lower than the average overall average which implicitly assumes that all commercial properties are insured. One reason for this is that for tenanted buildings it is unlikely that the FSL amount reflects the FSL paid by tenants on their business insurance policies covering contents, public and product liability, consequential loss and possibly other types of insurance.

In summary, the data collected on commercial policies is limited and based on the table above; the matched dataset appears to understate the total FSL currently paid by commercial properties.

9.4 Qualifications on Data Provided

9.4.1 Timing of Valuer General Data

The Valuer General's land values are all as at 30 June 2003. These values are updated and are provided to the Office of State Revenue for land tax purposes on an annual basis. The Valuer General, however, only provides an update of the values used by local councils for rating purposes once every 3 or, in some cases, 4 years. With council rates, individual councils can use out of date land values for rating purposes as the ad valorem rate is set by the council and takes into account whether or not the land values have been updated.

With a property-based FSL, however, there will be major anomalies if some councils apply the formulae to land values that are up to 4 years out of date, while other councils use current land values. Appendix 3 sets out a list of councils using land values as at 30 June 2000, 2001 and 2002 and sets out the percentage change in average land values for different categories of property, to get the 2003 land values. As can be seen, increases of over 100% are not uncommon but, in some rural councils, there were decreases in the average value.

PFS discussed this issue with the Working Group and came up with three possible methods to overcome this problem:

- a) Local councils could update their land values annually using the latest figures from the Valuer General;
- b) Develop the levy structure and values using the actual land values being used by local councils and
- c) Scale the formulae to allow for the timing discrepancy.

Option (a) is beyond the scope of this report. Option B would require a new dataset for the model (which may be difficult to obtain) and would also mean that properties would not be treated on a consistent basis.

Option c would involve adjusting the formula provided to individual councils each year for the FSL amount to be raised by those councils. Timing Adjustment Factors (TAFs) could be calculated, which would allow for the difference between the land values the councils are using and the latest land values from the Valuer General. These TAFs would need to be by type of property, as there can be significant differences changes in land values within one council area by property type. Even then, the adjustment would not be exact, as within one council area there can be significant differences between regions of that council. This scaling would, however, lead to greater equity between different councils and avoid large increases in FSL charges every third or fourth year.

In the absence of annual updating of land values to all councils, scaling the formulae may be a good compromise for the Committee to consider.

9.4.2 Non-Insurance

The results of the 1998-99 ICA survey indicated that there was, at that time, a significant level of non-insurance among owner occupiers (8.5% with no building cover and 24.3% with no contents cover). Due to the problems with using imprecise addresses it is not possible to produce a reliable estimate of the current non-insurance levels in NSW using the insurance data provided.

However, one by-product of the matching process is an estimation of the levels of residential property owners (excluding units) who have only purchased one form of cover; either contents or building only. As detailed in section 10.1, of the 870,000 matched residential and farmland properties 513,000 had both contents and building cover, 209,000 only had buildings cover and 93,000 had only contents cover.

Assuming the matched database is representative of the population of residential property owners in NSW, this indicates that approximately 24% of policyowners have no contents cover and 11% have no building cover. These figures are similar to those produced by the ICA; however they do not include those residential property owners with no cover at all.

Under a property-based system, those property owners with no insurance (including those under self insurance programs and insured overseas) will be required to contribute to the system. The Individual Comparisons will not show the impact on these properties as no insurance record is available. In addition, all matched properties with only one form of insurance have been excluded from the Individual Comparisons.

9.4.3 Under-Insurance

The ICA survey also estimated that 27% of households were insured for less than 90% of their replacement value and that possibly 35% of all contents were markedly underinsured.

PFS was provided with sum insured levels for this project. However, in order to determine under-insurance levels it would also be necessary to have an up to date database on reconstruction costs. Hence, this analysis has not been conducted. For information purposes, PFS has consolidated the residential insurance information provided and has produced a table showing the average sum insured levels, for building and contents, most local councils in NSW using the matched data set. It should be noted that some councils have not been included in the table as the number of matches in that council were too small to produce any reliable figures. This table is in Appendix 4. The following tables show the five highest and lowest councils by average building sum insured.

Top 5 by Building Sum Insured

Council	Matched Properties	Av. Building Sum Insured	Av. Contents Sum Insured
Woollahra	3,313	678,341	134,571
Mosman	2,006	601,272	131,356
Sydney (SS)	231	501,608	73,192
Hunters Hill	1,163	487,985	110,673
North Sydney	1,999	456,675	101,718

Lowest 5 by Building Sum Insured

Council	Matched Properties	Av. Building Sum Insured	Av. Contents Sum Insured
Barraba	207	138,638	49,675
Jerilderie	85	135,109	53,129
Guyra	294	134,779	51,820
Bingara	181	133,492	49,220
Broken Hill	2,860	122,827	48,337

The table below shows the results by the main geographic regions.

	Av. Building Sum Insured	Av. Contents Sum Insured
GMR	\$259,000	\$73,000
Non-GMR	\$190,000	\$60,000
All Councils	\$243,000	\$70,000

9.4.4 Crown Land

In the original database from the Valuer General, crown land was spread through the various property types and for most property types including those on which the new levy would be payable. This overstates the aggregate income produced by the model as it is likely that properties owned by some government bodies would pay the levy but other properties owned by government bodies would be exempt.

Following discussions with the Working Group, it was agreed that, in line with the government's policy of competitive neutrality, for the purposes of the modelling the following would be charged the property-based FSL:

- Public Trading Enterprises (PTEs) and State Owned Corporations (SOCs) of both the Commonwealth and NSW State Governments, and
- Telstra and any other partially owned government corporation.

These bodies, under current arrangements, generally take out insurance on their properties and pay the insurance FSL. NSW Treasury provided to the Valuer General a list of the government entities for both the Commonwealth and the State, which would, and which would not pay the proposed property-based FSL. This has enabled PFS to adjust the original database to exclude government properties that are unlikely to pay the property-based FSL.

The State Government, under the proposed arrangement, would continue to make an additional contribution to the cost of the fire services. As set out in the Terms of Reference for the Inquiry, under a property-based system, any change to the current system should be as near as possible cost neutral to the State Government, after allowing for any losses from reduced GST and stamp duty revenue.

9.4.5 Local Council Properties

Currently, councils contribute 12.6% of the budgeted cost of the Fire Services as well as contributing to the current FSL on those properties they currently commercially insure. Their properties are spread throughout the various property types in the original database from the Valuer General and in the model are generally assumed to pay the FSL. The Valuer General provided a further database of all the local council properties. From this PFS has created a database which enables the potential FSL income from these properties to be separately identified.

9.4.6 Heritage Properties

The original database from the Valuer General provided land values based on the highest possible use of the land. For heritage properties listed in the State Heritage Register under the *Heritage Properties Act* there is also a concessional land value allowing for the heritage restriction. For council rating purposes the concessional land value applies.

Therefore, a database of these properties with the concessional values was provided to PFS which was used to adjust the original database.

9.4.7 Other Valuation Adjustments

There are also allowances given under certain circumstances which are deducted from the land value to arrive at a net figure for rating. These are:

- Stratum allowance;
- On- site works allowance;
- Off-site works allowance;
- Joint water supply allowance and
- Subdividers allowance.

While the existence of these can make a significant difference in rating on individual properties, we have been advised by the Valuer General's Office that the number of the affected properties in NSW is very low and the impact on the FSL of allowing for these in the modelling would be very small. Therefore we have not adjusted the database for these properties.

9.4.8 NSW FB and RFS NSW Data

The information provided by the NSW FB differed from that provided by the RFS NSW. These differences are outlined below:

1. The NSW FB provided data on the time spent at incidents including time from the receipt of a call until the duties are completed (ie. includes travel time). The RFS NSW on the other hand provided data based on the time at the scene and did not include travelling time.
2. The two services also differed in how they categorised the effort put into each incident. The NSW FB based their figures on the duration of the incident whereas the RFS NSW weighted that by the number of personnel involved.
3. There are also significant differences in the breakdown of the types of incidents attended to by the two services, as would be expected.

The assumptions used in the User Pays scenario rely on the information from both fire services. To aggregate the two data sets, the budgeted figures for the two services were used to weight the experience of each service. In addition, average figures for the number of personnel attending each incident type were used to adjust the NSW FB figures.

10 Building a Matched Data Set

10.1 Overview of Procedure

The individual comparisons conducted by the FSL model rely on a sample of matched data records. Each data record contains the necessary pieces of information needed to undertake the comparison; these were:

1. The local council responsible for each property
2. The land value of the property and
3. The Gross FSL amount currently paid on the property.

