



Funding the Fire Service Levy on commercial real property

Final report

NZIER report to the Insurance Council of New Zealand

9 May 2014

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The assistance of the New Zealand Fire Service, CoreLogic and members of the insurance industry in acquiring and providing data are gratefully acknowledged.



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Key points

This report reviews the feasibility of moving from the current insurance base to a rates base for assessing and collecting the Fire Service Levy on commercial property.

The main conclusion is that it is feasible to move to a rates base and this is consistent with the trend in Australia to move away from insurance based levies to fund fire and emergency services, for both commercial and residential property.

We proposed that the design of the new scheme include the following:

- **Rates** – A capped levy for residential property (and, by proxy, for domestic contents) and an uncapped dual rate abating levy for commercial property
- **Base** – The base could be either improvement value or capital value of the property – on balance we support the latter as it is the basis most commonly used by rating authorities, although some adjustments may be needed
- **Collection Agents** – Local councils (territorial authorities) should collect a new fire services levy as a rate on a recovered cost basis, in the same manner as they collect rates on behalf of regional councils
- **Concessions** – Local councils' policies for rates relief and rates deferral should also be applied to the fire services levy rate collection in the case of hardship
- **Exemptions** – The fire service levy rate should be applied to non-rateable land (and improvements) described in schedules 1 and 2 to the Local Government (Rating) Act 2002 by an appropriate amendment to section 9 of that Act.

Comparing the proposed new rates-based scheme with the current insurance-based arrangements, we note the following advantages:

- **Direct Costs** – Direct costs of collection and administration would be removed for business but this reduction is matched by an almost equal increase in such costs for local government.
- **Other Compliance Costs** – Indirect compliance costs would be removed from business while equivalent compliance costs for local government would increase only marginally.
- **Administration costs** – Fire Service administration costs are likely to be lower as local councils are already subject to independent audit whereas the Fire Service has to arrange and perform audits of insurers and insurance brokers.
- **Distortion costs** – The application of a fire service levy on an independently set property value base will reduce incentives to under-insure, and eliminate the ability of property owners to reduce their levy liability through schemes that re-characterise the risk profile.

Comparing the levy rates payable under a rates-based scheme to those payable under an insurance-based scheme, we note the following benefits:

- **Levy rates** –It is feasible to devise levy regimes based on property values (capital values or improvement values) under which levy rates per unit value are no higher than those based on insurance indemnity values in the current regime, and levy rates are significantly lower for higher-value properties.
- **Winners and losers** –For those who are fully insured, under the preferred property-based levy regimes owners of lower valued properties will be no worse off and owners of higher valued properties will be better off than under the current regime, while raising the same amount of revenue.

This report presents evidence in support of the above observations and conclusions.

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1. Introduction

Background

In a previous report to the Insurance Council, in April 2013, NZIER identified and provided analysis of options for funding fire services in New Zealand. These included the use of general taxation, the collection of levies on residential and commercial property through the territorial authority rates system and the application of a levy on registration of motor vehicles. On public policy grounds, including equity, efficiency, simplicity and certainty of revenue, all of those methods were preferred to the system of insurance companies collecting a levy on contracts of fire insurance.

We concluded that if funding from general taxation was not fiscally acceptable, then the next best alternative would be the collection of a levy on property values, combined with a levy on motor vehicle registration fees. We confined our quantitative analysis to the case of residential real property, domestic household contents, and private motor vehicles. We identified regimes with levy rates that would yield similar revenue to the current system for these three categories.

Under those alternative arrangements, most households and vehicle owners who currently pay insurance-based levies would be no worse-off, some would pay marginally less. Those who do not currently pay insurance would face the full cost of funding their levy obligations.

In the earlier report, we foreshadowed that changing the regime for commercial property, and for commercial real property in particular, would present greater challenges, owing to the way that indemnity values are determined for fire insurance contracts. These can diverge substantially from the replacement value or rateable value of these properties. Some property owners are able to manage their risks in a way that significantly reduces their liability to pay the levy. There are also a number of other complicating factors that are addressed in the body of this current report.

Current study

In this second phase of the work we focus on the feasibility of moving from the current insurance-based levy to a rates-based levy for commercial property.

Our first challenge was to determine the amount of levy actually paid on commercial property under the current system, given that the insurance companies return only a combined amount of levy paid under policies for “commercial material damage” that cover buildings, non-building property improvements, property, plant and machinery, and stocks of materials, work in progress and finished goods.

Our second challenge was to determine how a rates-based levy can be applied and collected on properties where the rating base includes a range of improvements other than buildings or structures, and excludes certain categories of building that currently contribute to the Fire Service Levy through having fire insurance contracts.

Progress report

Our progress report of 17 February 2014 included a review and analysis of data that we obtained from the Fire Service Commission, from insurance companies through

ICNZ, and from CoreLogic (formerly PropertyIQ). We concluded that it was feasible to use this data to model and analyse the collection of a fire service levy through the rating mechanism. We noted that further information was needed to complete the study.

This report

This report brings together the arguments and evidence in support of the change from an insurance-based to a property-based fire service levy. We discuss the property value data and show how we have applied it in the modelling. We demonstrate the feasibility of raising the same amount of revenue as the insurance-based levy through a property-based levy applied on both residential and commercial property. We show how this can be accomplished while providing a reducing levy tariff for owners of high-value commercial properties. We outline the transition and implementation issues, and compare the costs of collection under the different systems. We include more detailed information in a series of appendices.

The remainder of this report is organised as follows.

In Section 2 we summarise the economic case for changing from an insurance-based levy to a property value based levy for commercial property. That is based upon the work in our 2013 report on the general case for change for various categories of insured assets. The grounds for change are essentially the same. We also summarise the current fire and emergency service funding arrangements in Australia, where all but one of the mainland States now use property-based funding. New South Wales is likely to follow suit after reviewing the outcome of the recent change in Victoria.

In Section 3 we identify the data obtained from three principal sources:

- fire service levy receipts from the New Zealand Fire Service,
- information from Insurers which we applied to determine the correct allocation of the Fire Service Levy on insurance policies for Commercial Material Damage between property assets and other assets
- detailed data on the value of land, property improvements and capital values for all property types, from Core Logic (formerly PropertyIQ), including the March 2014 update of property values for Christchurch.

We also discuss the information obtained from insurers (and brokers) on the current costs of collecting the Fire Service Levy and examples of how the liability for levy payments can be reduced in certain situations.

In Section 4 we model the property value based levy, dealing initially with the identification of commercial and non-commercial residential property. We model the levy using property improvement values. We demonstrate the inequity of applying a common uniform levy rate to non-commercial and commercial property.

We revise the previous modelling of the levy on non-commercial residential property to take account of the need to generate the same revenue from a reduced asset base. We recommend a single rate with a capped value for that class of property.

We continue with modelling a uniform rate and two-tier abating rates for commercial property. We show that a uniform rate property levy can produce the required levy revenue at a lower rate per dollar of value than the present insurance-based levy. We

show how a two-tier abating rate can provide significant discounts in levy costs for owners of higher value properties, while treating lower value properties equitably.

We model the effect of excluding a range of assets currently exempted from rating from the property-based levy. We model a “worst case” example. We show that a uniform levy rate would then be close to the current insurance based levy rate of \$0.076 per \$100 of value. We show that it would be necessary to increase the levy on lower value properties to provide for levy rate discounts for higher value properties.

Finally in that section, we look at the feasibility of using capital value (land value plus value of improvements) as a basis for a property-based fire service levy. We repeat the modelling for both non-commercial and commercial property. We show that a single-rate capped levy can be applied equitably for non-commercial property. The cap value is higher to recognise that land value is included in capital value, but the rate is lower than for the equivalent improvement-value based levy.

We also show that a uniform rate levy and a range of abating dual rate levy regimes can also be applied to the capital value of commercial property. Significant discounts can be provided for higher value properties without increasing levies on lower value properties. We note that different kinds of commercial property will have different ratios of improvement to capital values, so the incidence of the levy will be different.

In Section 5 we estimate the costs of collecting the Fire Service Levy as a property based levy, and compare those costs to the estimated cost of collection through the present insurance-based levy system.

We also identify the transitional issues and estimate costs of introducing the required new systems for collecting a property based levy. In that context, it also identifies some issues that will need to be addressed in changing to a rates levy.

In Section 6 we summarise the benefits and costs for property owners, the Fire Service, insurers and brokers, and territorial authorities that would flow from a change from an insurance-based fire service levy to a property-based levy.

In Section 7 we summarise what we have done and show how that meets the terms of reference agreed in our contract.

In Section 8 we draw together our conclusions and recommendations based upon the evidence that we have assembled in support of the change from an insurance based levy to a property based levy for funding fire services in New Zealand. We note that this is a next-best solution, relative to the preferred option of funding fire services in New Zealand from general taxation, which would provide a broader base, a lower effective rate and lower costs of collection.

Appendices

We include several appendices containing more detailed information. These are referenced in the relevant sections of the report.

2. The case for changing the basis of the Fire Service Levy

2.1. Summary of case previously presented

Introduction

In our April 2013 report “Better ways of funding fire services in New Zealand”, we presented a series of arguments to support a move away from funding the fire services through an insurance levy. We began with a summary of some reasons why it was no longer appropriate to link the provision of fire services with fire insurance:

- broadening of the scope of the fire services to include other emergency services (storm and flood responses) and rescue services
- having fire services acting as first responders for medical emergencies
- the emphasis of fire services on saving lives and protecting people from harm, ahead of fighting fires
- the lack of any specific connection between having policies of fire insurance in place and the response of the fire service in the event of fire.

We noted that the response of Australian States to these changing priorities for their fire and emergency services has been to shift funding away from insurance to levies on property. We document the current status of Australian States in the next section.

Policy reasons for changing the fire service funding system

Our arguments for changing to a different funding system were based upon public policy principles, including equity and fairness, efficiency, legitimacy, transparency and visibility, as well as on revenue design and administration principles including neutrality, breadth of base, certainty of revenue, simplicity, ease of administration, and convenience of payment.

While we identified the best choice on policy grounds as direct funding by central Government, we rated many other options ahead of the status quo of the insurance-based collection of a fire service levy. Among those preferred options were regimes with increased government funding, along with the collection of levies based upon the value of property and a levy as part of the registration charge for motor vehicles.

For residential property, we identified a fixed levy or a fixed-rate capped-value levy on property value as being superior to a fixed or variable-rate uncapped levy on property, on grounds of simplicity, certainty and convenience. An uncapped variable rate levy may score higher on equity grounds, but there are concerns about the ability to pay, as the income of residential property owners is not tied to property value. We developed the examples using property improvement values.

We noted that while the case for moving to a property value based system for commercial property was equally compelling, the situation was more complex, and determining the feasibility of an appropriate regime would require additional effort.

2.2. Fire service funding in Australia

All but two of the Australian States and Territories now fund their fire services through levies on property values, or from consolidated government funds, rather than via a levy on insurance. Victoria made the transition on 1 July 2013 from an insurance-based levy to a property-based levy, applied to the capital value of properties. New South Wales and Tasmania still use levies on property insurance.

The Government of New South Wales has completed consultation on a change to funding emergency services from insurance levies to property levies, but has deferred final design and implementation of a property levy regime, pending a review of the outcome of the recent change to a property-based levy in Victoria.

A summary of the current arrangements in Australia is shown in the following table.

Table 1 Comparison of fire service funding arrangements in Australia

State or Territory	Funding system	Contribution details
Queensland	Property-based (replaced insurance-based system in 1985)	Residential properties are charged based on building category and location. Commercial properties charged based on fire risk category
South Australia	Property-based (replaced insurance-based system in 1999)	Residential and commercial properties are charged based on location and land use
Western Australia	Property-based (replaced insurance-based system in 2003)	Residential and commercial properties are charged based on property value and location
Victoria	Property-based (replaced insurance-based system in 2013)	New property based scheme has a fixed component and a variable component based upon property value, adjusted by land use classification, and potentially for location
Tasmania	Insurance / property hybrid	Insurance companies charged on commercial insurance premiums. Local governments charged on property values
New South Wales	Insurance based (74%), plus state and local government (36%)	Insurance companies charged on premiums adjusted for location and other factors, commercial pay higher percentage on average (40%) than residential (23%) of premiums
Northern Territory	Government funded	Consolidated revenue
Australian Capital Territory	Government funded	Consolidated revenue

Source: Insurance Council of Australia, Deloitte Study, 2011, and NZIER

We note that the new Victorian arrangements include a fixed levy component, which varies with property type, and a variable component, which is based upon capital value (land plus improvements), but which is further varied according to land use classification and also potentially by location (with these variations subject to annual specification through a State Government Order-in-Council). In effect, rural property values will be discounted relative to urban residential and commercial properties. The mechanism appears complex, and the use of improvement values rather than capital values might provide a simpler way to target assets that contribute to fire risk.

