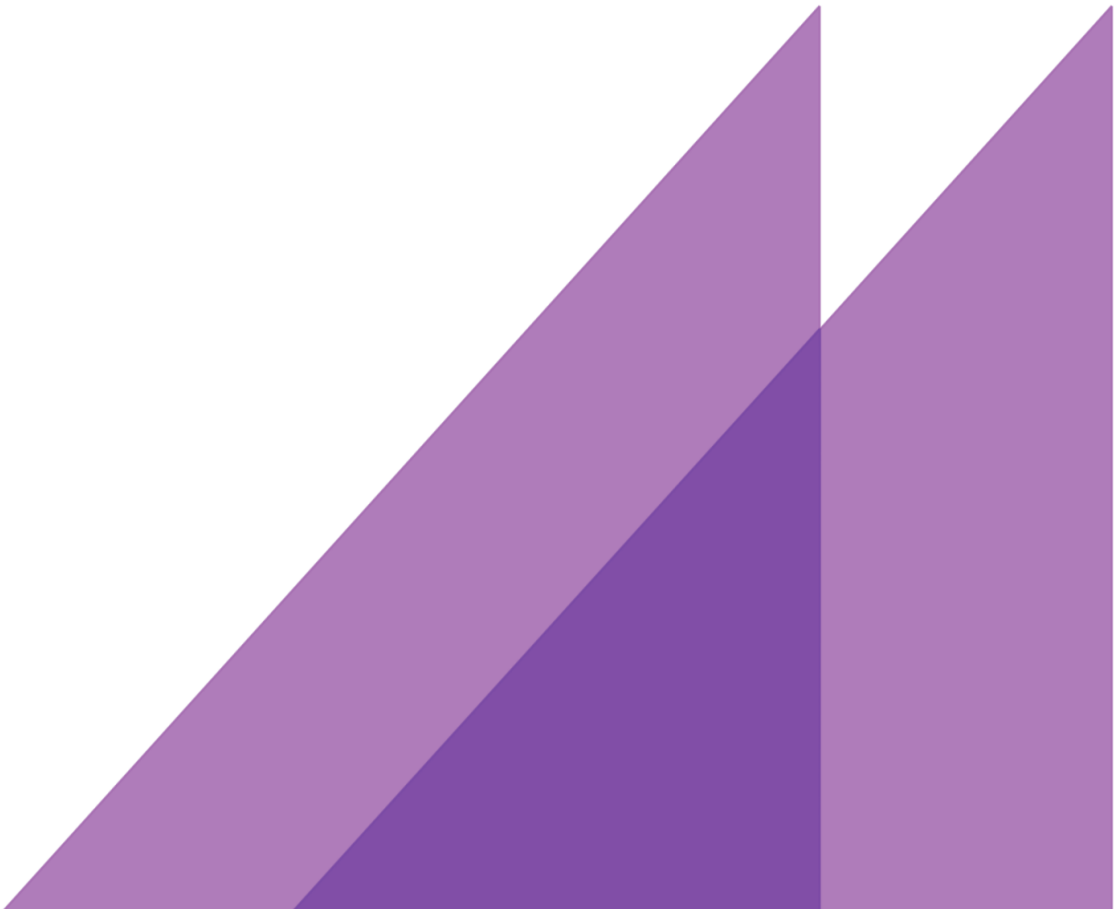
ACIL ALLEN CONSULTING

REPORT TO
RAC WESTERN AUSTRALIA

AUGUST 2014

MOTORIST TAXATION REVENUE AND ROAD SPENDING

WESTERN AUSTRALIA



ACIL ALLEN CONSULTING PTY LTD
ABN 68 102 652 148

LEVEL FIFTEEN
127 CREEK STREET
BRISBANE QLD 4000
AUSTRALIA
T+61 7 3009 8700
F+61 7 3009 8799

LEVEL TWO
33 AINSLIE PLACE
CAN BERRA ACT 2600
AUSTRALIA
T+61 2 6103 8200
F+61 2 6103 8233

LEVEL NINE
60 COLLINS STREET
MELBOURNE VIC 3000
AUSTRALIA
T+61 3 8650 6000
F+61 3 9654 6363

LEVEL ONE
50 PITT STREET
SYDNEY NSW 2000
AUSTRALIA
T+61 2 8272 5100
F+61 2 9247 2455

SUITE C2 CENTA BUILDING
118 RAILWAY STREET
WEST PERTH WA 6005
AUSTRALIA
T+61 8 9449 9600
F+61 8 9322 3955

ACILALLEN.COM.AU

RELIANCE AND DISCLAIMER

THE PROFESSIONAL ANALYSIS AND ADVICE IN THIS REPORT HAS BEEN PREPARED BY ACIL ALLEN CONSULTING FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES TO WHOM IT IS ADDRESSED (THE ADDRESSEE) AND FOR THE PURPOSES SPECIFIED IN IT. THIS REPORT IS SUPPLIED IN GOOD FAITH AND REFLECTS THE KNOWLEDGE, EXPERTISE AND EXPERIENCE OF THE CONSULTANTS INVOLVED. THE REPORT MUST NOT BE PUBLISHED, QUOTED OR DISSEMINATED TO ANY OTHER PARTY WITHOUT ACIL ALLEN CONSULTING'S PRIOR WRITTEN CONSENT. ACIL ALLEN CONSULTING ACCEPTS NO RESPONSIBILITY WHATSOEVER FOR ANY LOSS OCCASIONED BY ANY PERSON ACTING OR REFRAINING FROM ACTION AS A RESULT OF RELIANCE ON THE REPORT, OTHER THAN THE ADDRESSEE.

IN CONDUCTING THE ANALYSIS IN THIS REPORT ACIL ALLEN CONSULTING HAS ENDEAVOURED TO USE WHAT IT CONSIDERS IS THE BEST INFORMATION AVAILABLE AT THE DATE OF PUBLICATION, INCLUDING INFORMATION SUPPLIED BY THE ADDRESSEE. UNLESS STATED OTHERWISE, ACIL ALLEN CONSULTING DOES NOT WARRANT THE ACCURACY OF ANY FORECAST OR PREDICTION IN THE REPORT. ALTHOUGH ACIL ALLEN CONSULTING EXERCISES REASONABLE CARE WHEN MAKING FORECASTS OR PREDICTIONS, FACTORS IN THE PROCESS, SUCH AS FUTURE MARKET BEHAVIOUR, ARE INHERENTLY UNCERTAIN AND CANNOT BE FORECAST OR PREDICTED RELIABLY.