This matched data set was created by combining the two major datasets provided for this project: the valuation dataset provided by the Valuer General and the insurance data provided by insurance companies and property groups. The process developed to do this matching is outlined below.

Step 1: Reformat Insurance Records and Combine

All the insurance policies were reformatted and combined to produce a single consistent insurance policy database with two tables; one for residential policies and one for commercial policies.

Step 2: Consolidate Insurance Records

The method used to store policy addresses varies between insurance companies. Some companies will store records which cover both buildings and contents for the same address as two separate policies whilst others store the information under one record. Also, for some properties the building cover is with a different insurer to the contents cover (eg. rented properties). Therefore, in order to increase the likelihood that each matched record has an FSL amount that relates to the total amount of FSL paid on that property, PFS consolidated, and then developed automated processes to match, the insurance records for the same address. Hence, where a property had multiple insurance policy records, the records were combined to produce one insurance record.

Step 3: Modify Insurance and Valuer General Addresses

In order to link the insurance database with the Valuer General's database, it is necessary to have the addresses in the insurance database in the exact same format as the Valuer General's. Given the large variations in the way street references appeared in the insurance database it was decided that all references to: street, St, Str, Drive, Dr, Road, Rd, Avenue, Ave etc. should be removed from both the insurance database and the Valuer General's database. For example the address 45 George Circuit, St Leonards NSW 2050 was changed to 45 George, St Leonards NSW 2050. As a result some addresses which were identical to another address with the exception of the street reference were combined. We do not believe that this discrepancy was significant.

Step 4: Match Databases

The Valuer General's database was matched with the insurance database. Two tables were produced; the first table with the matched records contained the address, total FSL, land value, property zone, building sum insured,

contents sum Insured and local council. The second table was a list of the insurance records that did not find a corresponding Valuer General record.

Step 5: Examine and Modify Insurance Records without Matches

The addresses in the unmatched tables were examined to determine if there were any significant reasons why the insurance records did not match. When identified, these changes were made to all applicable records. For example it was discovered through this process that some addresses contained the names of the policyowner(s), these references were removed from the addresses.

Step 6: Rematch Databases

Once the addresses were modified, the databases were rematched to produce a final matched database for residential policies and for commercial policies. These two matched tables were then combined to produce a single matched database. A summary of the rematched database is provided below.

Total Number of Matched Insurance Properties	902,590
- Commercial Properties	26,159
- Farmland Properties	34,293
- Residential Properties	836,240
- Vacant Land	5,898

Note: There were some commercial properties from the Valuer General's database that have residential insurance from the insurance records and vice versa. Under the property-based system but will be charged under the Valuer General's classification and this will benefit some whilst penalising others.

Step 7: Determine Regions

The matched insurance database was then combined with the Greater Metropolitan Region table to produce a larger matched insurance database with an indicator showing the property-based levy structure applicable to each address.

Step 8: Calculate Gross FSL Figures

In order to take into account the reduction in GST and stamp duty payable on insurance premiums, all FSL figures were increased by 15.5% (being $110\% \times 105\% - 100\%$) to produce the Gross FSL figures.

Step 9: Remove Unwanted Records

Following discussions with the Working Group it was decided that the following records should be removed from the Individual Comparison dataset.

Records Removed	Rationale
All records with a negative or zero Gross FSL value – 4,373 records	These records are due to rebates on previous premium payments and also possibly system errors.
Unit blocks – 28,827 properties	Some of the matched records related to unit blocks. Generally, these matches related only to the building cover not any contents cover taken out by tenants (as this would be unit specific and this address is not contained in the Valuer General database). Therefore, these records were removed as they would underestimate the insurance on the property.
Vacant Land – 5,831 properties	Vacant land properties were not included in the Individual Comparison analysis.
Farmland or residential properties that have contents only or building only cover – 93,272 contents only 209,436 building cover only	In order to undertake a fair comparison only those properties with both buildings and contents should be considered.
Commercial properties that have a Gross FSL value of less than \$20 for GMR properties and \$10 for Non-GMR properties or if they have a Gross FSL value that is less than 5c for \$1,000 sum insured – 796 properties	These records were removed because it was viewed that they related in the main to: - Records where only instalment premium had been paid; - Contents cover for an office within an office block and - A system error within the insurance company.
Farmland or residential properties that have a FSL value of less than \$10 – 366 properties	These low values were probably the result of instalment payment records or system errors.

Step 10: Produce Tables for Model

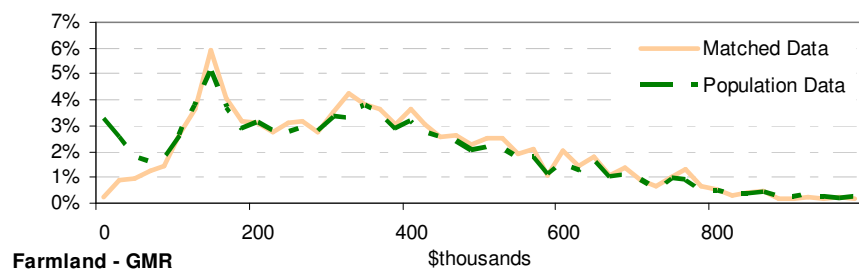
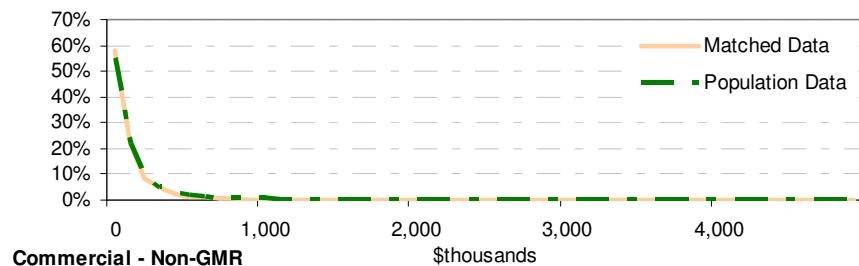
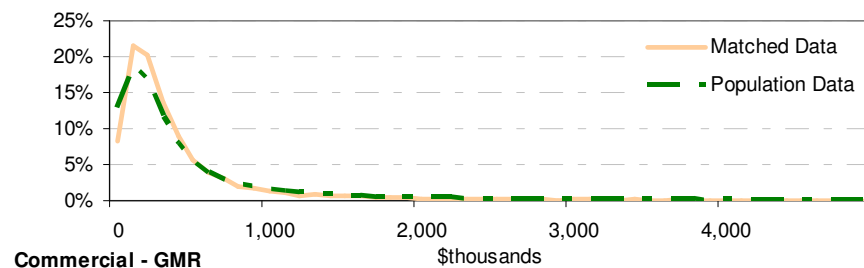
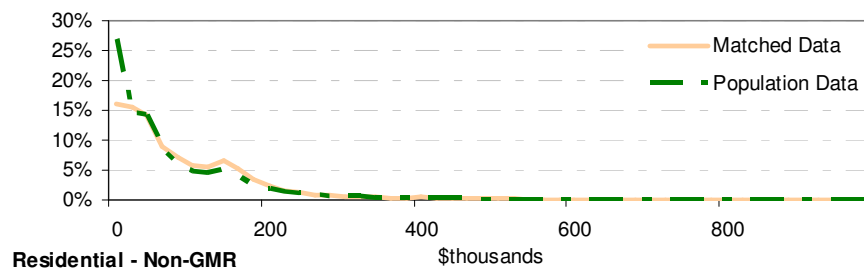
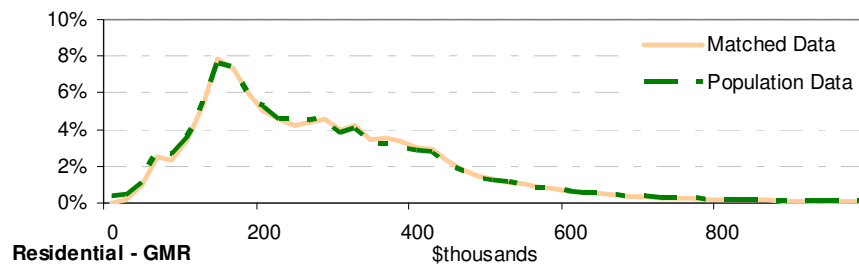
The remaining table was then sorted by property type (residential, commercial and farmland) and then by region. The table was then broken up into the six categories. The unwanted fields (ie. address, building sum insured, contents sum insured, pricing region and zone) were removed. This produced six tables with the fields: local council, Gross FSL and land value. These tables are used in the model for the Individual Comparisons.