3. Data sources

This section outlines the data sources used for this study and provides a summary of the data content.

More detailed descriptions of the data and how it was obtained and structured to facilitate analysis are included in Appendices A through D of this report.

3.1. Information on the Fire Service Levy

NZIER asked the New Zealand Fire Service to provide a breakdown by category of the Fire Service Levy payments that they received during the year ending 30 June 2013. We compared this to the data we had previously obtained for the prior year. There are variations, with increases in some categories and atypical reductions in others.

The information received is summarised in the table that follows.

Table 2 Fire Service Levy receipts for years ending 30 June

Categories are shown by type of insurance policy as reported by insurers on Form 6

Category	2012/13	2011/12	Difference
	Dollars	Dollars	Dollars
Commercial Material Damage	160,470,261	149,859,300	10,610,961
Domestic Building	113,937,228	118,487,087	(4,549,859)
Domestic Contents	18,799,714	19,939,120	(1,139,406)
Commercial Motor	14,687,652	13,029,276	1,658,376
Private Motor	13,154,878	13,802,077	(647,199)
Marine Cargo	2,433,615	2,380,534	53,081
Other Business	6,892,954	8,283,065	(1,390,111)
Total Collections	330,376,302	325,780,459	4,595,843

Source: New Zealand Fire Service

The category “Commercial Material Damage” includes levies on policies of insurance for buildings, plant and machinery, contractors’ risks, and other assets. Our focus was to identify alternative funding arrangements for the levy derived from insurance on commercial buildings and other building related risks. We have not directly addressed how current levies on insurance of plant and machinery, stocks of materials and contractors’ risks not related to buildings should be collected in the future.¹

For that reason we needed to know the split of the levy (or of the underlying asset values) between the building related components and other levy components in this category.

We requested assistance from the insurance industry to determine the split of the levy between these two elements.

¹ If the Fire Services Levy were to be removed from real commercial property then there is a strong prima face case to also remove the levy on other commercial insurance as well. Removal of the levy on other commercial would require Fire Service funding to be topped up by general tax revenue or scaling up the property value based levy discussed in this report.

3.2. Information from insurers

The split of “commercial material damage” insurance levies

We made a request through the Insurance Council for summary data from insurers in two categories – one relating to levies paid and the other relating to underlying assets values. The majority of insurers were able to provide at least some of this data. We worked with figures that had been aggregated by the Insurance Council.

The first item we requested was a breakdown of the levy payments in respect of insurance contracts for commercial material damage to separate what was paid in respect of the insurance of buildings and other property improvements and what was paid in respect of other types of assets (plant and machinery, materials, contractors’ liabilities, etc.) that are included in this category.

That proved to be somewhat difficult for many insurers, with only three of nine able to provide full information. We did receive information from all nine for the total levy paid in that category, which we used to gauge the coverage of the responses, by comparing the aggregate amount collected to the total levy reported by the Fire Service.

Our second requested item was data on the value of assets insured under the “commercial material damage” policies, again split between buildings (including buildings under construction, and contractors’ risk on buildings under construction) and other assets.

This proved to be somewhat easier for responding insurers to provide, with all nine able to provide at least some of the information. From the summary data provided, we calculated the sum of the indemnity value of buildings (including buildings under construction and construction contractors’ risk) is 74% of the total value of all classes of assets. That compares with a value of 72% for the same ratio calculated from those insurers who could provide information on the split of levy payments.

On balance, we chose the figure of 74% as the most reliable indicator of the proportion of the “commercial material damage” levy attributable to commercial property. We used the resultant proportion of the levy for Commercial Material Damage for 2012/13 as our target for modelling the property based levy.

The commercial property levy revenue target is therefore \$118.7 million.

Other information obtained from insurers

We subsequently obtained information on the costs of collection of the Fire Service Levy under current arrangements, provided by insurers through ICNZ, to enable us to compare the relative costs of the current method and the proposed alternative. As brokers also incur costs in assessing and collecting the levy, and are subject to audit, we asked the Chief Executive of the Insurance Brokers Association of New Zealand Inc. (IBANZ) to assist in obtaining an estimate of those costs.

We also requested assistance from the insurers in developing examples to show how liability for fire service levy payments can be reduced through various legitimate arrangements. We obtained that information, provided on a voluntary basis by a number of insurers, and have used this to guide our formulation of property-value based levy regimes that reduce costs of the levy for higher value properties.

3.3. Property value data

The analysis of property rateable values is based on data provided by CoreLogic (formerly PropertyIQ). The dataset includes all real properties (assets) that have been assigned values for local authority valuation and rating purposes. Some of the properties are classified as residential, and others are assigned to a range of other categories. The data sets are structured as follows:

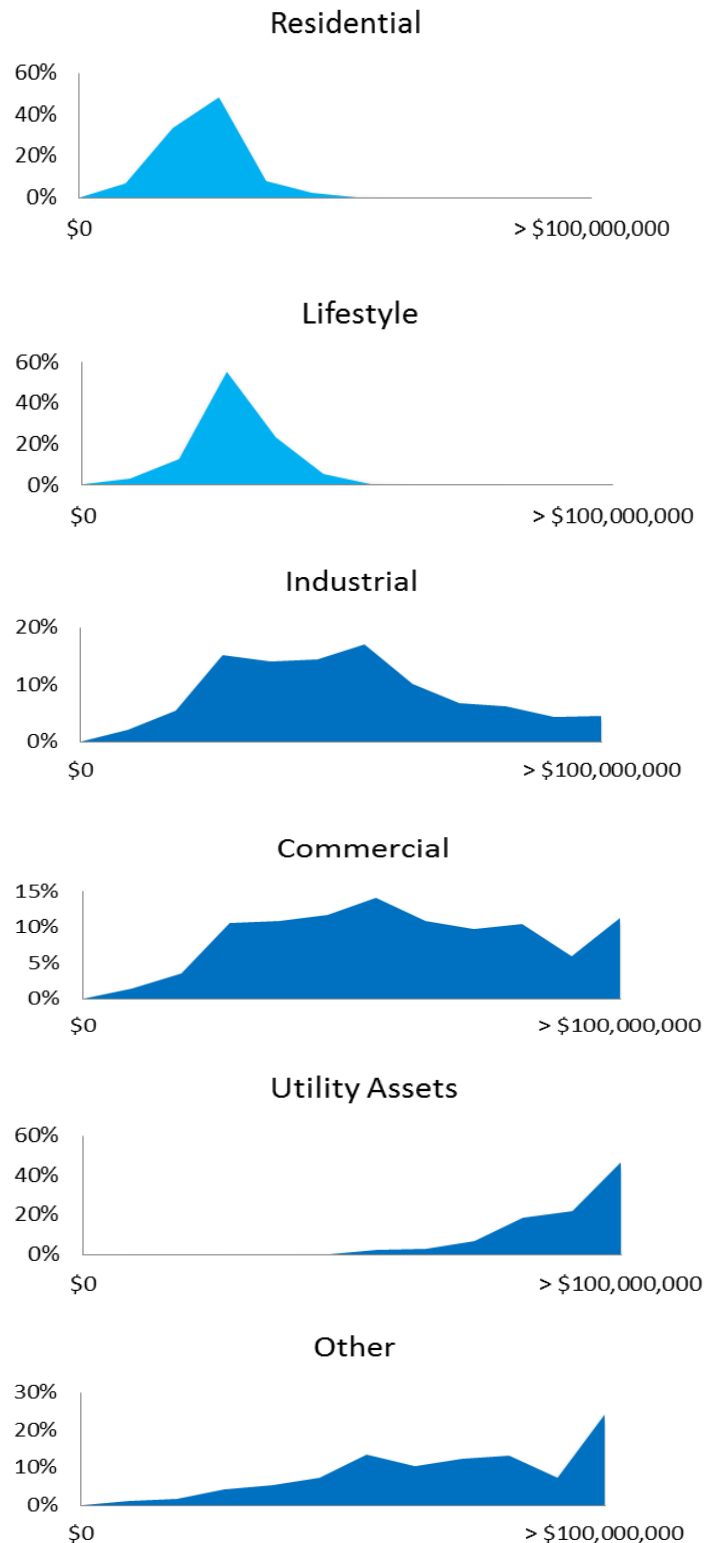
- the property assets are classified into 13 top level or “level 1” categories and further classified into 86 “level 2” categories. The “level 1” and “level 2” category descriptions are provided in Appendix B
- the 13 level 1 categories are as follows: Arable, Commercial, Dairying, Forestry, Horticulture, Industrial, Lifestyle, Mining, Other, Pastoral, Residential, Specialist, Utility Assets, plus a small group identified as “Z”
- for each “level 1” category and “level 2” category the data tables include:
 - the number of assets
 - the total land value for all assets
 - the total improvement value for all assets
 - the total capital value for all assets
- for each “level 1” category and “level 2” category, assets are grouped into *improvement value bands*. The data are arranged into 12 value bands:
 - (a) Improvements \$0
 - (b) Improvements \$1 - \$100,000
 - (c) Improvements \$101,000 - \$200,000
 - (d) Improvements \$201,000 - \$500,000
 - (e) Improvements \$501,000 - \$1,000,000
 - (f) Improvements \$1,000,001 - \$2,000,000
 - (g) Improvements \$2,000,001 - \$5,000,000
 - (h) Improvements \$5,000,001 - \$10,000,000
 - (i) Improvements \$10,000,001 - \$20,000,000
 - (j) Improvements \$20,000,001 - \$50,000,000
 - (k) Improvements \$50,000,001 - \$100,000,000
 - (l) Improvements > \$100,000,000
- the above value bands were chosen to provide a form of stratification of property values that would allow for analysis of uncapped, capped and multiple stage levies across properties with a very wide range of values
- in addition the asset categories are all disaggregated by territorial authority (TA) to allow for the geographical location of property assets, and to allow for synchronisation of the data to a common time, although such adjustments were not applied in the current analysis.

The property value bands were chosen on the above “logarithmic” scale owing to the wide range of values included, within which different categories of property have values concentrated at different parts of the distribution. It would be more difficult to perform useful analysis with property values aggregated on a linear scale. The number of properties in each of the higher ranges is significant with the chosen scale.

The ranges of improvement values for each of the top six level 1 categories that include 93% of property assets by value are illustrated in the figure that follows.

Figure 1 Total asset value by category and improvement value band

Shown in percentages of the total category value, by value band - first and last band labels Non-commercial property categories: light blue, Commercial property categories: dark blue



Source: CoreLogic, NZIER

4. Modelling a property levy

4.1. Residential property classification

The focus here is estimating the Fire Service levy on commercial buildings, therefore non-commercial residential buildings need to be excluded from the analysis. However the *Residential* level 1 category includes both commercial and non-commercial residential buildings. Table 3 shows the level 2 residential category breakdown and our assignment into commercial and non-commercial assets within that category.

Table 3 Commercial and non-commercial residential assets

Level 1 category	Level 2 category	Commercial / Non-commercial
Residential	Apartment	Commercial
Residential	Vacant Block land suitable for multi-unit dwelling	Non-commercial
Residential	House Converted to Flats	Non-commercial
Residential	Dwelling - house on its own defined section	Non-commercial
Residential	OYO - flats & units bought individually for occupation	Non-commercial
Residential	Home & Income	Non-commercial
Residential	Vacant Block land suitable for multi-unit dwelling	Commercial
Residential	Multiple Dwellings on one section	Non-commercial
Residential	Car Park	Commercial
Residential	Purpose built flats often specifically for rental	Commercial
Residential	Vacant Site zoned for residential use	Non-commercial

Source: CoreLogic, NZIER

Residential commercial properties make up a small but significant share of total residential improvement value, as identified in the following table:

Table 4 Residential commercial and non-commercial breakdown

	Number of assets	Total value of improvements (\$ million)	Share of total value of improvements
Residential Commercial	63,647	16,344	6%
Residential Non-commercial	1,414,807	269,414	94%

Source: CoreLogic, NZIER

There are few (0.4%) commercial residential properties with no improvements. About 19% of the commercial residential properties have improvements in the value ranges of \$1 to \$100,000, with 37% in the range from \$100,001 to \$200,000, and 44% over \$200,000. The average value of improvements over \$200,000 is \$429,000. This group includes 1,452 properties (2.3%) with improvements valued at over \$1 million.

Five percent of the non-commercial residential properties have no improvements. Around 17% of these properties have improvements valued at between \$1 and \$100,000, 42% have improvement values between \$100,001 and \$200,000, and 35% over \$200,000. The average value of improvements over \$200,000 is \$326,000. That group includes 4,802 properties (0.3%) with improvements valued at over \$1 million.