ACIL ALLEN CONSULTING SHALL NOT BE LIABLE IN RESPECT OF ANY CLAIM ARISING OUT OF THE FAILURE OF A CLIENT INVESTMENT TO PERFORM TO THE ADVANTAGE OF THE CLIENT OR TO THE ADVANTAGE OF THE CLIENT TO THE DEGREE SUGGESTED OR ASSUMED IN ANY ADVICE OR FORECAST GIVEN BY ACIL ALLEN CONSULTING.

© Acil Allen Consulting 2014

Contents

List of figures

List of tables

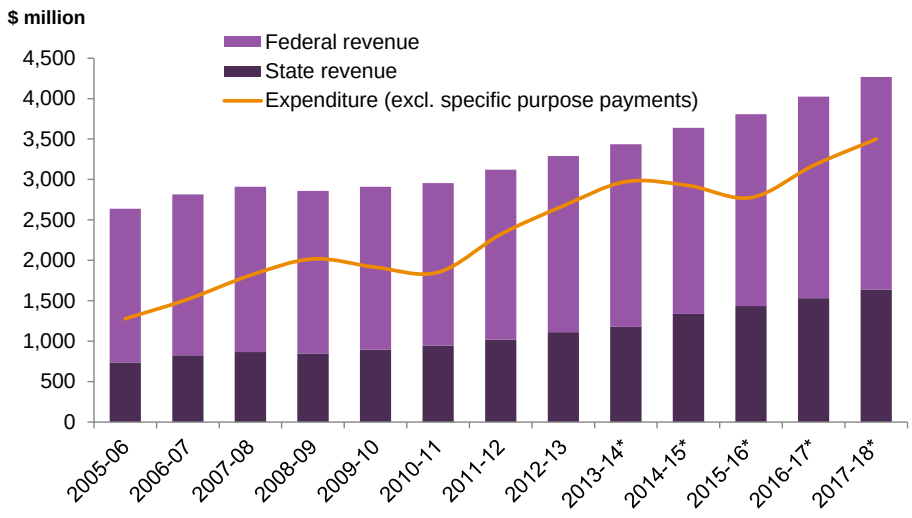
Key findings

This report has been prepared by ACIL Allen Consulting (ACIL Allen) for RAC WA. The report is an update of the 2013 report for the RAC WA and includes the latest figures from the Western Australian and Federal Government budgets. The report contains estimates of government revenues collected from motorists in Western Australia and spending by governments on Western Australian roads. Key findings include, based on the latest available budget estimates include the following:

- The Western Australian Government collected approximately $1.2 billion in fees (license and registration fees, recording fees and heavy vehicle permits) from Western Australian motorists in 2013-14.
- The Federal Government collected approximately $2.3 billion from motor vehicle related taxes in Western Australia in 2013-14. This revenue is mainly generated by GST paid on motor vehicles and excise duty on fuel.
- Total spending on roads in Western Australia in 2013-14 is estimated to be around $2.9 billion. This figure has increased in recent years, and represents around 84 per cent of the revenues collected by the Federal and State governments from Western Australian motorists (in 2006-07, the ratio was approximately 50 per cent).
- The State Government spends more on roads than it receives from motorists, but the Federal Government does not: approximately 41 cents in every dollar of revenue collected in 2013-14 by the Federal Government from Western Australian motorists will be returned to the State for spending on roads.

An overview of the balance between government spending and revenue is provided in Figure ES 1.

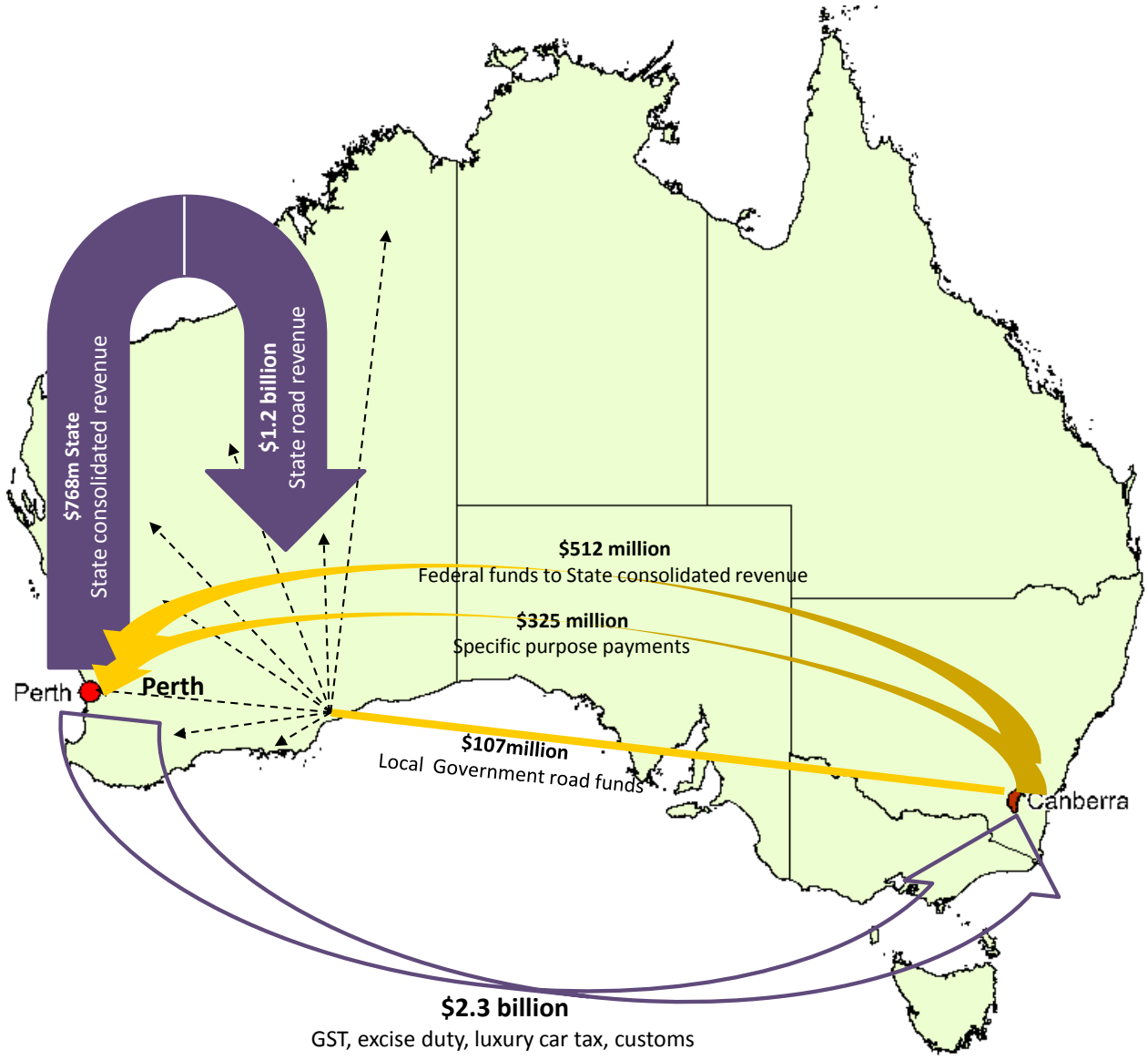
Figure ES 1 **Vehicle-related government revenue and road expenditure, historic and projected**



*Note:*Forecast*
Source: ACIL Allen analysis

The relationships between collection and spending at the different levels of government are depicted in Figure ES 2, and discussed in detail in Chapter 4.