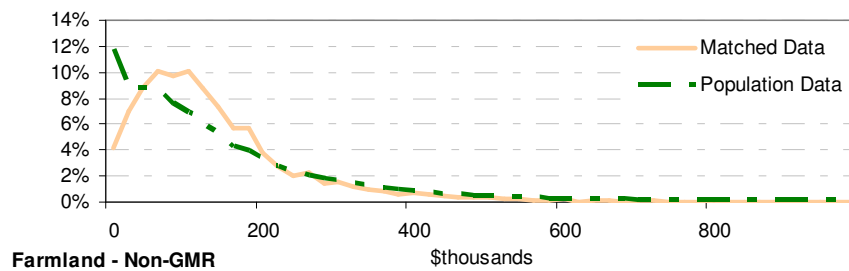
10.2 Relevance of Matched Datasets

The relevance of the results of the Individual Comparisons is dependent on whether the matched sets are representative of the insured population as a whole. In order to examine this issue, charts comparing the distribution of land values for the entire population against the distribution of land values in the matched datasets set have been produced and shown overleaf.

The charts show that the residential GMR and commercial Non-GMR matched datasets have a distribution that is very similar to the population overall. This implies that for these groups, the distribution of insured population is similar to the population overall.

The results for the other datasets show that lower property values tend to be under represented by the matched dataset. This effect is likely to be due to a higher proportion of lowered valued property owners choosing not to insure. Hence, overall it appears that the matched database produced by the process above is representative of the spread of land values for the insured population overall.





10.3 Scatter Plots of Matched Dataset

Scatter plots for the matched datasets for the three property types and by GMR and Non-GMR have been produced to show the spread of FSL values by land value. These are provided in Appendix 7.

Each point in the scatter plots represents one matched address with the position of the point determined by the land value of the property and the Gross FSL currently paid on that property. To facilitate comparison between charts, we have only shown those points with a land value less than \$5 million and a Gross FSL amount less than \$5,000. The charts show that FSL payments for residential properties are concentrated with very few properties paying more than \$500 of FSL. For commercial properties, the points are spread throughout the chart reflecting the large variation in FSL payments. Comparing the charts by region shows how the land values for Non-GMR properties tend to be lower than GMR properties and overall, the number of large FSL payments in the Non-GMR region is significantly less than in the GMR region.

The charts show that a flat property-based levy structure could be accommodated for residential properties given the narrow spread of current FSL payments. However, for commercial properties the very wide spread would produce a lot of properties contributing more and less by large amounts.

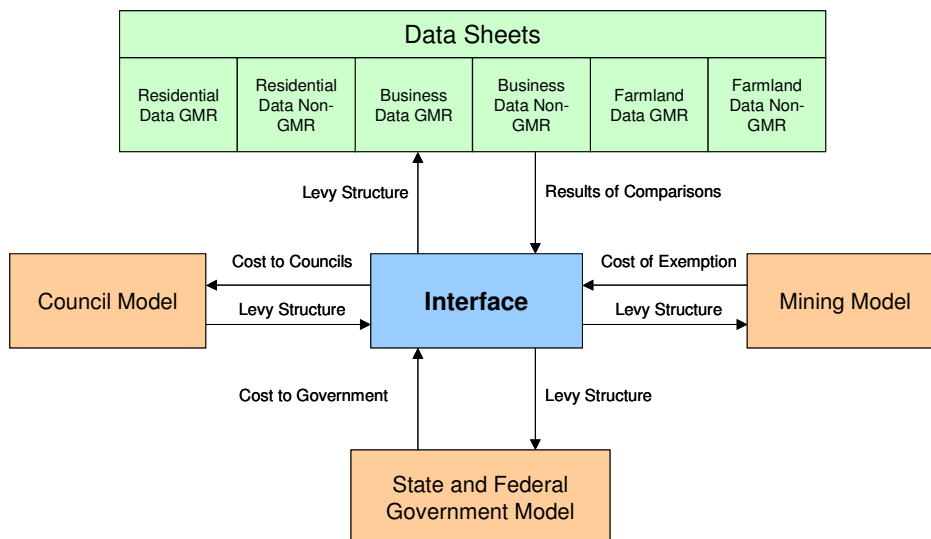
APPENDIX 1: Technical Overview of the FSL Model

The FSL model comprises of a series of linked Microsoft Excel spreadsheets. The decision to use a spreadsheet approach, as opposed to using a database approach, was based on the views that:

1. The model would be easier to use as more people are familiar with using spreadsheets than databases and
2. Spreadsheets allow greater flexibility with regards to user interfaces.

The following diagram shows the basic structure of the FSL model and outlines the flow of information between the components.

FSL Model Structure



An overview of these model components is provided in the next two sections.

The Interface Sheet

The Interface sheet controls the entire model and plays a key role in the Aggregate Calculations as well as the Individual Comparisons.

With regards to the Aggregate Calculations, the Interface sheet takes the inputted levy structure and applies this to the property distributions. There are six property distributions, one for each of the combinations of property types and pricing regions. These property distributions summarise the number and values of properties for each property subgroup. By applying the proposed levy structure to the property distribution, the expected levy revenue from the group can be determined quickly without having to apply the levy rate to every single property.

The total revenue for each distribution is determined and then modified for any maximum levies and any assumed discounts. The results for the six property groups are then consolidated to produce one final figure, which is presented in the model results.

The Interface sheet is also used to control the Individual Comparisons. With the large number of matched records, the data is stored outside the Interface sheet in separate data sheets, which are linked to the Interface sheet. The Individual Comparisons are then

undertaken in these data sheets, the Performance Indicators are then calculated and then transferred to the Interface sheet. The user is then able to view the consolidated results in the Interface sheet alone.

The Data Sheets

As discussed above, the matched property records are stored outside the Interface sheet in separate data sheets. There are six data sheets covering the three property types (residential, commercial and farmland) and the two regions (GMR and Non-GMR). Each sheet is linked to the Interface sheet by way of the levy structure. When the model is run, the first data sheet (Residential GMR) is opened and the proposed levy structure applicable to these properties is transferred to the data sheet. The data sheet then calculates the levy for every matched property record and compares this against the FSL amount currently paid through insurance levies to determine those property owners contributing more and less and the differential between the current and proposed amounts. The Performance Indicators are then calculated and then transferred to the Interface sheet. Once this has been completed, the data sheet is then closed down and the next data sheet is opened. This process is repeated for all data sheets allowing the Interface sheet to consolidate the results of each data sheet.

It should be noted that the actual property addresses are not stored in the data sheets for privacy reasons.

Results Produced By FSL Model

The FSL model produces three sets of results: Aggregate Results and Performance Indicators.

The Aggregate Results are used to determine the adequacy of the levy structure (ie. objective one) and show how much is being raised from the different property types and regions. This section also shows the expected impacts on the State Government, local councils and the value of the mining exemption.

The Performance Indicators aim to give a picture as to whether the majority of property owners are contributing more or less under the proposed system than the current system and the average amounts by which property owners are contributing more or less. The performance indicators of interest were advised to PFS and were subsequently incorporated into the model design. The following table lists, and briefly describes, the Performance Benchmarks calculated by the model.

Summary of Performance Benchmarks

Performance Benchmark	Description
Average Contribution*	The average amount paid for that sample group of property owners.
25 th Percentile*	The amount in which 25% of property owners in the sample group currently pay less (eg. if the result is \$50 then this indicates that 25% of the property owners in the group currently pay less than or equal to \$50 under the current insurance-based system).
75 th Percentile*	The amount in which 75% of property owners in the sample group currently pay less. This figure is used with the 25 th percentile figure to give a measure of the spread of the figures.
Median Contribution*	The amount in which 50% of property owners in the sample group currently pay less and 50% pay more.
95% Confidence Interval*	A measure of how reliable the sample average figure is as an estimate of the average of the population as a whole. For example if the confidence interval is \$10 and the average is \$80 then there is a 95% probability that the average for the whole population will be between \$75 and \$85.
% Contributing More	The % of properties in the sample group contributing less under the proposed system.
Av. Reduction in Contribution	For those property owners who are contributing less under the proposed system, the average reduction in contributions.
Av. Additional Contribution	For those property owners who are contributing more under the proposed system, the average additional contribution made by these property owners.
% at Maximum	The percentage of the sample at the maximum proposed levy.
Sample Size	The number of matched properties in the sample.
No. Contributing less by over \$100	The number of properties which will contribute less under the proposed system by \$100 or over.
No. Contributing more by over \$100	The number of properties which will contribute more under the proposed system by \$100 or over.