In summary, apart from the vacant land included in the non-commercial property group, the key differences are that the commercial residential properties have higher proportions of improvements valued above \$200,000, and valued above \$1,000,000, compared to the non-commercial residential properties.

Table 5 Residential commercial and non-commercial distribution

Type of property		\$0	\$1 - \$100,000	100,001 - \$200,000	>\$200,000
Residential	Number of assets	257	11,836	23,602	27,952
Commercial	Total improvement value (\$ m)	0	828	3,520	11,996
Residential	Number of assets	71,621	242,444	599,514	501,228
Non-commercial	Total improvement value (\$ m)	0	17,531	88,682	163,201

Source: CoreLogic, NZIER

All other level 1 property categories can be designated as commercial or non-commercial without the need to consider their level 2 attributes.

Overall, the residential asset group includes the *Residential Non-commercial* sub-category and the *Lifestyle* category. The commercial asset group includes the *Residential Commercial* sub-category and all of the remaining level 1 categories.

4.2. Modelling a property-value based levy

The CoreLogic data includes the aggregate improvement value for each value band and each category of asset, nationally and for individual TAs. We can calculate average values in each value band, for each category of property. We do not have details of the improvement values of individual properties. The values are the most recent assessments as provided for each TA, on a rolling basis over a three year period. Asset values for some TAs are nearing their reassessment date. The original data provided for Christchurch was six years old. CoreLogic has provided us with updated data for that city on 17 March, and we have included that in our analysis.

Levy collection targets

The target levy revenue for non-commercial assets is \$138.5 million, of which \$118.5 million relates to buildings and \$19.9 million to contents, to be assessed in line with residential properties by proxy. These figures are based upon the relevant levy collections in 2011/12, which were higher than the \$132.7 million total in 2012/13.

The total levy revenue target for commercial buildings is estimated at \$118.7 million, representing 74% of the estimated \$160.5 million Commercial Material Damage Fire Service Levy receipts reported by the Fire Service for the year ending 30 June 2013.

The revenue target for all property types combined is therefore \$237.2 million. Adding the proxy for domestic contents increases this target to \$257.2 million.

Modelling levy revenues

We have developed a linked-spreadsheet model to hold the CoreLogic data and to provide for the calculation of levy yields for commercial and non-commercial property under different levy scenarios. These scenarios include a common regime for all types of property, and separate levy schedules for commercial and non-commercial property. The model also allows for specific categories of assets to be excluded from the levy base. It does not currently allow for the exclusion of assets based upon level 2 categories, although that functionality could easily be added.

The model allows the user to choose up to three rates that can be applied to successive value ranges of property improvements, with thresholds applied at value band boundaries. The upper range can be bounded or unbounded. The value ranges and levy rates can be specified to be either identical or different for commercial and non-commercial property assets. If required, it would be possible to add more levy regimes and more rate steps to the model.

Note that although in our original report we had identified a levy regime that would yield the required revenue for residential properties (and domestic contents), the re-classification of approximately 6% of the residential property as commercial property means that the levy regime needs to be re-determined for the remaining non-commercial residential property. That change requires a higher levy rate and / or an increased cap on the value assessable for the levy for the non-commercial property.

Possible levy regimes

We examined a range of possible levy structures, many of which would produce too much or too little revenue, either in total or from either the commercial and / or the non-commercial property group.

We considered a flat rate for all property types, comparing this to the rate of \$0.076 per \$100 that is applied to indemnity values in the current fire insurance based levy system as a reference point. There is no reason in principle why that rate should yield a similar level of revenue when applied to a different property value base. We explored a range of rates and compared the total revenue yield to the overall target for property assets of \$257.2 million. We knew from our previous experience that a fixed rate at that level will yield too much revenue for residential property, and suspected that this would also be the case for commercial property.

We explored different rate structures, with and without the use of value caps, again across all property categories. In general, it is not possible to get the desired split of revenue yield between non-commercial and commercial property with a single regime. Either the residential yield is too high or the commercial yield is too low

Informed by previous work, we applied a regime that produces the required levy revenue from non-commercial property, and then explored the permutations of the commercial property regime that are able to produce the required revenue yield.

Finally, we examined cases where some categories of property may be excluded from the levy - in particular, the "Other" category, which we understand includes schools, hospitals, churches and government owned (not leased) properties that are

exempted from rating. That category may include some non-exempt properties, but the modelling is indicative of the levy regime changes that would be needed to compensate for the exclusion of rates-exempt properties from the levy base.

1. Common regime across all property types

We ran this simplest modelling with uniform levy rates on both non-commercial and commercial property. We found that the target yield for the overall levy was best approximated with a uniform levy rate of \$0.047 per \$100 of property improvement value. These revenue yields are calculated with no value cap for any type of property. We omitted the \$19.9 million for domestic contents in this uniform levy calculation.

The required yield for non-commercial residential property was achieved with a levy rate of \$0.038 per \$100, but for commercial property a levy rate of \$0.062 per \$100 was required to approximate the target.

Table 6 Flat rate levy at varying rates specified in \$ per \$100

Based on total value of property improvements in each category

Levy rate in \$ per \$100 of improvement value	Non-commercial levy \$ million	Commercial levy \$ million	Total levy \$ million
0.036	111.9	69.2	187.1
0.038	118.1	73.0	191.1
0.040	124.3	76.9	201.2
0.044	136.7	84.6	221.3
0.047	146.1	90.3	236.4
0.050	155.4	96.1	251.5
0.060	186.5	115.3	301.8
0.062	192.7	119.1	311.8
0.064	198.9	123.0	321.9
Target yields	118.5	118.7	237.2

Yellow shading denotes revenue yields closest to the target yields.

Source: CoreLogic, NZIER

We concluded that a uniform fixed rate would strongly overcharge non-commercial residential property owners and undercharge commercial property owners, relative to what each group is currently contributing through the fire-insurance based levy.

We were unable to identify a sensible tiered levy rate structure that would provide the required revenue yield for both non-commercial and commercial property. It would be possible to obtain that result with a rate structure that increased sharply at very high asset values, say above \$10 million, but that would require owners of those assets to pay a disproportionate share of the total levy.

A diminishing tiered common levy rate cannot produce the required result, as that would increase the relative levy contribution from lower-valued residential assets. Clearly, a uniform fixed fee levy would also produce a less equitable result, with residential property owners paying far more than their share of the total levy.

2. Separate regimes for commercial and non-commercial property

Separate regimes for non-commercial and commercial property allow for the collection of the appropriate amount of revenue from each group of owners.

We note that the current levy is capped for residential and uncapped for commercial building owners. That suggests that a similar approach could be adopted here. Alternatively, a fixed fee levy could be applied to non-commercial residential property. For commercial property, a fixed fee would be highly inequitable.

For commercial property, the rate schedule could be abating rather than being applied at a constant ad-valorem rate (as at present). An abating rate has one or more points at which the levy rate reduces. We explore these alternatives below.

Non-commercial properties

We begin with the non-commercial residential property case, as the value base is lower and the required levy yields are higher than those used in our 2013 report.

We begin with a uniform rate levy, on uncapped value, then consider a levy with a value cap of \$200,000 per property, and finally consider a fixed amount levy.

Table 7 Non-commercial residential property – uniform rate levy

Based upon improvement value of residential non-commercial property, with contents added by proxy

Levy rate in \$ per \$100 of improvement value	Residential property levy \$ million	Residential contents levy \$ million	Total residential levy \$ million
0.0381	118.4		
0.0064		19.9	
0.0445			138.3
Target yields	118.5	19.9	138.4

Source: CoreLogic, NZIER

The uniform levy would yield the required property levy amount if applied at a rate of \$0.0381 per \$100 of improvement value, and the required proxy contents levy for an additional \$0.0064 per \$100, making a total levy of \$0.0445 per \$100. There is no cap on this levy. A property with \$500,000 improvement value would pay \$222.50

Table 8 Non-commercial residential property – capped rate levy

Levy on improvement value capped at \$200K per property

Levy rate in \$ per \$100 of improvement value	Residential property levy \$ million	Residential contents levy \$ million	Total residential levy \$ million
0.0515	118.5		
0.0087		20.0	
0.0602			138.5
Target yields	118.5	19.9	138.4

Source: CoreLogic, NZIER

A levy on improvement values capped at \$200,000 would yield the required property levy amount if applied at a rate of \$0.0515 per \$100 of improvement value, and the required proxy contents levy for an additional \$0.0087 per \$100, making a total levy of \$0.0602 per \$100. The maximum total levy per property would be \$120.40.

Table 9 Non-commercial residential property – fixed levy

Levy applied at a fixed rate per property

Levy amount per property in \$	Residential property levy \$ million	Residential contents levy by proxy \$ million	Total residential levy \$ million
74.36	118.5		
12.51		19.9	
86.87			138.4
Target yields	118.5	19.9	138.4

Source: CoreLogic, NZIER

A flat levy of \$ 74.36 per property, plus another \$ 12.51 in respect of contents, would lead to a total levy of \$ 86.87 per non-commercial residential and lifestyle property.

The above fixed levy would be applied equally to all 1,593,457 non-commercial residential and lifestyle properties. If instead it applied only to the 1,508,908 such properties with non-zero improvement values, the total levy would need to be increased to \$91.74 per property. That is close to the maximum insurance-based levies currently payable for residential property and contents of \$91.20

One issue with this approach is that the regime would be totally different in structure from that applied to commercial residential properties, described in the next section.

Commercial properties

We first consider a uniform rate levy applied to all commercial property. Noting that this will result in very high levies for high value properties (above \$100 million), we then consider some abating rate schedules. In doing so, we look to keep the initial step at or below the current flat levy rate of \$ 0.076 per \$ 100 of insured value.

In all cases, the target revenue yield from the property levy is \$ 118.71 million, representing 74% of the 2012/13 Commercial Material Damage Fire Service Levy.

Table 10 Commercial property – flat rate and dual rate levies

Dual rate levies are at the initial rate up to the threshold, and at the second rate to the limit of value

Levy regime	Rate 1 - \$ per \$100	Threshold in \$	Rate 2 - \$ per \$100	Yield \$ million
Flat rate	0.0618	na	na	118.76
Dual rate a	0.0760	200,000	0.0578	118.72
Dual rate b	0.0760	1,000,000	0.0496	118.74
Dual rate c	0.0760	5,000,000	0.0362	118.69
Dual rate d	0.0760	10,000,000	0.0265	118.70

Source: CoreLogic, NZIER

The preceding table compares a flat rate levy (\$ 0.0618 per \$100 improvement value) to a range of feasible dual-rate levy regimes. The initial rate is set at \$ 0.076 per \$100 in all dual rate cases, with the threshold for abatement of that initial rate being set successively at \$ 100,000, \$ 1,000,000, \$ 5,000,000 and \$ 10,000,000.

The effect of raising the threshold at which the levy rate abates is to increase the levy amount for properties valued below the rising first threshold, and to reduce the amount of levy payable for higher-value properties. The effect on the latter group is very significant, as the following table illustrates:

Table 11 Commercial property – levy amounts under above regimes

Total levies payable by property improvement value under flat and proposed dual rate levy regimes

Levy regime	Levy on \$200,000 improvement value - \$	Levy on \$1,000,000 improvement value - \$	Levy on \$10,000,000 improvement value - \$	Levy on \$100,000,000 improvement value - \$
Flat rate	124	618	6,180	61,800
Dual rate a	152	596	5,798	57,818
Dual rate b	152	760	5,224	49,864
Dual rate c	152	760	4,018	36,598
Dual rate d	152	760	7,600	31,450

Source: CoreLogic, NZIER

No property owner will be worse off compared to the current levy obligations under any of the regimes. Small gains accrue to lower value properties under the flat rate, while those same properties are modelled to have no gain or loss under the tiered rate regimes. Significant savings are available for owners of higher value properties under all regimes, increasingly so as the rate abatement threshold is increased.

These results are shown in the following table.

Table 12 Commercial property - savings relative to current regime

Differences between levies payable under current \$0.076 per \$100 FSL and levies payable under the proposed property value based regimes

Levy regime	Gain or loss on \$200,000 improvement value - \$	Gain or loss on \$1,000,000 improvement value - \$	Gain or loss on \$10,000,000 improvement value - \$	Gain or loss on \$100,000,000 improvement value - \$
Flat rate	18	142	1,420	14,200
Dual rate a	nil	164	1,802	18,182
Dual rate b	nil	nil	2,376	26,136
Dual rate c	nil	nil	3,582	39,402
Dual rate d	nil	nil	nil	44,550

Source: CoreLogic, NZIER

3. Further differentiation among commercial property categories

The property categories designated as commercial include the following: *Arable, Commercial, Dairying, Forestry, Horticulture, Industrial, Mining, Other, Pastoral, Residential (Commercial), Specialist, Utility Assets, Z*.