Figure ES 2 **Detailed vehicle related government revenue and road expenditure, 2013-14 (rounded)**



1 Introduction

This report is the latest in a series of reports prepared by ACIL Allen for the RACWA to identify the quantum fees and taxes paid by motorists in Western Australia and the expenditure on roads and activities directly related to road networks in Western Australia. The report contains analyses of data from the 2014-15 Federal and State Government Budgets.

The remainder of the report is structured as follows:

- Chapter 2 contains estimates of government revenue that is generated by road-related activities in Western Australia. Specifically, the chapter contains calculations of the amount of revenue collected in fuel taxes, vehicle registration fees and other government charges associated with vehicle acquisition, operation and ownership in Western Australia.
- Chapter 3 contains estimates of total government expenditure on road infrastructure in Western Australia.
- Chapter 4 contains key conclusions and the identification of relationships between State Government and Federal Government revenue and expenditure as it pertains to Western Australia.

2 Government revenue

Motorists pay a range of fees and taxes associated with their vehicle. Vehicle ownership related fees and duties are mostly collected by the State Government whereas taxes generated by the usage of vehicles are collected by the Commonwealth Government. This chapter contains ACIL Allen's estimates of the total motor vehicle related government revenue generated from Western Australian motorists.

2.1 State Government revenue

The State Government collects various fees associated with motor vehicles, including:

- Vehicle licence duties: collected by the State Government when a vehicle is licensed or a vehicle licence is transferred
- Motor vehicle registrations: fees collected by the State Government for the ongoing registration of motor vehicles, and
- Other fees: include taxes from oversized motor vehicles and motor vehicle recording fees.

Table 1 depicts historic and projected State Government revenue for the 2005-06 to 2017-18 period.

Table 1 **State Government revenue, historic and projected**

Financial year	Vehicle licence duty	Motor vehicle registrations	Other	Total	Total
	($ million)	($ million)	($ million)	($ million)	(%)
2005-06	342	361	33	736	
2006-07	393	396	36	825	*12.1*
2007-08	393	434	39	866	*5.0*
2008-09	318	486	44	848	*-2.1*
2009-10	332	516	48	896	*5.7*
2010-11	338	557	51	946	*5.6*
2011-12	367	599	53	1,019	*7.7*
2012-13	404	650	56	1,110	*8.9*
2013-14*	396	725	57	1,178	*6.1*
2014-15*	442	834	60	1,336	*13.4*
2015-16*	489	879	66	1,434	*7.3*
2016-17*	536	924	71	1,531	*6.8*
2017-18*	587	972	78	1,637	*6.9*

***** Forecast by the Department of Treasury and Finance (Western Australia).
Note: Budget estimates may have varied from those of previous years.
Source: Department of Treasury and Finance Western Australia: Budget Paper No. 3 (2007-08 to 2014-15).

2.2 Federal Government revenue

Federal Government revenue sources include:

- GST: raised from motor vehicle related transactions such as the purchase of motor vehicles and fuel

- Luxury car tax: paid on the purchase of new cars for which the value exceeds the Government's luxury threshold[1]
- Excise duty petrol and diesel: taxes paid on the purchase of petrol and diesel, and
- Passenger motor vehicle customs: customs duties are paid on imported vehicles on entry into Australia.

Estimating the amount of Federal Government revenue associated with motor vehicles in Western Australia involves some degree of uncertainty as the Federal Budget does not report on the shares of tax revenues generated by each state and territory. The methodology used by ACIL Allen to estimate Federal Government revenue is detailed in Appendix A.

2.3 Total Federal Government revenues

The total motor vehicle related revenue collected by the Federal Government is depicted in Table 1, as are ACIL Allen's estimates of Federal Government revenue that is collected from Western Australian motorists.

[1] Current thresholds are $75,375 for fuel efficient vehicles and $60,316 for other vehicles. See, https://www.ato.gov.au/Rates/Luxury-car-tax-rate-and-thresholds/, accessed 13 June 2014.

Table 1 **Federal revenue generated in Australia and WA, historic and projected**

Financial year	Petrol associated GST	New vehicle associated GST	Fleet related GST	Luxury car tax	Excise duty petrol**	Excise duty diesel	Passenger MV customs	Total
Federal revenue generated ($ million)								
2005-06	1,515	2,294	1,686	320	7,280	6,240	1,258	20,593
2006-07	1,663	2,517	1,850	340	7,310	6,420	1,300	21,399
2007-08	1,751	2,651	1,949	464	6,959	6,674	1,400	21,848
2008-09	1,886	2,855	2,099	384	6,461	6,687	1,135	21,507
2009-10	1,812	2,742	2,016	499	6,339	6,886	1,226	21,520
2010-11	2,008	3,039	2,234	540	5,910	7,080	600	21,410
2011-12	1,949	2,950	2,169	435	6,036	8,231	805	22,575
2012-13	2,065	3,126	2,298	434	5,990	8,594	892	23,400
2013-14*	2,168	3,281	2,412	430	6,000	8,990	920	24,201
2014-15*	2,294	3,473	2,553	360	5,950	9,250	820	24,699
2015-16*	2,435	3,686	2,709	310	6,150	9,610	610	25,510
2016-17*	2,581	3,907	2,872	330	6,450	10,020	630	26,789
2017-18*	2,724	4,124	3,031	360	6,850	10,490	660	28,239
Generated in Western Australia ($ million)								
2005-06	152	229	196	49	618	530	127	1,901
2006-07	166	251	215	53	621	545	138	1,990
2007-08	175	265	227	72	591	567	148	2,045
2008-09	189	285	244	59	549	568	117	2,011
2009-10	181	274	235	77	538	585	123	2,012
2010-11	201	303	260	83	502	601	59	2,009
2011-12	195	295	253	67	513	699	80	2,101
2012-13	207	312	268	67	509	730	89	2,181
2013-14*	217	328	281	66	509	763	92	2,256
2014-15*	229	347	297	56	505	785	82	2,302
2015-16*	243	368	315	48	522	816	61	2,374
2016-17*	258	390	334	51	548	851	63	2,495
2017-18*	272	412	353	56	582	891	66	2,631