*Indicates that the Performance Benchmark is calculated for the current insurance-based system as well as the proposed property-based system to allow comparison of the two systems.

These Performance Benchmarks are produced for the three property types and for the two regions, so users are able to examine whether any differences exist between sample groups.

Appendix 5 contains the complete set of results for the Combined scenario (refer to section 6.5).

APPENDIX 2: Greater Metropolitan Region Councils

Ashfield	Liverpool
Auburn	Maitland
Bankstown	Manly
Baulkham Hills	Marrickville
Blacktown	Mosman
Blue Mountains	Newcastle
Botany	North Sydney
Burwood	Parramatta
Camden	Penrith
Campbelltown	Pittwater
Canterbury	Port Stephens
Cessnock	Randwick
Canada Bay	Rockdale
Fairfield	Ryde
Gosford	Shellharbour
Hawkesbury	South Sydney
Holroyd	Strathfield
Hornsby	Sutherland
Hunters Hill	Sydney
Hurstville	Warringah
Kiama	Waverley
Kogarah	Willoughby
Ku-ring-gai	Wollondilly
Lake Macquarie	Woollahra
Lane Cove	Wollongong
Leichhardt	Wyong

APPENDIX 3: Growth in Average Land Values to 2003

Councils Using 2000 Values	GMR	Growth in Average Land Values to 2003 Values			
		Residential	Business	Farmland	Vacant
ARMIDALE		5.2%	3.0%	14.9%	7.0%
AUBURN	Y	42.8%	21.1%		40.7%
BALRANALD		40.5%		14.7%	
BEGA VALLEY		166.2%	66.0%	104.2%	92.5%
BOURKE		-13.0%	7.9%	53.6%	
BREWARRINA				43.3%	42.8%
BYRON		166.5%	111.9%	73.7%	117.4%
CAMPBELLTOWN	Y	85.1%	89.2%	125.3%	75.0%
CANADA BAY	Y	64.1%	54.5%		45.0%
CARRATHOOL		16.2%		34.4%	
CENTRAL DARLING		61.0%			
CESSNOCK	Y	83.2%	69.1%	46.3%	63.4%
COBAR		-55.9%	10.2%	32.4%	-48.6%
COOLAH		-0.2%	-25.4%	27.8%	
COWRA		14.5%	17.9%	22.9%	2.7%
FAIRFIELD	Y	57.2%	54.6%	51.4%	31.7%
GOSFORD	Y	70.0%	42.8%	39.9%	39.9%
GRAFTON		33.2%	16.9%	7.6%	1.3%
GUNDAGAI		5.3%			
HASTINGS		128.5%	62.1%	84.5%	108.9%
HAY		41.6%		20.9%	
KEMPSEY		141.7%	119.4%	69.3%	130.8%
KIAMA	Y	151.1%	113.3%	77.8%	100.7%
LACHLAN		34.1%		17.2%	
MARRICKVILLE	Y	82.3%	60.4%		75.1%
MERRIWA		6.4%		26.4%	
NEWCASTLE	Y	94.5%	60.4%	38.6%	35.1%
NUNDLE		-4.0%		18.9%	
PARRY		-2.1%		14.5%	20.0%
PENRITH	Y	46.4%	26.5%	36.1%	21.1%
PITTWATER	Y	31.8%	26.5%	30.1%	25.1%
QUIRINDI		11.4%	20.4%	14.5%	
RANDWICK	Y	49.6%	49.5%		37.9%
RICHMOND VALLEY		68.2%	12.8%	10.9%	
ROCKDALE	Y	54.2%	45.1%		51.3%
SHELLHARBOUR	Y	117.3%	101.3%	83.6%	105.1%
SNOWY RIVER		8.7%	24.7%	27.2%	10.8%
TEMORA		0.0%	18.6%	3.1%	1.6%
TUMUT		16.7%	-0.2%	7.0%	-1.4%
WALCHA		-4.9%		20.0%	
WARRINGAH	Y	38.8%	32.9%	44.9%	44.4%
WAVERLEY	Y	32.1%	21.9%		17.3%
WENTWORTH		46.2%	30.5%	12.4%	
WILLOUGHBY	Y	43.1%	11.5%		31.8%
WINGECARRIBEE		129.0%	84.5%	91.5%	77.4%
YOUNG		28.5%	16.5%	39.9%	21.3%
All Greater Metro		63.6%	42.5%	45.8%	57.3%
All Non-Greater Metro		58.4%	43.4%	45.4%	54.2%
All Using 2000 Values		59.8%	43.1%	45.5%	55.1%

Councils Using 2001 Values	GMR	Growth in Average Land Values to 2003 Values			
		Residential	Business	Farmland	Vacant
ASHFIELD	Y	36.2%	49.8%		39.3%
BANKSTOWN	Y	42.4%	35.8%		37.5%
BARRABA		1.3%		29.0%	57.1%
BELLINGEN		60.8%	40.9%	32.3%	90.7%
BINGARA		42.2%		20.6%	-16.1%
BLAND		32.1%		43.6%	
BLUE MOUNTAINS	Y	48.0%	33.7%	19.6%	10.6%
BOMBALA		38.1%		20.2%	
BOTANY	Y	21.8%	32.9%		14.2%
BROKEN HILL		9.1%		-28.8%	
BURWOOD	Y	31.6%	39.8%		31.7%
CAMDEN	Y	85.1%	87.8%	63.3%	49.6%
CITY OF SYDNEY	Y	14.2%	9.4%		29.9%
COOLAMON		6.9%		20.0%	
COOMA-MONARO		54.8%	28.0%	24.7%	
COONABARABRAN		6.8%		10.9%	
COONAMBLE		-1.7%		24.1%	-9.1%
COOTAMUNDRA		5.7%		22.4%	
COPMANHURST		6.7%	6.5%	5.8%	8.9%
CROOKWELL		118.6%	59.9%	42.4%	114.8%
CULCAIRN				20.4%	
GILGANDRA		1.5%		17.7%	
GREATER TAREE		114.0%	26.8%	78.3%	101.5%
HOLROYD	Y	58.4%	34.3%		44.2%
HUME		65.1%	11.1%	42.6%	
HURSTVILLE	Y	44.8%	36.7%		37.7%
INVERELL		3.8%	0.2%	13.1%	2.7%
JUNEE		0.1%		20.2%	
KOGARAH	Y	40.5%	43.0%		49.3%
KYOGLA		4.7%		9.5%	
LAKE MACQUARIE	Y	85.0%	33.9%	38.3%	43.4%
LANE COVE	Y	34.8%	6.1%		20.5%
LEETON		12.3%	19.0%	11.7%	
LISMORE		18.9%	7.7%	21.8%	12.3%
MANILLA		-2.7%		27.3%	
MULWAREE		208.2%	118.7%	93.5%	
MURRAY		14.7%		12.6%	
MURRURUNDI		2.3%		39.5%	
NAMBUCCA		88.4%	34.5%	30.1%	62.3%
NARRANDERA		4.4%		0.0%	
NARROMINE		7.4%	113.7%	19.1%	
NORTH SYDNEY	Y	35.3%	19.5%		20.5%
OBERON		7.3%		4.4%	
ORANGE		27.3%	15.4%	8.0%	19.8%
PARRAMATTA	Y	36.9%	16.9%		8.9%
PORT STEPHENS	Y	83.5%	41.7%	57.1%	50.5%
PRISTINE WATERS		151.4%	112.2%	17.1%	37.9%
RYDE	Y	37.4%	13.3%		26.3%
SEVERN		20.4%		18.6%	
SOUTH SYDNEY	Y	33.1%	32.5%		12.2%
STRATHFIELD	Y	30.8%	27.4%		31.3%
SYDNEY (SS)	Y	15.2%	19.8%		7.6%
URALLA		-2.4%	-0.3%	10.8%	-12.1%
WAKOOL		14.5%		14.2%	
WARREN		2.5%		20.5%	
WOLLONGONG	Y	63.1%	49.0%	59.7%	55.1%
WOOLLAHRA	Y	30.3%	28.9%		36.7%
All Greater Metro		44.0%	24.2%	52.1%	37.5%
All Non-Greater Metro		54.5%	18.2%	30.7%	44.6%
All Using 2001 Values		44.3%	24.1%	35.4%	37.7%