Of these, the “Z” category has just 13 assets valued collectively at \$2.53 million, about which we know very little, while the “Other” category comprises the following: *assembly (halls, etc.), educational, health / medical, Māori sites, passive reserve, religious, sporting, utilities, vacant, multiple / other*.

The majority of the above are exempt from rates under the Local Government (Rating) Act 2002. An amendment would be needed to insert a provision within the Act to allow for the imposition of a special rate to apply a fire service levy on such properties. While that may be possible as part of the legislative changes needed to introduce the fire service levy as a new property rate, the changes may not cover all types of assets in this category. We therefore consider the alternative prospect of excluding all property improvements in this category from the scope of the levy.

In our view, the analysis that follows represents a “worst case” scenario in terms of the size of the reduction in the asset base over which the property levy can be applied. It is likely that many of the excluded properties will be liable for the levy.

With the “Other” and “Z” class assets excluded, the remaining commercial property base would require higher levy rates to produce the required revenue yield. To keep all properties within the ceiling of the current \$ 0.076 per \$ 100 fire service levy on insured property, the only feasible option is to apply a uniform rate levy at close to that rate. However, that would require large levy payments for high value properties.

Setting aside the restriction of making nobody worse off, we propose several dual rate regimes, all of which would reduce the impact of the levy on higher value properties, but which require increases in the levy payable for lower value properties.

We have limited the initial rate to \$ 1.00 per \$ 100 of improvement value, and reduce that rate only where the higher abatement thresholds allow the top-end rates to be reduced to achieve levels of levy payments comparable to those shown in the previous example set.

These levy regimes are shown in the following table.

Table 13 Commercial property excluding “Other” and “Z” categories

Dual rate levies are at the initial rate up to the threshold, and at the second rate to the limit of value

Levy regime	Rate 1 - \$ per \$100	Threshold in \$	Rate 2 - \$ per \$100	Yield \$ million
Flat rate	0.0755	na	na	118.79
Dual rate a	0.1000	200,000	0.0678	118.68
Dual rate b	0.1000	1,000,000	0.0500	118.73
Dual rate c	0.0950	5,000,000	0.0342	118.70
Dual rate d	0.0930	10,000,000	0.0253	118.70

Source: CoreLogic, NZIER

The flat rate levy rate is very close to the level of the current fire-insurance-based levy, and given the margins of error in determining the levy target and uncertainty in the actual property values, it may need to be higher than that rate to provide the required revenue yield.

Table 14 Commercial property - levy yields with excluded assets

Total levies payable by property improvement value under flat and proposed dual rate levy regimes

Levy regime	Levy on \$200,000 improvement value - \$	Levy on \$1,000,000 improvement value - \$	Levy on \$10,000,000 improvement value - \$	Levy on \$100,000,000 improvement value - \$
Flat rate	151	755	7,550	75,500
Dual rate a	200	742	6,844	67,864
Dual rate b	200	1,000	5,500	50,500
Dual rate c	190	950	6,460	37,240
Dual rate d	186	930	9,300	32,070

Source: CoreLogic, NZIER

The results as shown in the following table are that in all the dual-rate cases, owners of the lower value properties will need to pay more, and owners of higher value properties progressively less than under the present insurance-based levy regime.

Table 15 Commercial property – savings with some assets excluded

Total levies payable under the property value regime compared to current \$0.076 per \$100 FSL

Levy regime	Gain or (loss) on \$200,000 improvement value - \$	Gain or (loss) on \$1,000,000 improvement value - \$	Gain or (loss) on \$10,000,000 improvement value - \$	Gain or (loss) on \$100,000,000 improvement value - \$
Flat rate	1	5	50	500
Dual rate a	(48)	18	756	8,136
Dual rate b	(48)	(340)	2,100	25,500
Dual rate c	(48)	(290)	1,140	38,760
Dual rate d	(48)	(270)	(1,700)	43,930

Source: CoreLogic, NZIER

Summary of property improvement value levy modelling

The above examples demonstrate only one set of feasible ways in which the levy revenue can be raised. The examples serve to indicate the flexibility that a dual rate system offers relative to a uniform rate system. While it would be equally valid to construct triple rate levy regimes, with two thresholds at which the levy rates are progressively reduced, such a refinement would provide little additional flexibility.

Where the levy is applied across the full asset base, it is possible to achieve savings for all property owners, or to direct the savings to owners of higher-value properties.

Use of property capital value rather than improvement value

Our data selection and modelling has used value of improvements as the basis for the levy, as this is the obvious proxy for the value of assets subject to an insurance levy. We note that in Australia, the capital value (value of land plus improvements) is commonly used as the basis for a property levy, although adjustments are made for type of land use and for location. Clearly, a capital value based levy without adjustment would increase the share of the levy payable by rural property owners, where land is likely to represent a greater proportion of the assessment base value.

We note that overall, the value of improvements represents about 46% of capital value for non-commercial residential properties, and around 47% for commercial properties. Hence we can adjust our modelling by recognising that a doubling of our improvement value bands will provide a somewhat similar segmentation of properties on average, while noting that this will vary across property types.

We have adapted our model to provide some examples of levy rates based upon capital value. More accurate modelling would require a new data set with value bands selected according to capital values, rather than by value of improvements.

We omit consideration of a common uniform levy across all property types, as that will be no more reasonable in this case than it was in the preceding examples.

Non-commercial residential property using capital values

We repeat our previous analyses for the uniform rate and for a capped rate, noting that the results for a fixed rate would be no different from the previous example.

Table 16 Non-commercial residential property – uniform capital rate

Based upon capital value of residential non-commercial property, with contents added by proxy

Levy rate in \$ per \$100 of improvement value	Residential property levy \$ million	Residential contents levy \$ million	Total residential levy \$ million
0.0184	118.5		
0.0031		20.0	
0.0215			138.3
Target yields	118.5	19.9	138.4

Source: CoreLogic, NZIER

Table 17 Non-commercial residential property – capped levy rate

Levy on capital value capped at \$500K per property, contents added by proxy

Levy rate in \$ per \$100 of improvement value	Residential property levy \$ million	Residential contents levy \$ million	Total residential levy \$ million
0.0214	118.5		
0.0036		19.9	
0.0250			138.5
Target yields	118.5	19.9	138.4

Source: CoreLogic, NZIER

Note that all properties with zero improvement value are excluded in this analysis.

In summary, the levy rates are lower than in the previous examples owing to the capital value base being larger than the improvement value base. Whereas we had a \$200,000 cap for improvement value, we now use a \$500,000 cap for capital value.

For a typical property with \$500,000 capital value, the annual uniform rate capital levy for the property would be \$92.00, and the equivalent rate including the proxy for contents would be \$107.50.

For the same property, with a \$500,000 value cap imposed for the levy, the annual levy would be \$107.00, and the rate including a proxy for contents would be \$125.00.

In both cases, these rates would be pro-rated downwards for lower value properties. For properties with capital values above \$500,000, the capped rate levy would not increase, but the uniform rate levy would steadily increase with increasing capital value. In addition, a fixed fee could be charged for properties without improvements.

Commercial property using capital values

We repeat the analysis shown for improvement values in Tables 10 and 11 using capital values. We have moved the thresholds up to reflect the increase in property values in the capital measure, with the first moving from \$200,000 to \$500,000 and the others doubling in value, compared to the improvement value cases. This works effectively even though the raw data is still banded by improvement value ranges.

Table 18 Commercial properties – flat rate and dual rate capital levies

Without contributions from properties with no improvements

Levy regime	Rate 1 - \$ per \$100	Threshold in \$	Rate 2 - \$ per \$100	Yield \$ million
Flat rate	0.0292	na	na	118.67
Dual rate a	0.0315	500,000	0.02825	118.68
Dual rate b	0.0315	2,000,000	0.0258	118.70
Dual rate c	0.0315	10,000,000	0.0193	118.70
Dual rate d	0.0315	20,000,000	0.0147	118.68

Source: CoreLogic, NZIER

Table 19 Commercial properties – levy amounts under above regimes

Without contributions from properties with no improvements

Levy regime	Levy on \$500,000 capital value - \$	Levy on \$2,000,000 capital value - \$	Levy on \$20,000,000 capital value - \$	Levy on \$200,000,000 capital value - \$
Flat rate	146.00	584	5,840	58,400
Dual rate a	157.50	581	5,666	56,516
Dual rate b	157.50	630	5,274	51,714
Dual rate c	157.50	630	5,080	39,820
Dual rate d	157.50	630	6,300	26,460

Source: CoreLogic, NZIER

The above tables show one set of feasible levy rates that would raise the required \$118.7 million of revenue from commercial property based on capital value.

We have not included a table comparing the levies under the capital value regimes to the current fire service levy amounts payable as the basis for calculation is different.

The numerical values in the second column of Table 19 are marginally higher than those in the corresponding column of Table 11, as the capital value range is 2.5 times that of the improvement value range, while average capital values are only 2.12 times the average improvement values. Hence we expect a slightly higher levy.

The figures in the rightmost 3 columns of Table 19 are generally lower than those in the corresponding columns of Table 11, as the capital value ranges are double the improvement value ranges, while average capital values are 2.12 times average improvement values. In this case we expect and see generally lower levies, especially for higher value properties.

For high value properties (above \$20 million) it is also likely that the value of improvements will represent a greater proportion of the capital value, so the use of capital value for levy determination may be advantageous relative to the use of improvement value. Conversely, land value may represent a higher proportion of the value of smaller urban and many rural properties, and they will be disadvantaged by a levy applied to capital value rather than to the value of improvements.

We note that in jurisdictions where fire and emergency services levies are applied to capital values, there are usually adjustments applied for factors such as the type of land use, as well as for location (urban / rural and by districts) and sometimes for specific fire risk factors. The use of improvement values reduces the need for such adjustments, although in principle these can still be useful in improving equity.

Conclusion on property-based levy feasibility

We have explored a range of possible levy structures, and have demonstrated that these can be structured in different ways, some of which make them more affordable for owners of lower value properties, and others which reduce the levy liability for owners of higher value properties. Further differentiation and variation is possible.

Depending upon which property assets are included and which are exempt from the levy, there may be potential savings for all property owners under a flat rate levy regime. With dual rate levies, there is scope to provide significant reductions in levy costs for owners of higher value properties, although this may require small increases in the levy payable by owners of low to mid value properties if the asset base is restricted. We have modelled a “worst case” scenario for the restriction of the levy base and shown that it is still possible to provide concessions for owners of higher-value properties.

We conclude that it is feasible to base a fire service levy upon commercial property values, and to have different regimes for residential and commercial properties. The system can be made to work using either improvement values or capital values of property, generating revenue streams comparable to those obtained from the current insurance-based Fire Service Levy. A combination of a capped levy for non-commercial residential properties and an uncapped dual-rate levy for commercial properties would appear to provide the flexibility needed for a fire service funding arrangement based upon recognised property values.

5. Implementation of a fire service levy based on property values

5.1. Introduction

Having demonstrated the feasibility of determining a fire service levy based upon property values, we now consider how the corresponding revenue may be collected.

What follows here is a summary of these implementation issues, which are covered in greater depth in a report that we commissioned from a consultant with expertise in local government financial administration, attached as Appendix C.

We consider the use of territorial authorities and / or regional councils as collection agents, and how the levy will need to be characterised to enable such agents to collect it, including the expected legislative requirements, although we do not explore those in detail.

We then examine the likely costs of collecting the levy through a local authority administered special property rate, and compare these with the estimated costs of collecting the fire service levy through insurance companies and insurance brokers. We look at both the set-up costs and the ongoing costs of fire service levy collection.

We identify some of the transitional issues, drawing upon experience in Australian States that have switched to property based fire service funding, and adapting that to our local situation.

5.2. Collection agents

There are two groups of potential fire service levy collection agents that routinely collect revenues directly from property owners – territorial authorities (TAs), and regional councils (RCs). However, whereas all TAs collect revenue as rates from property owners, many RCs use the TAs in their region to collect the revenue due to them. A minority of RCs collect their rate revenue directly, through separate billing.

This means that TAs are the preferred collection agency, and that most already have systems to administer the notification and collection of a third party rate. Those TAs that do not currently collect rates on behalf of RCs may need to introduce new systems to enable them to collect a fire service levy rate.

While it may be feasible to have a fire service levy collected by RCs where they collect their own rates, the TAs are better placed to administer the commercial vs non-commercial property designations, and other property type related issues.