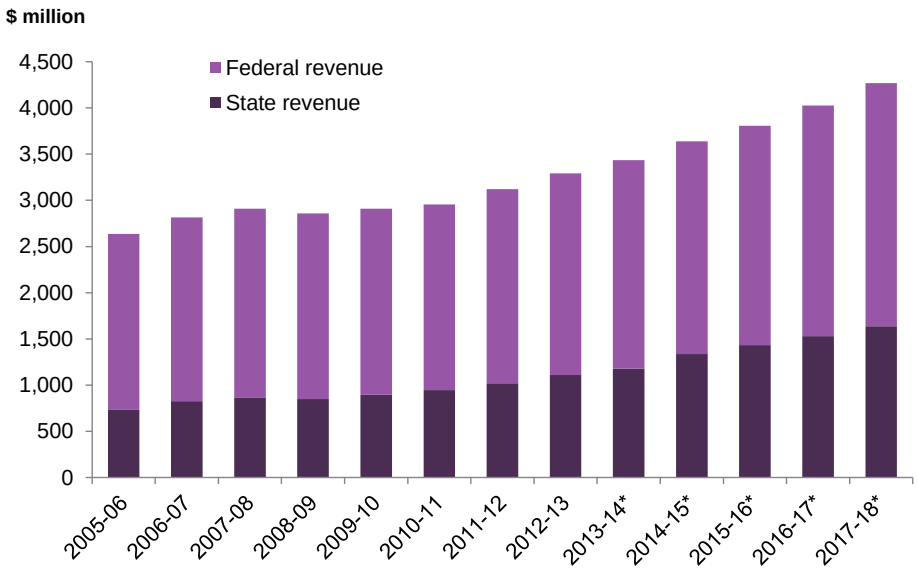
* Forecast by the Federal Government.
** Excise duty estimates reported in the table have been sourced from the 2014-15 Federal Budget. The Budget estimates have been prepared on the basis that, from 2014-15 onwards the rate of fuel excise will be indexed in accordance with inflation. At the time of writing, the policy of indexation had yet to be enacted as law.
Note: Budget estimates may have varied from those of previous years.

Data source: ACIL Allen analysis of Australian Government: Budgets 2006-07 to 2014-15.

2.4 Total revenue

Figure 1 depicts total Federal and State Government revenue collected from Western Australian motorists.

Figure 1 **Vehicle related government revenue, historic and projected**



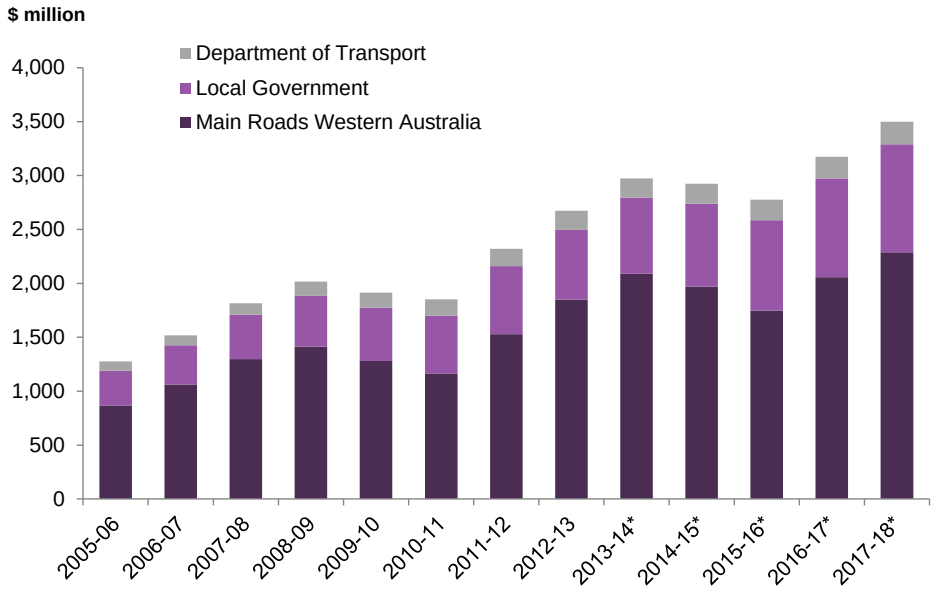
Note: * Forecast
Source: ACIL Allen analysis

3 Government expenditure

While a large share of revenue is collected by the Commonwealth Government, it is the State Government and local governments who are responsible for the provision of motoring-related infrastructure and services in Western Australia. The Federal Government does not spend directly on Western Australian motoring infrastructure and services but does transfer its tax revenue to the Western Australian Government either as part of transfers for specific projects or as block grants to State Government consolidated revenue.

Total road-related expenditure in Western Australia by State Government agency and local government is depicted in Figure 2. At a State Government level, road-related spending is undertaken by Main Roads Western Australia and by the Department of Transport. The largest shares of expenditure are attributable to Main Roads Western Australia and local governments. The share of expenditure attributable to the Department of Transport is relatively low.

Figure 2 **Total spending on roads in Western Australia by agency**



Note: * Forecast
Source: ACIL Allen analysis

3.1 Main Roads Western Australia

Main Roads Western Australia is responsible for the provision and maintenance of Western Australia's highways and main roads, and also for the provision of road-related services. These services are described in the sections below.[2]

[2] Expenditure by the Office of Road Safety has not been captured in this report. The majority of expenditure undertaken by the Office of Road Safety is funded from traffic fine revenues. Traffic fines are designed to change behaviour, rather than to fund roads.

Road system management

The objective of this program is to optimise real time management of the network, provide traveller information and support delivery of projects. Works include activities of the traffic operation centre, heavy vehicle operation activities, metropolitan and regional road asset management, road user and customer services, emergency telephones, street lighting, intelligent transport systems, traffic signals and road advisory services, such as traffic alerts, to the community.[3]

Road efficiency improvements

The objective of this program is to improve the efficiency, capacity and utilisation of the existing road network. Improvements include providing a road of improved standard through geometric improvements, road widening, bridge strengthening and intersection improvements including roundabouts and interchanges.