Councils Using 2002 Values	GMR	Growth in Average Land Values to 2003 Values			
		Residential	Business	Farmland	Vacant
BALLINA		32.8%	14.7%	23.4%	29.0%
BAULKHAM HILLS	Y	23.0%	23.0%	23.6%	21.3%
BERRIGAN		15.5%		14.6%	
BLACKTOWN	Y	24.0%	24.1%	26.6%	14.7%
BOOROWA		15.8%		17.6%	
CANTERBURY	Y	21.5%	24.5%		31.7%
COFFS HARBOUR		89.5%	22.7%	37.2%	59.9%
CONARGO				10.6%	
COROWA		10.2%	14.7%	20.0%	13.0%
DUBBO		12.8%	2.8%	9.5%	-0.2%
DUNGOG		72.9%	32.3%	23.0%	57.2%
EUROBODALLA		103.9%	42.4%	44.2%	30.0%
EVANS		10.8%		9.6%	
FORBES		10.9%	7.4%	17.5%	2.8%
GLOUCESTER		111.8%	76.1%	45.9%	60.4%
GOULBURN		57.8%	53.6%	73.1%	48.0%
GREAT LAKES		58.7%	25.2%	33.1%	81.3%
GRIFFITH			2.3%	6.0%	0.3%
GUNNEDAH		0.5%	0.9%	4.5%	0.9%
GUYRA		0.0%		11.6%	-25.1%
HARDEN		17.9%		16.8%	
HAWKESBURY	Y	32.0%	8.2%	27.9%	22.1%
HORNSBY	Y	15.3%	11.2%	12.2%	14.8%
HUNTERS HILL	Y	12.2%	17.1%		9.8%
JERILDERIE		10.1%		9.2%	
KU-RING-GAI	Y	4.9%	7.7%		5.2%
LEICHHARDT	Y	13.7%	19.5%		14.8%
LIVERPOOL	Y	33.1%	44.8%	50.0%	0.4%
LOCKHART		24.6%		8.6%	
MACLEAN		41.4%	37.7%	49.3%	32.7%
MAITLAND	Y	43.3%	15.5%	14.9%	19.0%
MANLY	Y	11.9%	5.2%		13.1%
MOSMAN	Y	6.3%	4.8%		8.5%
MUSWELLBROOK		14.5%	6.9%	4.7%	18.7%
PARKES		10.5%		20.5%	
RYLSTONE		39.5%		9.9%	
SHOALHAVEN		65.0%	40.7%	44.3%	43.9%
SUTHERLAND	Y	17.5%	19.0%	60.0%	14.8%
SYDNEY (L)	Y	14.8%	24.7%		14.7%
TAMWORTH		17.0%	5.3%	17.9%	15.5%
TWEED		40.9%	34.1%	36.6%	27.9%
URANA				0.0%	
WAGGA WAGGA		4.6%	4.5%	14.1%	9.3%
WEDDIN		8.0%		19.2%	
WELLINGTON		109.2%	52.5%	20.8%	99.7%
WOLLONDILLY	Y	34.7%	27.7%	30.0%	32.5%
WYONG	Y	31.9%	12.0%	15.8%	18.9%
YALLAROI		-0.2%		13.4%	
YARROWLUMLA		55.4%		37.8%	37.4%
YASS		44.1%	63.5%	25.2%	44.7%
All Greater Metro		18.2%	21.5%	27.6%	16.6%
All Non-Greater Metro		51.0%	22.8%	25.0%	31.9%
All Using 2002 Values		22.4%	21.7%	26.2%	19.6%

APPENDIX 4: Average Sum Insured Levels

LOCAL COUNCIL	MATCHED PROPERTIES	AVERAGE BSI	AVERAGE CSI
ALL MATCHED	513,447	243,038	69,853
ALL GMR	394,404	258,994	72,831
ALL NON_GMR	119,043	190,174	59,986
ALBURY	3,442	189,235	60,690
ARMIDALE	2,192	189,000	63,519
ASHFIELD	2,202	303,629	67,517
AUBURN	2,573	212,350	58,631
BALLINA	2,267	212,377	59,156
BALRANALD	103	140,670	52,589
BANKSTOWN	12,183	217,781	65,644
BARRABA	207	138,638	49,675
BATHURST	1,717	199,155	65,013
BAULKHAM HILLS	16,068	300,906	84,441
BEGA VALLEY	2,327	220,290	62,687
BELLINGEN	746	184,050	57,709
BERRIGAN	456	146,304	52,591
BINGARA	181	133,492	49,220
BLACKTOWN	22,363	202,632	62,606
BLAND	218	153,248	58,642
BLAYNEY	436	163,293	59,096
BLUE MOUNTAINS	10,690	228,670	72,704
BOGAN	224	153,614	55,668
BOMBALA	118	166,198	66,974
BOOROWA	126	154,512	59,248
BOTANY BAY	1,646	247,711	61,451
BOURKE	184	153,318	65,812
BREWARRINA	46	161,740	64,729
BROKEN HILL	2,860	122,827	48,337
BURWOOD	1,722	291,288	68,420
BYRON	1,353	213,425	54,517
CABONNE	539	163,982	59,747
CAMDEN	3,390	229,010	70,179
CAMPBELLTOWN	10,794	206,309	63,714
CANADA BAY	3,980	299,292	70,657
CANTERBURY	6,983	252,122	61,953
CARRATHOOL	88	145,180	56,884
CENTRAL DARLING	51	161,292	41,011
CESSNOCK	4,849	167,046	58,928
COBAR	323	178,974	63,663
COFFS HARBOUR	4,476	198,789	58,698
COOLAH	185	149,656	58,595
COOLAMON	307	156,849	58,011
COOMA-MONARO	617	173,698	64,995
COONABARABRAN	379	159,282	58,808
COONAMBLE	169	162,309	57,529
COOTAMUNDRA	736	170,033	61,588

LOCAL COUNCIL	MATCHED PROPERTIES	AVERAGE BSI	AVERAGE CSI
COPMANHURST	202	190,419	58,529
COROWA	670	169,626	52,893
COWRA	830	171,828	57,051
CROOKWELL	206	183,353	66,999
CULCAIRN	443	149,672	51,983
DENILQUIN	532	159,416	53,657
DUBBO	4,162	191,969	62,527
DUNGOG	424	165,990	57,169
EUROBODALLA	4,097	200,517	54,581
EVANS	13	146,696	53,384
FAIRFIELD	6,826	223,494	59,652
FORBES	921	179,566	62,718
GILGANDRA	353	161,451	58,882
GLEN INNES	567	151,734	55,246
GLOUCESTER	344	165,297	54,676
GOSFORD	18,305	227,777	67,094
GOULBURN	1,837	195,549	59,826
GRAFTON	1,755	163,324	51,381
GREAT LAKES	3,514	208,153	56,033
GREATER LITHGOW	1,607	176,118	61,949
GREATER TAREE	2,533	177,861	54,758
GRIFFITH	1,963	220,705	65,004
GUNDAGAI	175	164,018	62,898
GUNNEDAH	972	176,641	59,305
GUNNING	82	230,784	78,197
GUYRA	294	134,779	51,820
HARDEN	138	146,729	56,236
HASTINGS	6,223	219,221	63,587
HAWKESBURY	3,300	216,244	69,186
HAY	209	148,173	57,474
HOLBROOK	179	147,115	55,503
HOLROYD	4,902	216,855	66,193
HORNSBY	16,442	279,817	83,746
HUME	327	186,019	59,647
HUNTERS HILL	1,163	487,985	110,673
HURSTVILLE	6,073	261,018	72,019
INVERELL	1,125	158,903	54,523
JERILDERIE	85	135,109	53,129
JUNEE	316	152,145	58,618
KEMPSEY	1,528	174,381	52,325
KIAMA	2,440	247,782	68,834
KOGARAH	3,454	319,808	78,275
KU-RING-GAI	12,621	428,191	116,210
KYOGLE	215	161,906	55,301
LACHLAN	527	161,377	58,158
LAKE MACQUARIE	23,243	207,098	65,195
LANE COVE	2,246	409,489	102,327
LEETON	631	177,753	59,952