Therefore, we recommend the use of TAs as primary agents for collection of any property-based or property-value based fire service levy. If the new fire levy can be structured to look like other existing property rates (including local authority and regional council rates) the costs of adaptation and collection will be minimised.

5.3. Characterisation of the levy as a property rate

To enable TAs to collect any new levy using their rating powers, that levy will have to be deemed or designated as a rate, with the latter option requiring legislative action. However, the Fire Service will be able to retain control over setting the applicable levy rates, and to revise these annually if necessary to achieve their revenue targets.

Specifically, the intended new fire services levy will need to be included as a rate under the relevant legislation, the Local Government (Rating) Act 2002 (LGRA). Our consultant has recommended using the deemed rate provisions of section 88 (3) of the LGRA, but there may be other choices that will better serve the purpose.

Whichever part of the Act is seen as most appropriate to accommodate the new rate, the changes must be drafted in such a way that the Fire Service is not required to comply with all of the complex rules that govern the actions of TAs and RCs.

Depending upon whether the new levy is to be applied to the capital value or to the improvement value of properties and the need to distinguish different categories of property (e.g. residential and commercial, possibly also rural and lifestyle, and other level 1 categories) with different levy determination regimes, the specification of the levy may require its own new section within that Act. A requirement to extend the levy coverage to include classes of property – such as churches and educational organisations - that are included in the insurance base but are currently exempt from general rating will require more extensive legislative or regulatory changes.

To provide the Fire Service with assurance of the revenue yield from the new fire service levy on property, they will presumably want to be engaged in an annual rate setting exercise. The levy rates will need to be set and published in advance of the rating year, which commences on 1 June. The legislation could provide for levy rates to be proposed by the Fire Service and set annually by an Order in Council. That would allow the levy to be adjusted as property values and funding needs change over time.

5.4. Costs of collection

We asked our external consultant to provide advice on the likely cost of collection by TAs for a property based fire service levy structured as a rate on property value.

We asked for estimates of the expected set-up costs, which would cover programming and system changes, and other specific changes required to account for the fire service levy rate in rating receipts and to reconcile those receipts against levy payments to the New Zealand Fire Service.

We were advised that this cost could vary depending upon whether the basis for the levy was the same as or different from the property rate collection basis (which is in some cases capital value and in others the value of improvements) and whether the fire service levy rate would need to be extended to include properties that are exempted from general rates.

We also asked for estimates of the anticipated ongoing costs of collection of the fire service levy property rate, assuming that the systems were properly configured.

These costs would cover the administrative cost of any annual levy rate changes, the publication of the levy rates to ratepayers (noting even where TAs collect rates on behalf of RCs, separate summaries of the rating policy must be sent to property owners), accounting for the levy receipts within rates receipts, and the reconciliation of levy receipts and payments to the Fire Service.

These costs would be more standardised, but would vary with the number of properties within the rating base, with larger rating bases expected to incur a lower unit cost. Both these costs and the transitional costs are more readily expressed as a cost per rating unit, rather than as a cost per unit of rating value.

Estimates of rates levy set-up and annual collection costs

The following table illustrates the set-up costs and ongoing costs for some typical TAs in the eastern and central North Island.

Table 20 Estimated costs of setting up and collecting property levies

Typical small, medium and large councils

Council	Rating base number of properties	Estimated setup costs	Estimated ongoing annual collection cost
Council 1 rural	5,360	\$ 25,000	\$ 15,000
Council 2 rural	6,176	\$ 25,000	\$ 15,000
Council 3 mixed	14,676	\$ 50,000	\$ 40,000
Council 4 urban	26,220	\$ 75,000	\$ 50,000
Council 5 urban	30,512	\$ 80,000	\$ 50,000
Council 6 urban	54,739	\$ 150,000	\$ 100,000

Source: PJ & Associates

On a per property basis, the costs are as follows.

Table 21 Estimated per-property rate levy setup and collection costs

Typical small, medium and large councils

Council	Rating base number of properties	Estimated setup costs	Estimated ongoing annual collection cost
Council 1 rural	5,360	\$4.66	\$2.80
Council 2 rural	6,176	\$4.05	\$2.43
Council 3 mixed	14,676	\$3.41	\$2.73
Council 4 urban	26,220	\$2.86	\$1.91
Council 5 urban	30,512	\$2.62	\$1.64
Council 6 urban	54,739	\$2.74	\$1.83

Source: PJ & Associates

The transitional set-up costs therefore range between \$2.62 and \$4.66 per property, while the annual collection costs are in the range from \$1.64 to \$2.80 per property. Those amounts are small relative to the fire service levy rates that we modelled in Section 4.

By relating the total cost estimates to the amount of revenue expected to be raised by the property-based fire service levy, we can estimate the set-up cost and the cost of collection relative to that revenue. We have used our model to estimate the levy revenue from both commercial and non-commercial properties for each council, based on a capped rate for non-commercial and flat rate for commercial properties.

We have averaged the information for successive pairs of the councils listed in the preceding tables to obtain the following relative cost estimates.

Table 22 Average set-up and collection costs for a property levy

Typical small, medium and large councils

Council group	Average levy revenue	Set up cost percent	Annual cost percent
Low levy revenue	\$ 637,153	3.92%	2.35%
Mid levy revenue	\$ 2,493,809	2.51%	1.80%
High levy revenue	\$ 6,167,588	1.86%	1.22%

Source: PJ & Associates, CoreLogic, NZIER

The estimated annual collection cost ranges from 1.22% of levy revenue for larger, urban councils with more than 30,000 rating units, through 1.80% of levy revenue for mid-sized councils with an average of 20,000 rating units, to 2.35% of levy revenue for smaller councils with an averages of 6,000 rating units.

By extension, we would expect annual collection costs to be lower than 1% for very large councils, with over 100,000 rating units.

The set-up cost for introducing a property rate fire service levy would be close to 4% of the annual levy revenue for the smallest councils, around 2.5% for mid-sized councils, and less than 2% of levy revenue for large councils. That cost is likely to reduce to around 1.5% for very large councils.

Comparison with costs of collection of an insurance-based levy

In Appendix A we provide information obtained through ICNZ that insurers typically incur a levy collection and administration cost of between 0.6% and 1.7% of levy revenue, with a best estimate of 1.0% of revenue. Allowing for a comparable measure of costs by insurance brokers, who assess and collect the levy on insurances, the best estimate of collection costs doubles to a typical 2.0% of levy revenue.

From the preceding analysis, we conclude that at around 1.25% or less of levy revenue, the cost of levy collection by the large and very large rating-base councils will be lower than the collection cost in the present system, and that for mid-sized and small rating-base councils, the average 2.1% cost of collection will be comparable with the estimated 2.0% cost of collection in the present system.

On balance, we expect the ongoing cost of collection of the fire service levy revenue to be lower under a property-based system than under an insurance-based system. In order to maximise the administration and compliance cost savings it would be important to remove the levy on both real property and other commercial insurance.

5.5. Other benefits from a rates based system

Reduced audit requirements and administrative costs

The Fire Service conducts several audits of insurers and insurance brokers each year, which are intended to verify that the levy is correctly assessed and remitted in full when due. This requires detailed examination of insurance documents and books of accounts held by brokers and insurers. The Fire Service incurs direct costs, and the indirect cost to insurers and brokers is also significant, although difficult to quantify.

TAs are subject to review and audit by the Government Audit Office (GAO), and the marginal cost of extending GAO audit coverage to include the collection and payment of a fire service levy rate would be small, while the additional marginal impact upon TA operations would also be minimal.

The Fire Service spent between \$438,000 and \$533,000 on administration of the fire service levy in 2010/11 and 2011/12 (including some litigation costs in the latter year). These costs would very likely be smaller if the revenue base was not subject to a need for continual vigilance to deter and detect attempts to avoid liability for payment.

5.6. Transitional and other collection issues

We have identified a small number of issues that will be important during a changeover from an insurance-based regime to a property-value based levy regime.

Phasing out the insurance-based levy:

- as property rates must be set on an annual basis (July to June), the insurance industry will have to arrange for pro-rating of fire service levy collections in the lead up to the change-over date
- insurers and brokers should be prepared to inform their customers about these changes in advance of the phase-down period, which means the lead time for implementation of the change will be more than one year.

Public education:

- the change will require good advance preparation, including plenty of publicity directed at property owners with good information to prepare them for the introduction of a new rating based levy
- equally important will be to let property owners know about the cessation of the insurance based levy, and that the new charges are fairer

Recovery of transitional costs:

- TAs will need to be compensated for their set-up costs for the new fire service levy rate, especially where they have to introduce new systems

- this may require a grant or lump-sum payment Government payment, or the setting of a higher fire levy rate to spread the cost over several years, as a one off charge or single year addition to the levy rate would have an adverse impact on acceptance of the new regime by property owners.

Recovery of annual collection costs:

- TAs will charge for the cost of collection of the fire service rate levy rate, just as they do for the collection of regional council rates, and levy rates may need to be grossed up to cover the cost of collection or fees imposed by TAs.

Timing of payments to the Fire Service:

- insurers currently pay any fire service levy amounts due on new policies and policy renewals by the 15th of the second month following their acceptance of risk, regardless of whether they have received payment.
- TAs collect rates in four instalments per year, one in each calendar quarter. The first is based upon the previous years' rates, and the remaining three instalments are for one-third of the remaining balance for that year.
- TAs send invoices to property owners for each rating instalment, with detailed information on the rates to be paid, and a clear indication of due dates. Many property owners pay their rates by direct debit.
- TAs need time to reconcile their rates collections with invoices, and verify that the payment is correct, before disbursing funds to other agencies. The inclusion of the fire service levy rate should not slow down that process.
- the Fire Service will receive fewer payments per year, but from a larger number of payers than under the current system, and with more certainty about the size of each payment, as the rating base is determined annually in advance.

5.7. Other regime design issues

We note here some additional matters that will need to be taken into account in modelling and designing a fire service levy that is to be applied to the rating base and collected by TAs.

Rating differentials:

- most TAs apply a differential rating system, with different levels of rates applied to commercial and non-commercial property, which will allow for the different treatment of these properties for a fire service levy rate
- many TAs apply a more highly differentiated rating system, which recognises the different levels of service provided to properties in different locations and with different characteristics
- a more differentiated system of property categorisation may be needed if a fire service levy rate is to be applied to the capital value of properties, rather than to the value of improvements.

Treatment of non-rateable and reduced-rate properties:

- properties that are non-rateable under the LGRA may still be subject to rating for water and sewerage connections, which may offer a means to include a fire service levy rate in the rates payable for such properties
- property used for some purposes is rateable at only 50% of the normal rate, and it may be impractical to treat it differently for the fire service levy rate.

Rating relief and rates deferrals:

- the collection of full or even partial fire service levy rates may be difficult where rates deferral and rating relief arrangements are applied by TAs, with caps on rates for some property owners
- to compensate for this, the base levy rates may need to be set higher than would otherwise be the case

Late payment and penalty rates:

- TAs typically apply late payment charges for rates not paid by the due date, and these are designated as additional rates under the LGRA, and accounted for separately
- the Fire Service may wish to be compensated for late payment of levies, which may require a regime to charge separate late payment penalty rates.

6. Benefits and costs from switching from an insurance to a property levy

In the following table we summarise the benefits and costs anticipated as a consequence of a change from the current insurance-based fire service levy to a property-based levy collected by local authorities through the rating system. These apply whether the levy is based on capital values or improvement values of property.

Table 23 Benefits and costs to various parties

Benefits and costs under preferred regime – capped residential levy and abating commercial levy

Type of Benefit	Party	Benefits	Costs
Annual levy payable	Residential property owners	Lower levies for most	Small increases for minority
	Commercial property owners	Same levies for lower value properties	Reduced levies for higher value properties
Administration costs	New Zealand Fire Service	Monitoring of revenues less onerous as rate yields are predictable	Need to deal with Increased number of parties (78 TAs)
	Insurers	Eliminated – note that costs were not recoverable	
	Insurance brokers	Eliminated – note that costs were not recoverable	
	Local authorities	Costs can be met from the levy rate if well designed	Manageable increase in collection costs
Compliance costs	New Zealand Fire Service	Costs of levy enforcement reduced by ability to rely upon OGA audits	
	Insurers	Eliminated – note that costs were not recoverable	
	Insurance brokers	Eliminated – note that costs were not recoverable	
	Local authorities	Costs can be met from the levy rate if well designed	Manageable increase in compliance costs
	Property owners	Rates are familiar and accounting transparent	Some owners may not have means to pay full rates
Revenue certainty	New Zealand Fire Service	Rates levy yield predictable in advance of year	
Adjusting revenue	New Zealand Fire Service	Levy rates can be adjusted annually	
Market distortion	Property owners	Reduced incentives to under-insure or construct artificial arrangements	

Source: NZIER

7. Summary

Our primary objective was to assess the feasibility of having a fire service levy for commercial property collected through the rating system. We were also asked to provide estimates of the rate of the levy that would need to be imposed to yield a revenue stream for the Government similar to that currently derived from the Fire Service Levy on contracts that include fire insurance for commercial buildings.