Infrastructure for community access

The objective of this program is to provide infrastructure that will improve personal mobility and community access, including increasing the quality of access where appropriate, providing levels of access commensurate with community expectations and meeting minimal levels of appropriate access. Works include providing access to remote communities, pedestrian facilities, cyclist facilities, vulnerable road users' facilities, road user amenities, public transport integration and improvements such as new bridges to address flood closures.

Infrastructure for state development

The objective of this program is to expand the road network in accordance with government transport and land use strategies that will facilitate the economic and regional development of the State. These works are mostly aimed at increasing the capacity of the road network through the addition of new links, which include town bypasses.

Road safety

The objective of this program, which is separate from the Office of Road Safety, is to reduce the road fatality rate, minimise road factors contributing to road trauma and reduce the serious crash injury rate. Works undertaken have safety as the foremost factor and include the State and National Black Spot programs and various projects that improve safety on the existing road network including passing lanes.

[3] Main Roads Western Australia, Annual Reports (various editions), and website, https://www.mainroads.wa.gov.au.

3.1.2 Total expenditure by Main Roads Western Australia

Annual levels of expenditure by Main Roads Western Australia are provided in Table 2.

Table 2 **Main Roads Western Australia expenditure, historic and projected ($ million)**

Financial year	Road safety	Road system management	Road efficiency	Infrastructure for community access	Road network maintenance	Infrastructure for State development	Total
2005-06	76	76	69	102	410	134	867
2006-07	68	79	157	135	410	213	1,062
2007-08	81	76	158	105	450	426	1,297
2008-09	141	80	202	97	475	418	1,413
2009-10	166	92	202	32	502	286	1,282
2010-11	117	86	225	41	582	115	1,166
2011-12	132	119	461	35	614	167	1,529
2012-13	129	108	428	56	750	286	1,757
2013-14*	148	148	610	53	732	316	2,007
2014-15*	111	153	786	25	735	60	1,870
2015-16*	104	148	485	27	778	155	1,697
2016-17*	116	149	480	45	835	387	2,012
2017-18*	120	145	484	27	901	583	2,260

* Forecast by Main Roads Western Australia.
Note: Budget estimates may have varied from those of previous years.
Source: Government of Western Australia: Budgets 2006-07 to 2014-15

3.2 Local governments

Local roads account for about 80 per cent of the total road network. Local governments spend a large share of their budgets on preserving, repairing, upgrading and constructing roads. Approximately 18 per cent of local government expenditure is funded by the State Government.[4] This proportion of expenditure has been discounted from the figures reported below as it has already been included in the estimates of expenditure by Main Roads Western Australia. Local government expenditure is detailed in Table 3.

[4] Western Australian Local Government Association, 2012, *Report on local government road assets and expenditure 10/11, p. 21.*

Table 3 **Local government expenditure, historic and projected**

Financial year	Preservation of existing roads		Upgrades and construction		Flood damage		Total	
	$ million	*% share of total*	$ million	*% share of total*	$ million	*% share of total*	$ million	*Annual growth %*
2005-06	219	*67.8*	103	*31.9*	1	*0.3*	323	
2006-07	254	*69.6*	111	*30.4*			365	*13.0*
2007-08	278	*67.1*	136	*32.9*			414	*13.4*
2008-09	311	*66.2*	159	*33.8*			470	*13.5*
2009-10	342	*69.5*	150	*30.5*			492	*4.7*
2010-11	354	*66.3*	160	*30.0*	21	*3.9*	534	*8.5*
2011-12	445	*70.6*	148	*23.5*	37	*5.9*	630	*18.0*
2012-13	487	*75.3*	160	*24.7*			647	*2.7*
2013-14*	533	*75.5*	173	*24.5*			706	*9.1*
2014-15*	583	*75.7*	187	*24.3*			770	*9.1*
2015-16*	639	*76.1*	202	*24.0*			840	*9.1*
2016-17*	699	*76.2*	218	*23.8*			917	*9.2*
2017-18*	766	*76.5*	235	*23.5*			1,001	*9.2*

* ACIL Allen extrapolation.

Note: Flood damage related expenditure is included in preservation of roads after 2005-06, except where specific data could be found. Also due to rounding some percentages may not add to 100.

Source: (WALGA, 2012) (WALGA, 2013)

3.3 Department of Transport

The Department of Transport has a number of roles associated with transport in general, but plays only a minor role in aspects of transport that are directly related to infrastructure delivery. The Department's main responsibility is monitoring and enforcing the registration of motor vehicles and licensing of drivers. Such services are important for road safety and hence are considered to fall into the classification of road-related expenditure. Table 5 contains estimates of expenditure undertaken by the Department of Transport.

Table 4 **Department of Transport expenditure, historic and projected ($ million)**

Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*	2014-15*	2015-16*	2016-17*	2017-18*
	134	140	151	161	176	177	184	189	201	209

* Forecast by the Government of Western Australia

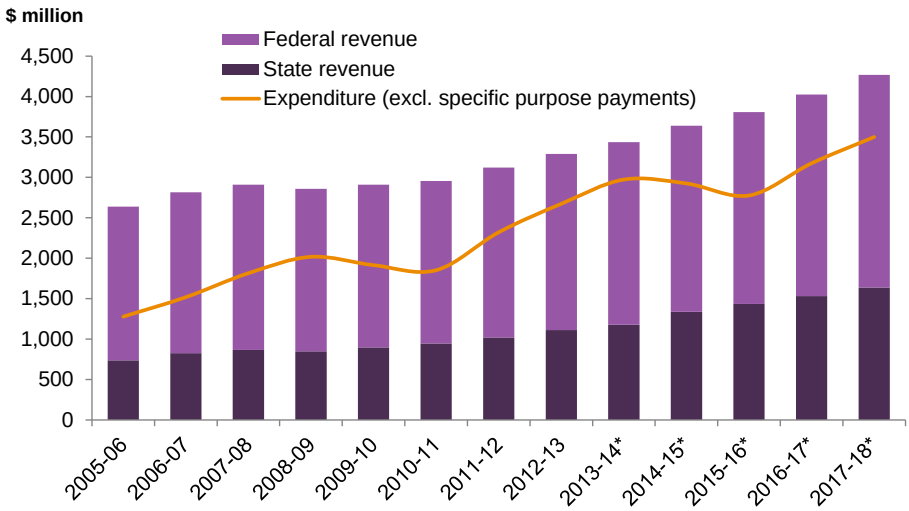
Data source: Government of Western Australia: Budgets 2008-09 to 2014-15

4 Total revenue and expenditure

ACIL Allen estimates that in 2013-14, total road-related expenditure in Western Australia will equate to about $2.9 billion. Also in 2013-14, total Federal and State Government revenue collected from Western Australian motorists will equate to about $3.4 billion. The ratio between road-related expenditure and motorist-related revenue for 2013-14 was approximately 84 per cent. Updated figures suggest that the 2012-13 ratio was 78 per cent.