LOCAL COUNCIL	MATCHED PROPERTIES	AVERAGE BSI	AVERAGE CSI
LEICHHARDT	4,554	295,293	69,241
LISMORE	2,180	181,628	55,864
LIVERPOOL	9,199	235,043	62,372
LOCKHART	221	154,411	58,170
MACLEAN	1,203	189,639	53,568
MAITLAND	6,775	193,254	64,403
MANILLA	249	150,051	53,119
MANLY	2,682	412,416	94,760
MARRICKVILLE	4,328	256,245	60,609
MERRIWA	90	148,081	59,455
MOREE PLAINS	844	196,441	69,097
MOSMAN	2,006	601,272	131,356
MUDGEES	1,053	186,602	61,789
MULWAREE	48	158,731	53,012
MURRAY	277	163,429	51,579
MURRUMBIDGEE	159	165,646	58,532
MURRURUNDI	133	148,331	55,458
MUSWELLBROOK	1,313	189,588	66,147
NAMBUCCA	818	182,810	56,795
NARRABRI	937	178,005	63,960
NARRANDERA	545	166,929	60,068
NARROMINE	526	166,169	56,290
NEWCASTLE	17,149	195,594	61,340
NORTH SYDNEY	1,999	456,675	101,718
NUNDLE	34	142,208	56,532
OBERON	282	172,953	61,384
ORANGE	3,230	201,175	66,091
PARKES	1,383	168,971	59,209
PARRAMATTA	8,959	227,220	67,785
PARRY	386	146,151	57,446
PENRITH	14,086	209,429	66,774
PITTWATER	5,761	367,768	89,707
PORT STEPHENS	5,583	210,525	62,095
PRISTINE WATERS	476	162,915	47,144
QUEANBEYAN	3,576	248,932	79,315
QUIRINDI	284	158,026	59,050
RANDWICK	6,294	347,374	75,599
RICHMOND VALLEY	1,647	166,219	53,334
ROCKDALE	4,972	258,973	64,374
RYDE	6,586	265,853	73,773
RYLSTONE	262	140,055	55,158
SCONE	693	183,663	61,050
SEVERN	20	290,749	123,851
SHELLHARBOUR	6,461	198,797	65,657
SHOALHAVEN	11,907	195,930	57,712
SINGLETON	975	202,966	67,298
SNOWY RIVER	247	200,038	54,403
SOUTH SYDNEY	2,298	302,219	61,980

LOCAL COUNCIL	MATCHED PROPERTIES	AVERAGE BSI	AVERAGE CSI
STRATHFIELD	1,690	381,609	82,708
SUTHERLAND	22,094	280,265	81,841
SYDNEY (L)	561	370,150	79,120
SYDNEY (SS)	231	501,608	73,192
TALLAGANDA	141	184,033	67,516
TAMWORTH	298	174,033	59,541
TEMORA	473	157,691	57,222
TENTERFIELD	422	146,708	51,248
TUMBARUMBA	222	145,780	60,553
TUMUT	689	167,832	59,653
TWEED	3,988	200,471	56,066
URALLA	320	151,454	53,111
URANA	42	141,710	54,254
WAGGA WAGGA	1,964	200,206	64,802
WAKOOL	276	152,182	50,097
WALCHA	166	153,634	60,624
WALGETT	159	153,104	59,390
WARREN	221	165,888	60,231
WARRINGAH	12,106	304,514	83,962
WAVERLEY	2,638	441,153	87,252
WEDDIN	302	147,821	56,515
WELLINGTON	648	158,781	56,839
WENTWORTH	234	143,224	51,003
WILLOUGHBY	3,972	423,591	99,118
WINGECARRIBEE	3,683	242,964	75,502
WOLLONDILLY	2,608	209,629	70,447
WOLLONGONG	18,305	216,550	67,763
WOOLLAHRA	3,313	678,341	134,571
WYONG	16,736	196,205	61,306
YALLAROI	171	162,296	61,209
YARROWLUMLA	287	203,703	71,396
YASS	578	195,186	70,929
YOUNG	689	172,025	59,542

APPENDIX 5: Detailed Results for the Combined Scenario

ADEQUACY OF FEE STRUCTURE

	\$'M
Estimated Total Levy Received (c) = (a) + (b)	411.2
From Motor Vehicles (a) 0%	0.0
From Properties (b)	411.2
Residential 39%	162.1
Commercial 56%	229.1
Farmland 4%	18.2
Vacant 1%	1.7
NSW Fire Brigade Budget Requirement (d)	406.6
Other Fire Services Costs (e)	5.5
Differential = (c)-d)-(e)	-1.0

IMPACT ON NSW GOVERNMENT

	\$'M
Current Costs	
Direct Funding (a)	69.8
Fire Service Levy Paid on Insurance (b)	0.0
Stamp Duty Received (c)	20.2
Net GST Received (d)	10.9
Net Current Costs (d)=(a)+(b)-(c)-(d)	38.7
Proposed Costs	
Direct Funding (e)	38.7
Fire Service Levy Paid on Rates (f)	1.4
Net Proposed Costs (g)=(e)+(f)	40.1
Impact of Proposed Change on NSW Gov. =(g)-(d)	1.4
Uncharged Amount	11.5

IMPACT ON NSW LOCAL COUNCILS

	\$'M
Current Costs	
Direct Funding (a)	64.2
Fire Service Levy Paid on Insurance (b)	2.2
Net Current Costs (c)=(a)+(b)	66.4
Proposed Costs	
Direct Funding (d)	64.2
Fire Service Levy Paid on Rates (e)	8.0
Net Proposed Costs (f)=(d)+(e)	72.2
Impact of Proposed Change on Local Councils =(f)-(c)	5.8

PERFORMANCE INDICATORS BY PRICING REGION**PRICING REGION SELECTED:****GMR****RESIDENTIAL PROPERTIES**

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$112	\$85	\$124	\$101	0.2%
Proposed System	\$89	\$71	\$100	\$84	0.1%
	Av. Amount				Sample Size
	% Better Off	Better Off	Amount Worse Off	% at Maximum	
	75%	\$36	\$17	0%	394,404
	No. Better Off		No. Worse Off		
	By \$100 or more				
	14,493		149		

COMMERCIAL PROPERTIES

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$789	\$89	\$607	\$234	6.0%
Proposed System	\$1,640	\$74	\$332	\$89	8.1%
	Av. Amount				Sample Size
	% Better Off	Better Off	Amount Worse Off	% at Maximum	
	60%	\$532	\$2,920	0%	16,590
	No. Better Off		No. Worse Off		
	By \$100 or more				
	6,480		3,406		

FARMLAND PROPERTIES

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$127	\$91	\$143	\$112	0.9%
Proposed System	\$100	\$76	\$118	\$96	0.5%
	Av. Amount				Sample Size
	% Better Off	Better Off	Amount Worse Off	% at Maximum	
	72%	\$46	\$24	3%	10,744
	No. Better Off		No. Worse Off		
	By \$100 or more				
	724		11		

PRICING REGION SELECTED:**Non-GMR****RESIDENTIAL PROPERTIES**

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$86	\$70	\$96	\$81	0.3%
Proposed System	\$43	\$34	\$49	\$39	0.2%
	Av. Amount		Av. Amount		Sample
	% Better Off	Better Off	Worse Off	% at Maximum	Size
	97%	\$45	\$16	0%	119,043
	No. Better Off	No. Worse Off			
	By \$100 or more				
	3,754	26			

COMMERCIAL PROPERTIES

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$272	\$63	\$266	\$107	5.5%
Proposed System	\$126	\$35	\$51	\$40	12.4%
	Av. Amount		Av. Amount		Sample
	% Better Off	Better Off	Worse Off	% at Maximum	Size
	86%	\$239	\$420	0%	6,697
	No. Better Off	No. Worse Off			
	By \$100 or more				
	2,600	207			

FARMLAND PROPERTIES

	Average Contribution	25th Percentile	75th Percentile	Median Contribution	95% Conf. Interval
Current System	\$108	\$77	\$114	\$92	1.4%
Proposed System	\$50	\$39	\$55	\$46	0.7%
	Av. Amount		Av. Amount		Sample
	% Better Off	Better Off	Worse Off	% at Maximum	Size
	96%	\$61	\$18	0%	12,022
	No. Better Off	No. Worse Off			
	By \$100 or more				
	1,248	5			