Actions taken

We have performed the following tasks, as required under our terms of reference:

- analysed alternative ways of raising a levy based upon the rating valuations of commercial and residential properties, under different assumptions as to what may or may not be included in the revenue base (Sections 3 and 4)
- determined an optimum way or ways of collecting a levy on of commercial and residential properties so as to yield revenues similar to those obtained from the current Fire Service Levy collected by insurance companies (Section 4)
- developed illustrative examples for different types of property and the likely level of and changes in costs to property owners of the levy under a rating regime compared to those under the current levy (Section 4)
- identified and documented the transitional issues in switching to the collection of a fire service levy through the rating mechanism (Section 5)
- estimated the likely transitional costs and ongoing periodic costs for the collection of a levy through the rating system by territorial authorities (Section 5 and Appendix C)
- provided a summary of the expected benefits and costs for the proposed alternative levy system, compared to those of the current levy system, for the various parties concerned (Section 6).

Findings

Our key findings include the following:

- there are a range of feasible ways of collecting the required amount of levy revenue from both non-commercial and commercial properties, using property based levies collected on the rateable value of properties
- while the value of property improvements most closely mimics the insurance indemnity value basis for the current levy, it is feasible to collect a property levy based on either improvement values or capital values
- regardless of whether the levy is assessed on the improvement value or the capital value of a property, it is possible to construct levy regimes that do not increase costs for any commercial property owners, and which reduce costs for owners of owners of higher value properties, compared to costs for owners with full value insurance under the current levy regime
- it is feasible for a property based levy to be collected by territorial authorities, as a deemed rate, the transitional costs of changing to a property based regime are manageable, and the ongoing collection and compliance costs are comparable to or lower than current costs.

8. Conclusion

Preferred option for funding fire services

The best way of funding fire services in New Zealand, based upon our previous analysis using public policy revenue principles, is from general taxation. Now that there is an expectation of surpluses in Government revenues in the near future, we recommend that this option be considered again.

Recommended next-best option

As a next-best policy option, we endorse our previous recommendation to move from a system of insurance-based levies to property-value based levies for both non-commercial (residential and lifestyle) and real commercial property. This would complement our recommended change from insurance based to registration based levies together with a levy component of Road User Charges for motor vehicles. The current levy on other commercial property (\$38m) should be replaced by general tax funding.

Australian examples

Australian States are successively moving from insurance-based levies to property-based levies to fund their fire and emergency services. The last mainland state (New South Wales) with an insurance-based levy has completed its public consultation and is observing the outcome of the recent change to a property-based levy in Victoria before implementing similar changes. The two Australian Territories fund their fire and emergency services from government consolidated revenue.

Recommended levy regimes

From our current analysis, we recommend that the following regimes be applied, based upon either the capital value or the value of improvements of properties:

- for non-commercial property, a single rate levy on property value up to a fixed cap (either \$200,000 value of improvements or \$500,000 capital value)
- for commercial property, a dual-rate abating levy, with an initial rate no higher than the current insurance-based levy rate per unit of value, and the abatement point set so as to balance the benefits across mid-range to higher value properties in an equitable manner (we provide examples).

Implementation

We recommend that the property based levy be collected by local authorities as a rate (deemed rate) on property values, and that this rate be extended to include many of the properties that are exempted from general rates (notably churches, schools, hospitals) but which are currently contributing to payment of the insurance-based fire service levy.

We recommend that the transitional costs should be met by central Government, and that the ongoing costs of collection should be recovered from the levy collection, with levy rates adjusted annually to provide the Fire Service with their required revenue after deduction of collection charges.

Appendix A – Data details

A summary of the main sources of data is included as Section 3 of the body of the report. This Appendix provides further details on how the data was collected and prepared for use. The application of this data is described in Sections 4 and 5 of the report.

A.1 Interpretation of insurance data

Data on the split of “commercial material damage”

The initial insurance data was provided in the form of entries into a table in an Excel spreadsheet that was devised during consultation with industry representatives. Insurers sent their data in that format to ICNZ. We received a copy of the table with entries showing the aggregated information provided by insurers to ICNZ.

Split of Commercial Material Damage Levy

We used the data supplied by insurers to estimate that 74% of the Commercial Material Damage levy payments relate to buildings, and the remainder to non-structural assets. The process is outlined below.

We were advised that nine insurers had contributed by providing data relating to levy collections and asset values from the 2012/13 financial year. The key measures for our analysis were the levy payments and the underlying insured asset values.

Although all nine insurers could provide high level levy data, that data did not provide a split between buildings and other assets. The total of the levy payments reported by responding insurers was \$114 million. That is about 71% of the \$160 million reported by the Fire Service for their collection of levies on policies for Commercial Material Damage in the year to June 2012. Therefore, we can be reasonably confident that the data are representative of the pattern for the industry.

Only three insurers were able to report the split of levies between buildings and other assets. From this limited sample, we estimate that levies on buildings were contributing 72% of the levy payments for commercial material damage assets.

Seven of the nine respondents were able to provide the data on the indemnity values of buildings and other assets subject to insurance levies. Based on this data, the value of buildings is 74% of the total for all assets in this category. If we also include the split of contractors' risks contributions provided by just three insurers, we get 75% of total assets allocated to buildings, a very similar figure.

We consider that all three estimates, one from the levy payments indicating 72% buildings, and the others from asset values indicating 74% or 75% buildings across the material damage category are fully consistent. ***On balance, we prefer the figure of 74%, which is based on responses from the highest number of insurers.*** We note that the seven respondents included in this estimation represent about half of the industry insurance base by value. The other two figures are well within the likely margin of error in that estimate.

It is difficult to determine whether the limited information that we received may lead to a bias in the estimate, and in the absence of evidence to the contrary we assume

that it is an unbiased estimate. Bias aside, we would suggest a confidence range of plus or minus five percent of the estimate, that is, a range from 70% to 78%.

Other insurance data

Costs of levy collection

We asked for estimates of the total costs relating to the collection and remittance of and accounting for the Fire Service Levy (FSL) to be expressed as a percentage of the Levy amount (not the Insurance premium). Costs of audits of the FSL were also to be included. This information was collated by ICNZ and the results provided to us.

Ignoring the highest and lowest figures, the range was from 0.6% to 1.7% of the levy revenue. On the same basis, the estimated average cost to insurers was 1.0% of the levy collected.

We also received advice from some insurers that they thought that costs to insurance brokers could be higher than those experienced by insurers, as brokers had to assess the levy, collect and account for it and pass the information and revenue to the insurers, who were then required to pay the levy based upon broker assessments and wait for payment to them by the brokers. Brokers were also subject to audit of their books by the Fire Service.

We requested assistance from the Chief Executive of IBANZ, in the hope of obtaining some indications of their costs against the levy collected, but were advised that members were unable to extract and provide the information that we sought.

Based upon the information and evidence available, we estimate the costs of collecting the Fire Service Levy at between 1.0% and 3.0% of the levy collected. That collection cost is borne by the insurers and brokers, who need to cover it out of their commissions and charges to insured parties.

We would suggest 2% as the best point estimate of the current levy collection cost.

We use this information in Section 5 of the report to compare the estimated costs of collecting the Fire Service Levy as a property rate to the estimated current cost of collecting the fire insurance based levy.

Effect of arrangements to reduce levy liability

We requested summary information on the ways in which some property owners may be able to reduce their insured indemnity values, and therefore their liability for the Fire Service Levy. We received too few responses to allow us to reproduce them in this report, or to allow us to construct typical cases.

One important conclusion is that participants in such arrangements may be able to achieve reductions of between 50% and 70% in their liability for levy payments. These arrangements are more readily available to owners of multiple properties, and the savings can be very significant for owners of higher value properties.

We used these findings in designing the abating levy regimes documented in Section 4 of the report. Under those regimes, the levies payable by owners of higher value properties are substantially reduced per unit of property value, compared to those applying to lower value properties. Our proposed differentiated dual rate levy regimes can provide for discounts of between 50% and 70% for high-value properties, relative to the levy charges under a uniform rate levy regime.

A.2 Further details of the property value data

Summary by primary property category

The table that follows shows the total improvement value of assets for each level 1 category. The total value of improvements for all categories is \$503.0 billion. The total capital value is \$1,078 billion. Improvements represent 46.6% of capital value.

The categories *Residential*, *Commercial*, *Lifestyle*, *Other*, *Utility Assets* and *Industrial* make up nearly 94% of the total value of improvements. The categories of *Pastoral*, *Dairying* and *Horticulture* account for almost all of the remaining 6% of value of property improvements.

The ranking by capital values is different. The top seven, each above 5%, are *Residential*, *Lifestyle*, *Commercial*, *Pastoral*, *Dairying*, *Other* and *Industrial*, together comprising 94.4% of the total value. *Utility assets* and *Horticulture* contribute another 3.3%. *Arable* and *Forestry* each make a small but significant contribution.

Table 24 Improvement value and capital value by level 1 category

Level 1 category	Total improvement value (\$ million)	Share of total improvement value	Total capital value (\$ million)	Share of total capital value
Residential	285,758	56.8%	592,386	54.9%
Commercial	53,340	10.6%	90,514	8.4%
Lifestyle	41,387	8.2%	96,585	9.0%
Other	34,845	6.9%	58,457	5.4%
Utility Assets	29,733	5.9%	31,789	2.1%
Industrial	27,547	5.5%	54,728	5.1%
Pastoral	11,130	2.2%	65,781	6.1%
Dairying	11,017	2.2%	59,232	5.5%
Horticulture	4,995	1.0%	11,995	1.1%
Specialist	1,547	0.3%	4,575	0.4%
Arable	1,017	0.2%	6,365	0.6%
Forestry	584	0.1%	5,508	0.5%
Mining	76	0.0%	294	0.0%
Total	502,976	100.0%	1,078,217	100.0%

Source: CoreLogic, NZIER

While the majority of improvements are buildings, other asset types may be included, especially in the industrial and agricultural categories. Our data set does not include information that enables the distinction of improvement assets by type.

Councils are provided with information on the type but not necessarily the actual or relative values of individual property improvements. Most TAs record only the total value of improvements, especially if they rate on capital value.

Distribution of property values within each level 1 category

The distribution of property improvement values by improvement value band for the main property groups by level 1 category is shown in Figure 1 in Section 3. Several features are worthy of note:

- the *Residential* category has a large proportion of its assets worth between \$100,000 and \$500,000, while *Lifestyle* assets are mostly valued within that same range
- the *Commercial*, *Industrial* and *Other* category assets are mostly worth a minimum of \$501,000 and extend to over \$100,000,000 in value
- the *Utility Assets* have improvement values starting above \$10,000,000 and extending to over \$100,000,000

Number of properties and values by improvement value band

The distribution of the number of assets and the total improvement value by improvement value band is shown in the table below. The improvement value bands (a) through (d) comprise 94% of the total number of assets and 62% of the total value of improvements.

The number of assets with values of over \$100,000,000 is 148 and these represent 6% of the total value of improvements.