Budget forecasts suggest that the existing level of road-related expenditure in Western Australia will be maintained through to 2017-18 and that the ratio of expenditure to revenue will fluctuate between 70 and 80 per cent over the forecast period (Figure 3).[5]

Figure 3 **Vehicle related government revenue and road expenditure, historic and projected**



Note: * Forecast
Source: ACIL Allen analysis

4.1 Major road projects

In the 2013 edition of this report, road-related expenditure was shown as peaking in 2012-13 and then declining over the three years to 2015-16. This was attributed to the majority of Gateway project funding being spent in 2012-13 and 2013-14. However, the 2014-15 State Budget contains allocations for expenditure on the Gateway project of $337 million in 2013-14; $296 million in 2014-15; and $251 million in 2015-16 and 2016-17. This shift in expenditure is one of the contributing factors towards the maintenance of a relatively high level of road-related expenditure in the forward years (as depicted in Figure 3).

In addition to this, there is an estimated $1.7 billion to be spent as part of a series of jointly funded State and Federal Government projects. A substantive portion of this $1.7 billion

[5] Specific purpose payments from the Federal Government to the State Government have not been included in the reported figures as allocations from special purpose payments are not guaranteed sources of revenue.

has been allocated to be spent in 2016-17 and 2017-18. These projects are detailed in the 2014-15 State Government Budget, and include:

- *Great Northern Highway- Muchea to Wubin Stage 2* - estimated total cost of $385 million, of which $81 million is allocated to 2014-15 and $273 million is allocated to 2015-16 through to 2017-18
- *North West Coastal Highway- Minilya to Barradale* - estimated total cost of $218 million, of which $72 million is allocated to 2014-15 and $140 million is allocated to the following three years to 2017-18
- *North Link WA- Swan Valley Section* - estimated total cost of $845 million, of which $569 million will occur in 2016-17 and 2017-18, and
- *North Link WA- Tonkin Highway Grade Separations* - estimated total cost of $281 million with the majority of spend to take place in 2016-17 and 2017-18.

As a result of these jointly funded projects, the values of specific purpose payments are expected to increase in the years beyond 2013-14. Other matters of relevance to the funding of road-related infrastructure include:

- In 2014-15, the Federal Government will introduce the Infrastructure Growth Package to provide funding for additional investment in high quality economic infrastructure. As part of this program, an additional $965 million over five years has been allocated to Western Australia so that it can be spent on investment in road projects and programs such as the black spot and roads to recovery programs. This additional funding is the reason for a higher transfer figure for specific purposes in the coming years. Around 65 per cent of the New Investment funding is expected to be spent in 2016-17 and 2017-18.[6]
- Another component of the Infrastructure Growth Package that may have an influence on Western Australian roads funding is the Asset Recycling Initiative. This initiative will provide funding of $5 billion over five years in the form of financial incentives to jurisdictions that sell assets and reinvest the sale proceeds into new productive infrastructure. The program will work on a first come, first served basis. Note however, this initiative is applicable to all infrastructures.

4.2 Conclusions

A total of $2.9 billion was spent on Western Australian roads in 2013-14, of which, approximately 68 per cent was attributable to State Government

State Government expenditure on Western Australian roads is typically greater than the value of revenue that it collects from Western Australian motorists. In 2013-14, the State Government spent approximately $2.0 billion[7] on Western Australian roads and collected approximately $1.2 billion from Western Australian motorists.

In contrast, Commonwealth Government expenditure on Western Australian roads is typically less than the value of revenue that it collects from Western Australian motorists. In 2013-14, the Commonwealth Government spent approximately $944 million on Western Australian roads[8] and collected approximately $2.3 billion from Western Australian motorists.[9] In effect, for every dollar of revenue collected by the Commonwealth

[6] Information on how this money is to be spent is not provided in the Federal Budget Papers. Details of annual allocation of funds are available in the 2014-15 Federal Budget, Budget Paper No. 3, p. 66.

[7] Made up of $1.2 billion of direct funds and $768 million of own source consolidated revenue.

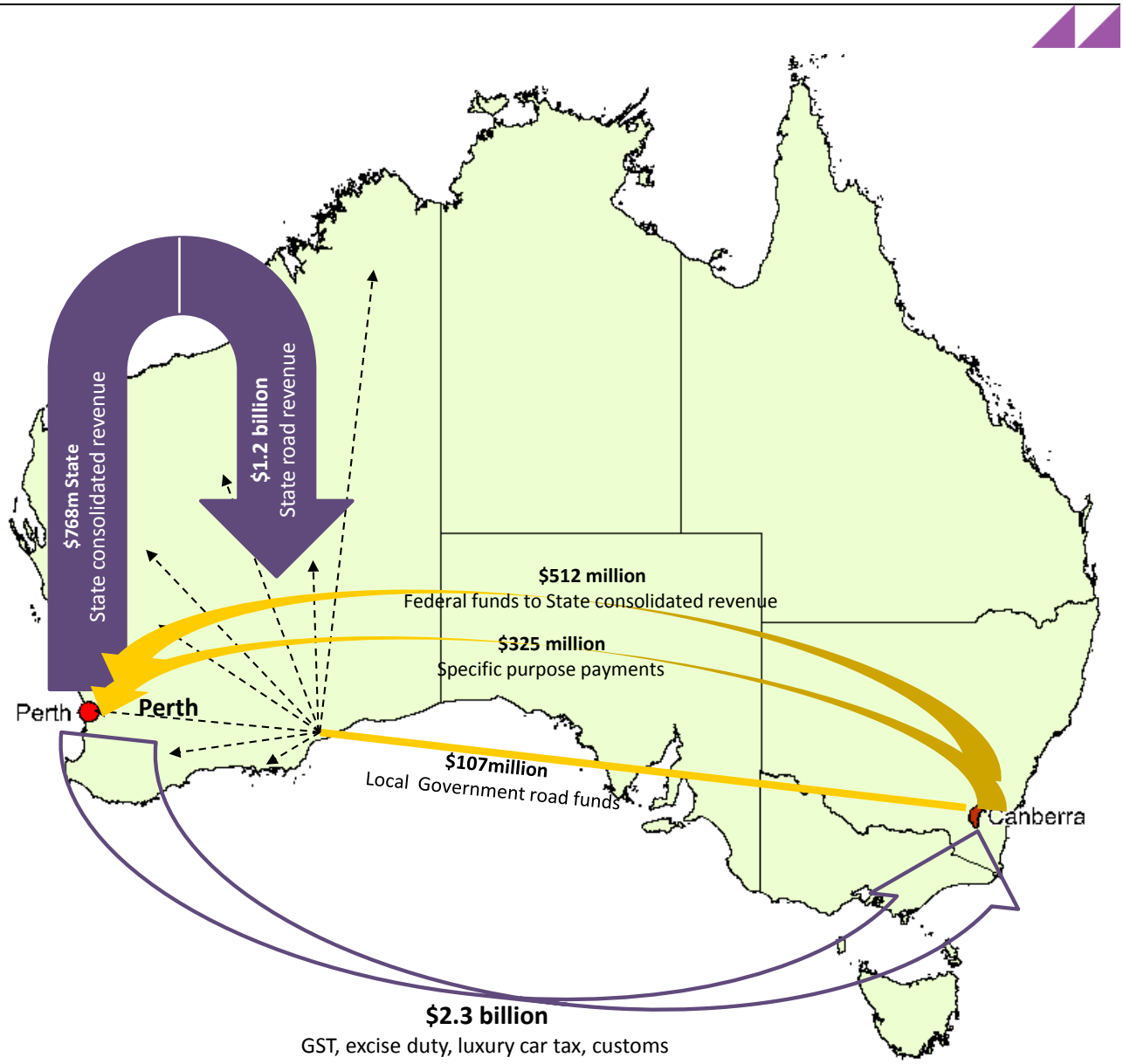
[8] Made up of direct spending of $325 million in special purpose payments; $107 million in the Local Road Financial Assistance Grant; and $512 million as a result of the Federal Government contribution to State consolidated revenue.