Results by Local Council – Percentage of Matched Database Contributing Less

LOCAL COUNCILS	GMR			NON-GMR		
	RES.	FARMS	COMM.	RES.	FARMS	COMM.
ALBURY				99%	90%	85%
ARMIDALE				100%	100%	90%
ASHFIELD	63%		60%			
AUBURN	76%		63%			
BALLINA				89%	94%	70%
BALRANALD				99%	100%	100%
BANKSTOWN	68%		68%			
BARRABA				100%	100%	100%
BATHURST				99%	99%	89%
BAULKHAM HILLS	78%	68%	36%			
BEGA VALLEY				97%	98%	86%
BELLINGEN				100%	99%	97%
BERRIGAN				99%	95%	90%
BINGARA				100%	100%	86%
BLACKTOWN	96%	44%	68%			
BLAND				100%	100%	83%
BLAYNEY				100%	100%	100%
BLUE MOUNTAINS	88%	89%	65%			
BOGAN				100%	94%	94%
BOMBALA				100%	100%	
BOOROWA				99%	83%	100%
BOTANY BAY	79%		68%			
BOURKE				99%	100%	100%
BREWARRINA				100%	100%	100%
BROKEN HILL				98%	100%	
BURWOOD	63%		40%			
BYRON				81%	83%	49%
CABONNE				100%	92%	93%
CAMDEN	86%	66%	59%			
CAMPBELLTOWN	98%	58%	61%			
CANADA BAY	46%		56%			
CANTERBURY	69%		58%			
CARRATHOOL				100%	100%	67%
CENTRAL DARLING				82%		100%
CESSNOCK	95%	93%	78%			
COBAR				100%	100%	96%
COFFS HARBOUR				97%	98%	80%
CONARGO					100%	
COOLAH				100%	92%	100%
COOLAMON				99%	100%	100%
COOMA-MONARO				100%	97%	100%
COONABARABRAN				99%	100%	80%
COONAMBLE				100%	94%	100%
COOTAMUNDRA				99%	100%	100%
COPMANHURST				100%	100%	100%

LOCAL COUNCILS	GMR			NON-GMR		
	RES.	FARMS	COMM.	RES.	FARMS	COMM.
COROWA				98%	100%	84%
COWRA				99%	97%	93%
CROOKWELL				100%	100%	100%
CULCAIRN				100%	100%	100%
DENILQUIN				99%	100%	
DUBBO				100%	99%	92%
DUNGO				100%	98%	95%
EUROBODALLA				95%	97%	81%
EVANS				100%	100%	
FAIRFIELD	95%	65%	63%			
FORBES				100%	94%	91%
GILGANDRA				100%	100%	100%
GLEN INNES				100%	100%	90%
GLOUCESTER				100%	96%	96%
GOSFORD	67%	60%	68%			
GOULBURN				99%	100%	89%
GRAFTON				99%	100%	93%
GREAT LAKES				92%	96%	77%
GREATER LITHGOW				100%	96%	81%
GREATER TAREE				98%	96%	89%
GRIFFITH				99%	97%	88%
GUNDAGAI				99%		67%
GUNNEDAH				100%	96%	94%
GUNNING				99%	100%	100%
GUYRA				99%	100%	100%
HARDEN				99%	100%	100%
HASTINGS				97%	92%	77%
HAWKESBURY	95%	77%	81%			
HAY				100%	100%	88%
HOLBROOK				100%	89%	92%
HOLROYD	81%		58%			
HORNSBY	66%	59%	65%			
HUME				99%	79%	100%
HUNTERS HILL	51%		41%			
HURSTVILLE	47%		65%			
INVERELL				100%	98%	90%
JERILDERIE				100%	100%	100%
JUNEE				100%	100%	100%
KEMPSEY				96%	97%	79%
KIAMA	54%	54%	63%			
KOGARAH	43%		52%			
KU-RING-GAI	65%		61%			
KYOGLE				100%	98%	100%
LACHLAN				100%	100%	93%
LAKE MACQUARIE	80%	68%	74%			
LANE COVE	51%		45%			
LEETON				100%	100%	93%

LOCAL COUNCILS	GMR			NON-GMR		
	RES.	FARMS	COMM.	RES.	FARMS	COMM.
LEICHHARDT	81%		63%			
LISMORE				99%	98%	91%
LIVERPOOL	97%	62%	43%			
LOCKHART				99%	100%	100%
MACLEAN				94%	97%	79%
MAITLAND	96%	92%	79%			
MANILLA				100%	100%	100%
MANLY	51%		45%			
MARRICKVILLE	87%		64%			
MERRIWA				100%	100%	100%
MOREE PLAINS				100%	94%	89%
MOSMAN	66%		25%			
MUDGEES				99%	99%	91%
MULWAREE				100%	97%	100%
MURRAY				99%	98%	83%
MURRUMBIDGEE				99%	67%	100%
MURRURUNDI				100%	86%	100%
MUSWELLBROOK				100%	100%	87%
NAMBUCCA				99%	99%	93%
NARRABRI				100%	98%	88%
NARRANDERA				100%	100%	100%
NARROMINE				100%	89%	95%
NEWCASTLE	80%	96%	70%			
NORTH SYDNEY	71%		40%			
NUNDLE				100%	100%	
OBERON				100%	100%	91%
ORANGE				100%	99%	84%
PARKES				100%	96%	90%
PARRAMATTA	76%		59%			
PARRY				99%	100%	100%
PENRITH	95%	80%	71%			
PITTWATER	56%	63%	45%			
PORT STEPHENS	73%	89%	74%			
PRISTINE WATERS				96%	99%	
QUEANBEYAN				92%	100%	91%
QUIRINDI				100%	100%	100%
RANDWICK	71%		50%			
RICHMOND VALLEY				99%	100%	90%
ROCKDALE	48%		60%			
RYDE	40%		59%			
RYLSTONE				99%	100%	100%
SCONE				99%	99%	91%
SEVERN				100%	100%	
SHELLHARBOUR	86%	62%	74%		81%	
SHOALHAVEN				93%	92%	74%
SINGLETON				100%	98%	87%
SNOWY RIVER				100%	100%	100%