Table 25 Number of assets and total improvement value by band

Improvement value band	Number of assets (properties)	Share of total number of assets	Total improvement value for band (\$ million)	Share of total value of improvements
(a) \$0	137,957	7.1%	-	0%
(b) \$1 - \$100,000	391,149	20.0%	22,419	4.5%
(c) \$101,000 - \$200,000	692,973	35.4%	102,929	20.5%
(d) \$201,000 - \$500,000	621,560	31.8%	185,337	36.8%
(e) \$501,000 - \$1,000,000	80,843	4.1%	53,652	11.0%
(f) \$1,000,001 - \$2,000,000	19,509	1.0%	26,592	5.3%
(g) \$2,000,001 - \$5,000,000	7,841	0.4%	23,469	4.7%
(h) \$5,000,001 - \$10,000,000	2,018	0.1%	14,091	2.8%
(i) \$10,000,001 - \$20,000,000	992	0.05%	13,855	2.8%
(j) \$20,000,001 - \$50,000,000	584	0.03%	17,704	3.5%
(k) \$50,000,001 - \$100,000,000	198	0.01%	13,437	2.7%
(l) > \$100,000,000	147	0.01%	29,490	5.9%
Total	1,955,763	100%	502,976	100%

Source: CoreLogic, NZIER

Appendix B – CoreLogic property data classifications

Table 26 CoreLogic data: property asset classification list

13 top level categories; 86 second level categories

Level 1 category	Level 2 category
Arable	Irrigated
Arable	Non-Irrigated
Commercial	Accommodation
Commercial	Cinema
Commercial	Elderly
Commercial	Health Operations
Commercial	Educational Uses
Commercial	Liquor
Commercial	Motor Vehicle
Commercial	Office
Commercial	Parking
Commercial	Retail
Commercial	Service Station
Commercial	Tourist
Commercial	Vacant
Commercial	Multiple/Other
Dairying	Factory and Town combined
Forestry	Exotic
Forestry	Indigenous
Forestry	Protected
Forestry	Vacant
Horticulture	Berry
Horticulture	Citrus
Horticulture	Flower
Horticulture	Glasshouse
Horticulture	Kiwifruit
Horticulture	Market Garden
Horticulture	Pipfruit
Horticulture	Stonefruit
Horticulture	Vines
Horticulture	Other/Mixed
Industrial	Food Processing and/or Food Storage
Industrial	Heavy Manufacture
Industrial	Light Manufacture
Industrial	Noxious/Dangerous
Industrial	Service
Industrial	Vacant
Industrial	Warehouse
Industrial	Other/Mixed

Lifestyle	Bare Land – pre-subdivision
Lifestyle	Improved
Lifestyle	Vacant
Mining	Coalfield
Mining	Gas
Mining	Limestone Quarry
Mining	Oilfield
Mining	Precious Metal
Mining	Rock/Shingle
Mining	Mixed/Other
Other	Assembly (halls, etc.)
Other	Educational
Other	Health/Medical
Other	Maori Sites
Other	Passive Reserve
Other	Religious
Other	Sporting
Other	Utilities
Other	Vacant
Other	Multiple/Other
Pastoral	Fattening
Pastoral	Grazing
Pastoral	Run
Pastoral	Stud
Residential	Apartment
Residential	Vacant Block land suitable for multi-unit dwelling
Residential	House Converted to Flats
Residential	Dwelling - house on its own defined section
Residential	OYO - flats & units bought individually for occupation
Residential	Home & Income
Residential	Vacant Block land suitable for multi-unit dwelling
Residential	Multiple Dwellings on one section
Residential	Car Park
Residential	Purpose built flats often specifically for rental
Residential	Vacant Site zoned for residential use
Specialist	Aquaculture
Specialist	Deer
Specialist	Horses
Specialist	Poultry
Specialist	Pigs
Specialist	Other
Utility Assets	Civic
Utility Assets	Energy
Utility Assets	Generating & processing sites or plants
Utility Assets	Postboxes
Utility Assets	Rail Network Corridors
Utility Assets	Telecommunication Networks

Source: CoreLogic

Appendix C – Consultant report on the collection of fire levies by Territorial Authorities

We append a copy of a report written by Philip Jones of PJ & Associates under contract to NZIER. His brief was to address the item highlighted in section 1 of that report, which reflects the fourth of the five items in our proposal as accepted by ICNZ.

Mr. Jones has extensive experience in working with territorial authorities on commercial matters. We benefited from a face-to-face meeting with him early in February and had the opportunity to review a draft version of his report.

The report appended is slightly amended from what Mr. Jones submitted to us. The changes are stylistic and explanatory, and none are substantial.



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Estimation of costs of collection of Fire Service Levies by Territorial Rating Authorities

1. Background

This report is in response to the proposal dated 11 November 2013 which has the key deliverable item for this area of work as:

'high-level estimates of the comparative collection costs and likely transition costs associated with moving from an insurance based levy to a rateable value based levy with collection by TAs, separately for commercial and residential property (with domestic contents by proxy), along with the identification of potential areas of difficulty.'

2. Approach

The first step is to identify what the processes will be and therefore what are the costs likely incurred by a territorial authority (council) to implement the proposal. The second step is to identify the year-on-year requirements and costs.

As part of the cost analysis I have considered the data that is used by territorial authorities together with the data provided by the councils' Valuation Service Providers (VSPs) under the valuation rules² issued by the Office of the Valuer General (OVG).

Also part of the analysis is a summary of the potential difficulties and decisions required to set the service level agreements with councils.

In my considerations I have made a number of assumptions and these are detailed in appendix 1, but the principal assumption is that there will be modifications to both the Local Government Act 2002 (LGA) and the Local Government (Rating) Act 2002 (LGRA) to enable councils to collect fire service rates by way of targeted rates. I have not considered in any detail what amendments would be required to either of those local government acts.

² Rating Valuation Rules 2008 LINZS30300 issued 1 October 2010

3. Step by step process summary

As the costs will be dependent on the levels of service, the following is a step by step process that needs to be undertaken to set up the process.

- a. Decide options on the service levels required by councils.
 - i. Just administer and collect rates;
 - ii. Set, administer and collect rates;
 - iii. Act as full/part agents on behalf of the fire service in relation to compliance with the LGRA, and LGA.

This would require legislative change, as previously identified.

- b. Select the rating tools - for example a different targeted rate will required for commercial properties compared to residential properties which may have a capped targeted rate;
- c. Extract the improvement values applicable for fire levies using the valuation rules and taking into account both the current Fire Service Act (1975) (FSA) and the LGRA;
- d. Identify non-rateable and rateable properties in terms of fire levies taking into account both the current FSA and the LGRA requirements;
- e. Evaluate whether there is any specific rates policy required to administer the fire service levies
- f. Development the transaction reports costs of the various options in terms of transitions costs and on-going maintenance for the councils.

4. Ongoing (yearly) process summary

- a. Update rating data for additional properties and improvements using data based on the valuation information that was obtained at the previous revaluation (which can be up to 3 years old);
- b. Set the agreed rate per property;
- c. Update various council documents including Annual Plan;
- d. Send out assessment and invoices;
- e. Correctly receipt rates for fire service levy;
- f. Undertake reconciliation of fire service levy funds received, fire service levies written off and funds still outstanding;
- g. Make payment to fire service for levies received.

5. Outline of sources of costs

The transitional and annual costs of implementation of fire service levies through the rates process is highly dependent on:

- a. The type and complexity of rating tool selected;
- b. Changes required to current valuation data;
- c. Impact of non-rateable and part rateable properties schedules under the LGRA;
- d. The principal / agent relationship between the fire service and councils;
- e. Service level agreements with councils in relation to agreed costs.

The transition costs are hard to quantify until more strategic decisions have been debated and set. There is a direct cost relationship associated with changes required from business as usual for Councils, and the need for major upgrades in terms of rate setting and administration.

The estimated setup cost for an average council with 25,000 rating units is estimated at \$67,500 but that figure is highly dependent on the above complexities and would exclude any additional valuation and computer system changes. The annual cost for that average council is likely to be around \$45,000.

6. Process assessment

The LGRA provides councils with flexible powers to set, assess, and collect rates from landowners. As the rating of land and any capital improvement is a tax, it is important that policies and processes with all aspects of rating are transparent and accountable.

- There needs to be sufficient information available for councils to administer the fire service rates
- There needs to be sufficient information available to enable ratepayers to identify and understand their liability for rates.

The cost of providing a national process for councils to administer a proposed fire service levy rate is entirely dependent on the complexity of the rating tool chosen, which includes validation of commercial / residential definition data, as well as any system amendments required to accommodate the administration of this rate.

In summary, if the fire service levy can be treated as business as usual, and not different from any other rate administered, there could be minimal impact on Councils processes and thus also on costs of administration of all rates. On the other hand, if special accounting and reconciliation procedures are required, and additional audits are needed, the administration costs will increase.

7. Transitional issues and costs

7.1 Variations to the rating information databases (RID)

A likely transition cost is reconciliation between the requirements of the Fire Service Act and the LGRA including; current Fire service exemption on levies versus land that is fully non-rateable, or 50% non-rateable under the LGRA. An additional consideration is the current valuation rules on fire service levies as opposed to the valuation bases used by councils. This is explained in more detail below.

Decisions are required to be made on whether all properties including exempt properties as listed in schedule 1³ of the LGRA will be required to be assessed for fire service levies.

Currently the LGRA details a significant number of non-rateable properties which would normally pay fire service levies. Non-rateable properties include government owned property, and property used for charitable purposes including churches, all of which currently pay fire service levies if they are insured for fire.

While the valuation data provided by the VSP does include the improvement value for these properties, additional time will be required in setting up the current non-rateable properties on to the rating system to ensure that the properties that were not being rated for council activities can be charged for the fire service levies. Once this is set up, then it would be business as usual.

Also a number of councils specifically rate utility companies including power telephone and water and sewerage. Under the current fire service levies these are exempt, so these properties may also need to be exempted from the fire service levy rate. These properties will need to be tagged in council systems as not having the fire service levy attached to them.

The current fire service levies for commercial and industrial properties are based on all property assets which are insured against fire risk, but that excludes other improvements such as pavement. This also applies to rural properties where improvements also include items which are not subject to fire service levies such as kiwifruit vines.

Another factor that needs to be considered is where there is a mixed use between commercial and residential. For example an apartment complex with retail on the lower floor, and residential on the upper floors, will be valued from a rating perspective depending on ownership. Ownership of these complexes varies from unit title to licence to occupy. This will add another layer of complexity to identifying commercial versus residential rateable properties. From a rating perspective, mixed use properties are not separated on the rating information database unless the TA is using commercial differentials. The majority of rural and low population base district councils do not use commercial differentials.

³ See Appendix 3

The VSP holds the information on the breakdown of the various improvements. This information is not generally loaded on to the council rating system as the rating system is based on the land or capital values (land plus improvement value). In theory the VSP would need to identify the type of improvements together with the estimated land and individual improvement values. The issue over the estimated cost is about the proportion of total current market value of the property allocated between land and improvements. The sum of the improvement value by component therefore may not reflect the total improvement value that is included within the rating valuation.

The valuation rules (OVG) require VSPs to record in 'the other improvements field' an indication of substantial other improvements not already accounted for in other fields. Example of substantial other improvements include swimming pools, and tennis courts. Generally these are noted and may not have specific values associated with those improvements. This generally is not an issue for residential properties however it becomes more complicated with rural and commercial properties.

Based on the information discussed above, the costs of implementation could vary significantly between Councils because each Council will have different characteristics associated with commercial and industrial property categories. The higher number of commercial and industrial properties, theoretically the more complex the implementation will be. In addition the implementation costs will vary depending on the ability of the council information system to extract additional data from the information provided by the VSP. As noted above the VSP only needs to provide the rateable value of improvements together with details as to what the improvements are. It is unlikely therefore that the council have ready access to the values of the individual improvements that are subject to fire service levies for commercial and industrial properties.

A review of valuation rules needs to be undertaken prior to an estimation of costs, both for transition and annual administration.

7.2 Complexity of the rating tool selected

Transition and collection costs will be highly dependent on the type of rating funding tool selected.

The proposal has named two potential differential targeted rates for commercial and residential property (with domestic contents by proxy). As a general rule the cost of administration is dependent on the number of rates being collected and the information that needs to be maintained to invoice and administer them.

The first step in the process by councils would be to identify which properties will be subject to the fire levies.

Fire service levies have two different categories, one for residential and one for commercial. However the majority of territorial authorities use the following three major categories for identifying the rating categories:

- a. Residential
- b. Commercial and industrial

c. Rural, including lifestyle

From a rating perspective generally there is no difference between lifestyle properties and rural properties that have a commercial focus. However from an insurance valuation perspective rural can be either considered residential or commercial and industrial. For example a lifestyle block would be considered residential but a dairy farm would be considered commercial.

The councils will need additional information extracted from the valuation data to ensure the correct allocation of fire service levies. Currently Councils have the following valuation information readily available:

- a. Land value
- b. Improvement value
- c. Capital value (land value plus improvement value)

It would be a relatively simple process to collect fire service levies from residential as the current fire service levy has a maximum levy of approximately \$100, and any allocation between improvements that are subject to fire service levies and other improvements such as swimming pools/tennis courts would only have a minor impact.

The councils already have available the three valuation components listed above. However the current fire service levies for commercial and industrial properties are based on all property assets which are insured against fire risk which excludes other improvements such as pavement. This also applies to rural properties where improvements also include items which are not subject to fire service levies such as kiwifruit vines.

The real challenge therefore for Councils will be to identify the improvements which are subject to fire service levies for commercial properties including some rural properties. While in theory this is a relatively easy exercise because the (VSP) does record the improvement value separately. However the detail of the various improvements may not identify which of the improvements are property assets which are insured against fire risk.

It is important to note that the VSP is only required to record the land value and improvement value for rating purposes.

Currently residential properties (including lifestyle blocks) have a capped fire service levy. If it is decided to continue with this approach, it represents additional system information required to maintain it.