[9] Collected from GST, excise duty, luxury car tax and customs duties.

Government from Western Australian motorists, approximately 41 cents is returned to Western Australia as Commonwealth Government expenditure on Western Australian roads

These revenue and expenditure flows are depicted diagrammatically in Figure 4. A detailed explanation of how the estimates in Figure have been derived is provided in Appendix A.

Figure 4 **Detailed vehicle related government revenue and road expenditure, 2013-14 (rounded)**



5 Bibliography

ABS. (2012-13). *Cat. 5512.0: Government Finance Statistics, Australia.* Canberra, WA: Australian Bureau of Statistics.

Australian Bureau of Agriculture and Resources Economics and Science. (2009). *Australian Consumption of Petroleum Products.*

Australian Bureau of Statistics. (2002). *Cat. 9208.0: Survey of Motor Vehicle Use.*

Australian Bureau of Statistics. (2005). *Cat. 5514.0: Australian System of Government Finance Statistics: Concepts, Sources and Methods.*

Australian Bureau of Statistics. (2005). *Cat. 6461.0: Australian Consumer Price Index: Concepts, Sources and Methods.*

Australian Bureau of Statistics. (2012). *Car Census.*

Australian Bureau of Statistics. (2013). *Cat. 9314: Sales of New Motor Vehicles.*

Australian Government. (2005-06). *Budget: Financial Statements.*

Australian Government. (2006-07). *Budget: Financial Statements.*

Australian Government. (2007-08). *Budget: Financial Statements.*

Australian Government. (2008-09). *Budget: Financial Statements.*

Australian Government. (2009-10). *Budget: Financial Statements.*

Australian Government. (2010-11). *Budget: Financial Statements.*

Australian Government. (2011-12). *Budget: Financial Statements.*

Australian Government. (2012-13). *Budget: Financial Statements.*

Australian Government. (2013-14). *Budget: Financial Statements.*

Australian Government. (2014-15). *Budget: Financial Statements.*

Bureau of Infrastructure, Transport and Regional Economics. (2009). *Australian Transport Statistics Yearbook.*

Department of Infrastructure and Regional Development. (2014). *Financial Assistance Grants to Local Government*. Retrieved June 10, 2014, from Department of Infrastructure and Regional Development: http://www.regional.gov.au/local/assistance/

The Government of Western Australia. (2005-06). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2006-07). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2007-08). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2008-09). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2009-10). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2010-11). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2011-12). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2012-13). *Budget Paper No.2 & 3.*

The Government of Western Australia. (2013-14). *Budget Paper No. 2 & 3.*

The Government of Western Australia. (2014-15). *Budget paper No. 2 & 3.*

WALGA. (2012). *Report on local government road assets and expenditure 10/11.* Perth, WA: Western Australian Local Government Association.

WALGA. (2013). *Report on local government road assets and expenditure 11/12.* Perth, WA: Western Australian Local Government Association.

Appendix A Methodology

Below is the apportioning methodology for each motorist related revenue stream, as discussed in Chapter 2.

GST

The GST is apportioned in two steps:

1. Calculation of the amount of GST raised from motor vehicle related transactions, and
2. Determination of Western Australia's contribution to each category.

GST contribution of motor vehicle related transactions

The GST contribution of motor vehicle related transactions is determined by applying the weights of motor vehicle related groups from the Consumer Price Index (CPI) to the total GST revenue. The group specific weight is estimated by the Australian Bureau of Statistics and measures what share of its income an average household spends on a certain good. Therefore it is a good proxy for the share of total spending on this good in Australia and thus the generated GST revenue. We adjusted the weights by excluding GST free products such as dairy products, bread, vegetables etc. from the weighting to ensure consistent results.

Three relevant private expenditure groups were identified: motor vehicle sales, automotive fuels and repairs, accessories etc. The derivation of the adjusted CPI weights is outlined in Table 5.

Table 5 **Adjusted CPI weights**

Good category	Weight
GST free	9.1%
Dairy	1.5%
Bread/cereal	2.2%
Meat/Seafood	2.6%
Fruit/vegetable	2.3%
Eggs	0.1%
Tea/coffee	0.3%
Adjustment factor	1.1001
Unadjusted motor vehicle related	
Motor vehicles	5.9%
Automotive fuel	4.3%
Repairs, accessories etc.	4.3%
Adjusted motor vehicle related	
Motor vehicles	6.4%
Automotive fuel	4.7%
Repairs, accessories etc.	4.7%

Note: Rounded values
Data source: Australian Bureau of Statistics, cat. 9208.0

Western Australian contribution

The GST associated with each these groups generated in Western Australia is calculated by applying the relevant share of consumption of motor vehicles, petrol and vehicle repairs in Western Australia. Statistics for the three groups are provided either by the ABS new car sales (Cat. 9314: Sales of New Motor Vehicles, 2013) and motor vehicle census (Australian

Bureau of Statistics, 2012) or by ABARES (Australian Consumption of Petroleum Products, 2009). In order to estimate the Western Australian contribution to federal tax revenue we applied 10 year averages of historic data to the national GST revenue of each category (details in Table 6).