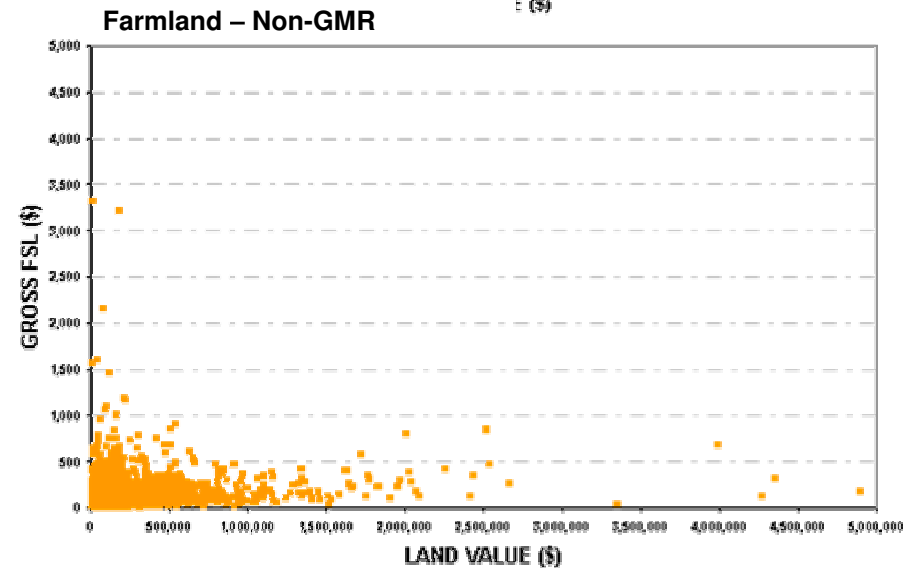
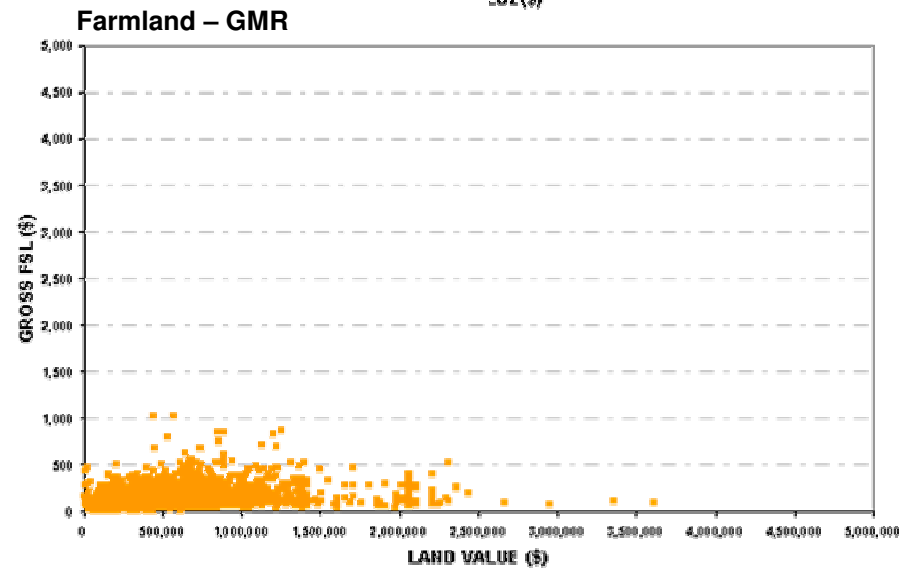
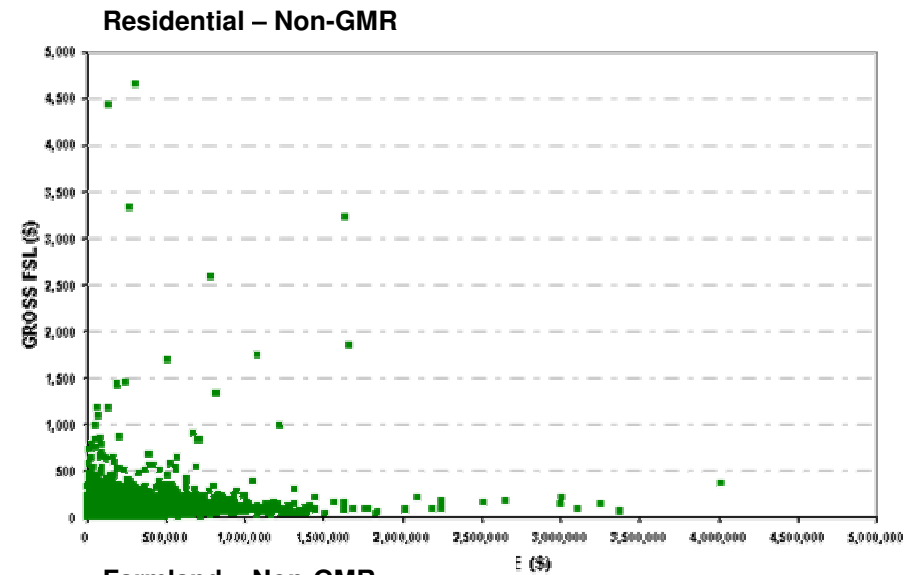
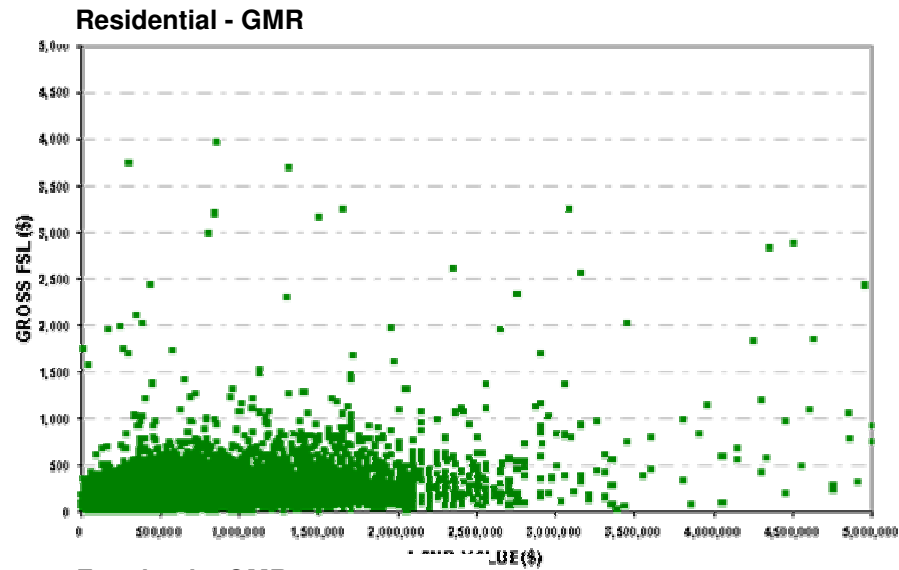
LOCAL COUNCILS	GMR			NON-GMR		
	RES.	FARMS	COMM.	RES.	FARMS	COMM.
SOUTH SYDNEY	91%		49%			
STRATHFIELD	56%		59%			
SUTHERLAND	57%	100%	46%			
SYDNEY	88%		41%			
TALLAGANDA				99%	94%	100%
TAMWORTH				100%	100%	91%
TEMORA				100%	100%	95%
TENTERFIELD				100%	96%	96%
TUMBARUMBA				99%	97%	100%
TUMUT				100%	100%	90%
TWEED				91%	94%	66%
URALLA				100%	100%	100%
URANA				100%	83%	
WAGGA WAGGA				99%	97%	83%
WAKOOL				99%	100%	100%
WALCHA				100%	89%	100%
WALGETT				100%	92%	100%
WARREN				100%	77%	86%
WARRINGAH	52%	52%	51%			
WAVERLEY	78%		55%			
WEDDIN				98%	100%	
WELLINGTON				100%	100%	94%
WENTWORTH				98%	95%	
WILLOUGHBY	53%		57%			
WINGECARRIBEE				97%	91%	70%
WOLLONDILLY	82%	63%	52%			
WOLLONGONG	86%	80%	70%			
WOOLLAHRA	85%		49%			
WYONG	74%	71%	75%			
YALLAROI				100%	89%	100%
YARROWLUMLA				97%	93%	50%
YASS				100%	99%	100%
YOUNG				99%	98%	95%

APPENDIX 6: Number of Vehicles Registered in NSW

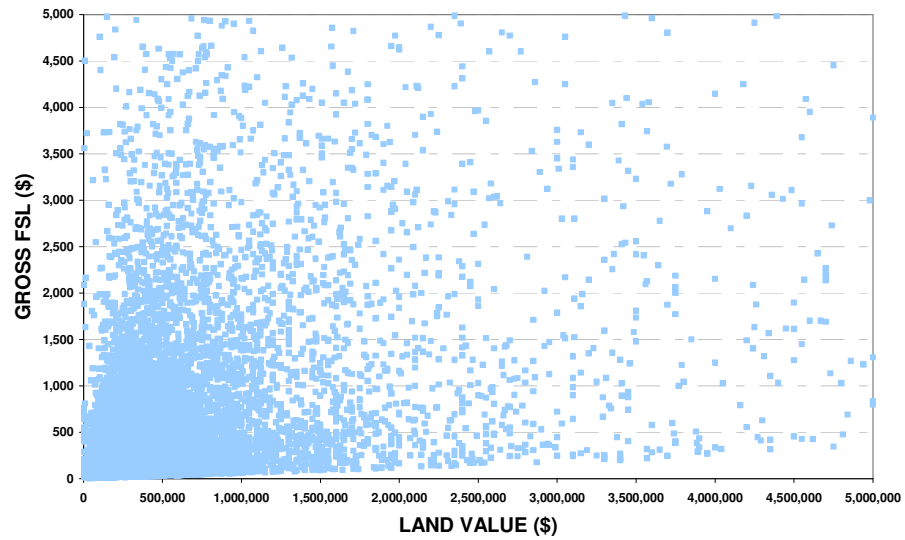
Vehicle Type	Private	Pensioner Concession	Primary Producer Concession	Business General	Taxi	Public Bus and Coach	FIRS	Other Vehicle Usages	Total
Passenger Vehicles	1,953,751	478,997	7,217	265,009	5,564	107		67,676	2,778,321
Off-road Passenger Vehicles	209,550	23,367	7,959	64,916	1	55		8,647	314,495
Small Buses	20,863	6,178	286	5,396	240	563		2,079	35,605
Buses	733	34	9	1,610	6	8,453	4	852	11,701
Mobile Homes	4,465	2,891	11	238				104	7,709
Motorcycles	90,065	1,575	325	5,129				2,157	99,251
Light Trucks	257,843	47,059	60,281	218,179		4		17,143	600,509
Heavy Trucks	2,172	260	8,465	50,913			160	13,586	75,556
Prime Movers	5		1,326	11,284			1,259	573	14,447
Light Plant	93	8	362	3,165				3,641	7,269
Heavy Plant	41		166	4,926				5,930	11,063
Small Trailers	430,398	20,912	1,064	18,984				2,695	474,053
Trailers	122,572	11,993	10,036	48,744			869	8,433	202,647
Other Vehicles	69	26		318		6		154	573

Source: RTA as at 30 June 2003.

APPENDIX 7: Matched Data Scatter Plots



Commercial – GMR



Commercial – Non-GMR