A review of the differential categories required for fire service levies is required prior to giving a reasonable estimate of annual and transition costs.

7.3 Consideration of legislative changes required

The first consideration is that the current provisions of the LGRA allowing territorial authorities to collect regional council rates need to be replicated for fire service levies.

It has been broadly assumed that the fire service levies will be recovered by a deemed rate based on the improvement value. It is important to note that to ensure ease of collection that any future legislation using the rating process to collect fire service levies must ensure that the levies are a deemed rate similar to the postponement fee added to postponement rates under section 88 (3) of the LGRA.

A legal requirement for all councils, both regional and territorial, is compliance with the LGA. It is assumed that the intention of the proposal on fire service levies by way of rates does not include the fire service being subject to all the same rules, regulations and legislation. As such councils would be acting as agents in the administration and collection of rates and compliance with all aspects relating to rates as set out in both the LGA and LGRA.

Key decisions need to be made therefore in how the fire service levies are to be integrated within the current LGA and LGRA regulations without the fire service being subject to all of the same regulations as councils.

7.4 Development of fire service rating policies (if any)

Currently a number of TAs collect rates on behalf of regional councils. The proposed fire service rate collection process could use the same mechanisms that TAs use to administer and collect regional council rates.

Some regional councils adopt and align their own rating policies with the TAs that administer the rates on their behalf. This cuts down on transaction costs. Any variation to the TAs rating policies required to accommodate variation to the collecting TAs rating policies would be an additional transition cost in terms of the development, integration, administration and training on the application of policy amendments.

It should be noted that the change to collecting fire service levies by rates will inevitably also result in a redistribution of who pays the levies. A transitional rates remission policy may need to be considered in relation to fire service levies in case the setting of rates results in some unforeseen financial hardships. Whenever you introduce new rating tools, there are outliers in the data that produce unintended results. A clear example of unintended result is the extreme redistribution of rates in some areas for the new Auckland City Council that required review and then hit the national head-lines. Even if the \$100 cap is maintained for residential properties, if an annual rates charge for some properties is under \$1,000, this \$100 represents a 10% rate rise or higher. (Examples of such properties would be rural residential properties without infrastructural services).

7.5 *Impact of revaluations*

All TAs currently administer and collect their own rates. Some Regional Councils also administer and collect their own rates, while other Regional Councils sub-contract this to the various TAs in their region.

It should be noted that rating revaluations occur only once every three years. The issue of equity and fairness will need to be addressed as the values of properties in one territorial authority area will not be on the same basis as properties in a territorial authority that has just undertaken a revaluation. The common approach for regional councils to resolve this issue is to use an equalised value approach. The distribution of the liability for rates is calculated using the equalised values and the rate in the dollar requirement uses the unequalised values. This will incur additional valuation costs. If required, the equalised values would have to be provided on a national basis with a potential cost exceeding \$100,000 per annum.

The issue of having to consider equalised values for rateable properties raises the question on how the fire service levies are going to be financially modelled including;

- a. Use current information available: Specify the quantum of fire service levy rates required by Region and calculate the fire service levy rate in the dollar using the councils own equalised values.
- b. Get new information: Collect the national rating information database information from each council; assign equalised values to get the quantum of rates by collecting authority, and then provide the necessary information so that the councils can assign the unequalised rate in the dollar to collect the required rates.

Depending on the valuation system (land or capital) there is a requirement for rating information database (RID) to be updated on a regular basis for building consent information. This process will capture additional buildings that would be subject to fire service levies.

8. Cost of annual processing

8.1 Setting of rates

The setting of the fire service levies would probably come from the fire service advising each of the Councils the intended rates to be charged on all applicable properties. This would be done after the consultation process is complete. Before the 1st of July each year Councils would advise the fire service levy of the estimated revenue that will be generated.

An alternative option is the fire service advises the revenue required and the councils would set the rate in the dollar (or decided targeted rate funding tool) to collect that amount. This would require a revenue budget by region, and targeted rate. This has been discussed in the service provision section.

8.2 Collection

Councils have a variety of due dates for rates payments, and the number of instalments is completely discretionary. Generally Councils will have between two and six instalments annually. If a territorial authority is collecting rates on behalf of a regional council, then there is an agreement between the territorial authority and regional council as to the timing after the penalty date the cash received by the territorial authority is transferred to the regional council. The basis of payment is generally on a cash basis which requires a reconciliation of the amount invoiced, the amount collected, the amount written off and the outstanding amount. It is assumed that this approach would be used.

It is also generally assumed that the majority of rates are collectable. This is not always the case because of multiple ownership of Maori land and the write-off of small values. The issues of multiple ownership of Maori land are complex and generally the uncollectible rates are on unoccupied land. However there are occasions where it is not practicable to collect all rates from the occupied land. Some districts have significant multiple owned Maori land, where other districts may have only very small percentage of total land that is probably owned.

8.3 Impact of remission and postponement policies

Individual councils have both remission and postponement policies which allow for rates to either be remitted or postponed. Generally these amounts are small as a percentage of total rates levied, and therefore it is generally assumed that if Council has a remission or postponement policy that the fire service levies will either be remitted or postponed. The amounts that have remitted or postponed could be notified through the reconciliation process.

9. Estimated costs for a range of typical councils

The set up and annual cost for each territorial authority will vary depending on the complexity of the make-up of the district. The complexity will be based on the percentage of commercial and industrial properties compared with the total number of properties, and the number of existing non-rateable properties. Also the total cost will depend on the number of rating assessments and for an average council I would anticipate the set cost would be between \$25,000 and \$150,000 and the cost to maintain the information, to set and collect the fire service levies by way of rate depending on the complexity of the rating tool selected would be between \$15,000 and \$100,000. This is demonstrated in the table below.

	Rating units		Set up		Annual
Council 1	5,360		\$ 25,000.00		\$ 15,000.00
Council 2	6,176		\$ 25,000.00		\$ 15,000.00
Council 3	14,676		\$ 50,000.00		\$ 40,000.00
Council 4	26,220		\$ 75,000.00		\$ 50,000.00
Council 5	30,512		\$ 80,000.00		\$ 50,000.00
Council 6	54,739		\$ 150,000.00		\$ 100,000.00
Council 5	low number of commercial properties				
Council 6	higher number of commercial properties				

Appendix 1

Assumptions used in the preparation of this report

Currently a number of territorial authorities collect rates on behalf of regional councils. In my analysis I have used the same principal that the fire service levies being proposed to be collected by way of rates, will use the same mechanisms that territorial authorities used to collect regional council rates.

Currently residential properties (including lifestyle blocks) have a capped fire service levy. It is assumed that this approach will continue.

That all properties including exempt properties as listed in schedule 1 of the Local Government (Rating) Act 2002 will be required to be assessed for fire service levies.

Any transitional part-year levies from the existing method will be managed by the insurance companies. The reason for this is that councils set their rates based on information as of 1 July of each year and there is no ability for a council to pro rata a fire service levy based on previous payments.

That territorial authorities will be collecting fire service levies, as opposed to regional councils who may collect their own rates.

That the appropriate legislative changes are made that treat fire service levies as a targeted rate and the provisions of schedule 10 clauses 15 & 20 of the Local Government Act 2002 are amended to reflect that fire services levies are a targeted rate collected by a territorial authority.

That the current provisions of the Local Government (Rating) Act 2002 allowing territorial authorities to collect regional council rates are replicated for fire service levies.

Appendix 2

Rating valuation rules 2008 1 October 2002

District Valuation Rolls (DVR)

Section 2.1 of the Rating valuation rules contains the following statement:

Every DVR must contain the following information for every rating unit within the district:

- (a) certificate of title reference, where applicable
- (b) name of owner or owners
- (c) name of ratepayer or ratepayers
- (d) situation address of the rating unit, where applicable
- (e) valuation reference number
- (f) legal description, where applicable
- (g) land area, where applicable
- (h) effective date of valuation
- (i) rateable value or values. Where the value of improvements is the rateable value, capital value and land value must also be displayed
- (j) where capital value or annual value is maintained, nature of improvements, including a description of the type of improvements on a property (e.g. dwelling, garage, other buildings, other improvements)

Section 2.2 Supporting information

In addition to the information required by rule 2.1, a territorial authority must maintain the following supporting information for every rating unit within the district:

- (a) postal address for the owner
- (b) postal address for the ratepayer
- (c) territorial authority number
- (d) property category
- (e) land use data
- (f) mass appraisal data, for residential and lifestyle properties only
- (g) ownership details, in accordance with Appendix B
- (h) production for economic dairy and pastoral properties only
- (i) sale details, in accordance with Appendix A.2 and Appendix G

- (j) sales group
- (k) history of changes, i.e. a record of all alterations made to the DVR
- (l) for annual value assessments, the rentals used for the annual value calculation, and the number of bedrooms
- (m) field notes for valuers in accordance with rule 2.3.

Appendix 3

Extract of Schedule 1 Local Government (Rating) Act 2002 as amended.

Land fully non-rateable (partial list)

1 Land forming part of—

- (a) a National Park under the National Parks Act 1980:
- (b) a reserve under the Reserves Act 1977:
- (c) a conservation area under the Conservation Act 1987:
- (d) a wildlife management reserve, wildlife refuge, or wildlife sanctuary under the Wildlife Act 1953.

3 Land that is—

- (a) owned by a society or association of persons (whether incorporated or not); and
- (b) used for conservation or preservation purposes; and
- (c) not used for private pecuniary profit; and
- (d) able to be accessed by the general public.

4 Land used by a local authority—

- (a) for a public garden, reserve, or children's playground:
- (b) for games and sports (except galloping races, harness races, or greyhound races):
- (c) for a public hall, library, athenaeum, museum, art gallery, or other similar institution:
- (d) for public baths, swimming baths, bathhouses, or sanitary conveniences:
- (e) for soil conservation and rivers control purposes, being land for which no revenue is received.

5 Land owned or used by, and for the purposes of,—

- (a) the New Zealand Historic Places Trust:
- (b) the Queen Elizabeth the Second National Trust:
- (c) the Museum of New Zealand Te Papa Tongarewa Board:
- (d) the charitable trust known as Children's Health Camps—The New Zealand Foundation for Child and Family Health and Development:
- (e) the Royal New Zealand Foundation of the Blind, except as an endowment.

6 Land owned or used by, and for the purposes of,—

(a) a special school established under section 98(1) of the Education Act 1964:

7 Land owned or used by, and for the purposes of, an institution for the instruction and training of students in theology and associated subjects, being land that does not exceed 1.5 hectares for any one institution.

8 Land owned or used by a district health board and used to provide health or related services (including living accommodation for hospital purposes and child welfare homes).

9 Land used solely or principally—

(a) as a place of religious worship:

(b) for a Sunday or Sabbath school or other form of religious education and not used for private pecuniary profit.

10 Land that does not exceed 2 hectares and that is used as—

(a) a cemetery, crematorium, or burial ground, within the meaning of section 2(1) of the Burial and Cremation Act 1964 (except a burial ground or crematorium that is owned and conducted for private pecuniary profit):

(b) a Māori burial ground

11 Māori customary land.

12 Land that is set apart under section 338 of Te Ture Whenua Maori Act 1993 or any corresponding former provision of that Act and—

(a) that is used for the purposes of a marae or meeting place and that does not exceed 2 hectares; or

(b) that is a Māori reservation under section 340 of that Act.

13 Māori freehold land that does not exceed 2 hectares and on which a Māori meeting house is erected.

14 Māori freehold land that is, for the time being, non-rateable by virtue of an Order in Council made under section 116 of this Act, to the extent specified in the order.

18 Land vested in and occupied by the Crown, or by any airport authority, that is—

(a) within the operational area of an aerodrome; and

(b) used solely or principally—

(i) for the landing, departure, or movement of aircraft; or

(ii) for the loading of goods and passengers on to or from aircraft.

19 Land occupied by the New Zealand Railways Corporation, or by a railway operator, that is—

(a) part of the permanent way of the railway, being land on which is sited any railway line together with contiguous areas of land that are occupied incidentally and not otherwise used; or

(b) used, solely or principally, for the loading or unloading of goods or passengers on to or from trains situated on the railway line.

20 Land used as a wharf.

21 Land used or occupied by, or for the purposes of, an institution that is carried on for the free maintenance or relief of persons in need, being land that does not exceed 1.5 hectares for any one institution.

22 Land on which any vice-regal residence or Parliament building is situated.

25 Structures that are—

(a) fixed to, or under, or over any part of the common marine and coastal area; and

(b) owned, or deemed to be owned, by the Crown under section 18 or 19 of the Marine and Coastal Area (Takutai Moana) Act 2011.