Table 6 **Western Australian GST contribution proxies**

Weight	WA contribution proxy
Motor vehicles	New motor vehicles sales WA / new motor vehicles sales Australia
Automotive fuel	Fuel consumption WA / fuel consumption Australia
Repairs, accessories etc.	Number of cars WA / number of cars Australia

Luxury car tax

The Western Australian contribution to the luxury car tax revenue was estimated by determining the share of luxury cars in the State based on the Motor Vehicle Census 2012 and applying it to the federal revenue from this tax.

Excise duty on petrol and diesel

Commercial vehicles can reclaim 50 per cent of the excise duty on petrol and diesel. Therefore it is necessary to estimate the fuel consumption of commercial vehicles in Western Australia.

In 2002 the ABS conducted a detailed survey on fuel consumption in Australia in which it reports total fuel consumption in this year of passenger vehicles and commercial vehicles (Cat. 9208.0: Survey of Motor Vehicle Use, 2002). The Bureau of Infrastructure, Transport and Regional Economics (BITRE) in turn, publishes figures on the total number of driven kilometres per year, state and vehicle class (Australian Transport Statistics Yearbook, 2009). From these datasets we calculate an average consumption per kilometre for both vehicle classes which we applied to the number of kilometres travelled in Western Australia by the vehicles of the respective class. This provides an estimate of total fuel consumed in Western Australia by vehicle class and thus the share of excise duty generated in the State.

This number was applied to excise duty revenues for petrol and diesel to correct for the 50 per cent rebate for commercial vehicles.

Customs on passenger motor vehicles

Customs duties are paid on imported vehicles when they enter the country. Since transport to Australia tends to be expensive, we have assumed that all imported vehicles are new[10]. Therefore we applied the share of new vehicles sold in Western Australia (Cat. 9314: Sales of New Motor Vehicles, 2013) to determine customs revenues attributable to Western Australia.

[10] We recognise that imports of used vehicles do occur, but this does not change our overall conclusions.

Derivation of funding sources by level of government for 2013-14

ACIL Allen has undertaken a detailed assessment of road-related revenue and expenditure by level of government for 2013-14 so as to map the flows of road-related funds to and from governments. In 2013-14:

- Total spending on Western Australian roads is estimated at $2.9 billion.
- Of this amount, approximately $1.2 billion will be directly funded by the State Government through its collection of road-related revenue (primarily vehicle licence fees and motor vehicle registration fees).
- This leaves a preliminary funding gap of approximately $1.7 billion.
- Part of this preliminary funding gap will be directly funded by the Federal Government:
  - in 2013-14, the Federal Government transferred $325 million to Western Australia as specific purpose payments related to the Infrastructure Investment Program. This Program includes black spot projects, the bridges renewal program, heavy vehicle safety and productivity, a road investment component, the off-network projects program, roads to recovery, and interstate road transport; and
  - also in 2013-14, the Federal Government provided $107 million to Western Australian local governments through the Local Road Financial Assistance Grant.[11]
- After taking these Federal funding sources into account, there remains a funding gap of approximately $1.3 billion. This is the value of road-related expenditure that cannot be directly attributed to Federal road funds allocated to the State and nor can it be attributed to revenue that the State Government collects from Western Australian motorists.
- This funding gap is funded from State Government consolidated revenue. State Government consolidated revenue consists of the State Government's own source revenue collected through its own revenue raising instruments and contributions from the Federal Government (for example GST distributions).
- Using available State Budget data, ACIL Allen estimates that State Government consolidated revenue consists of State Government own source revenue (approximately 60 per cent) and Federal Government grants (approximately 40 per cent).
- Based on the above proportions, ACIL Allen estimates that about $768 million (or 60 per cent) of the funding gap is funded by the State Government while about $512 million (or 40 per cent) of the funding gap is ultimately funded by the Federal Government.
- In sum, this means that the State Government will spend more on roads (approximately $2.0 billion[12]) than it will collect from motorists (approximately $1.2 billion) in 2013-14. Whereas the Federal Government will allocate about 41 per cent of federal road related revenue to Western Australia in the form of road spending. That is, the Federal Government will collect approximately $2.3 billion from Western Australian motorists[13] and effectively spend approximately $944 million on Western Australian roads in 2013-14[14]). These revenue and expenditure flows are depicted diagrammatically in Figure 4.

[11] Department of Infrastructure and Regional Development, 2014, *Financial Assistance Grants to Local Government*.

[12] Made up of $1.2 billion of direct funds and $768 million of own source consolidated revenue.

[13] Collected from GST, excise duty, luxury car tax and customs duties.

[14] Made up of direct spending of $325 million in special purpose payments; $107 million in the Local Road Financial Assistance Grant; and $512 million as a result of the Federal Government contribution to State consolidated revenue.

Appendix B Comparison of data sources

We have compiled our estimates by making use of primary sources, such as government budget papers, as we believe this to be the most accurate way in which to make the estimates. However, secondary sources also exist, in particular work undertaken by the ABS (Cat. 5512.0: Government Finance Statistics, Australia, 2012-13). The estimates of the ABS differ from our estimates, and it is useful to explore what these differences are and how they arise. The two data series are presented in Table 7.

Table 7 **Comparison of ABS and ACIL Allen expenditure estimates ($ million)**

Year	ACIL Allen	ABS
2005-06	1,277	798
2006-07	1,518	860
2007-08	1,814	954
2008-09	2,017	876
2009-10	1,914	894
2010-11	1,851	1,021
2011-12	2,320	1,143
2012-13	2,580*	1,346

*Note: *estimated*

Data source: ABS and ACIL Allen analysis

In order to understand this difference, we spoke with the ABS and the Department of Treasury and Finance Western Australia (DTFWA). We also discussed our own methodology with these agencies to explore sources of difference.

The ABS only reports operating expenses. For the purposes of this report we regard this definition as too narrow since it excludes the construction and improvement of roads.

Since the ABS definition of road expenses appears too narrow, we have chosen to make use of our own numbers as the basis of analysis.