

**A REPORT FOR
THE CIVIL CONTRACTORS FEDERATION
QUEENSLAND BRANCH**

**BUILDING OUR FUTURE:
2015 UPDATE**

***A Review of Infrastructure Investment in
Queensland***

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EXECUTIVE SUMMARY

Background

This research has been undertaken for the Civil Contractors Federation Queensland Branch to provide an update on trends in infrastructure investment in Queensland. The key objective of this 2015 update is to provide a current picture of infrastructure investment in Queensland and anticipated trends over the next 3 to 5 years.

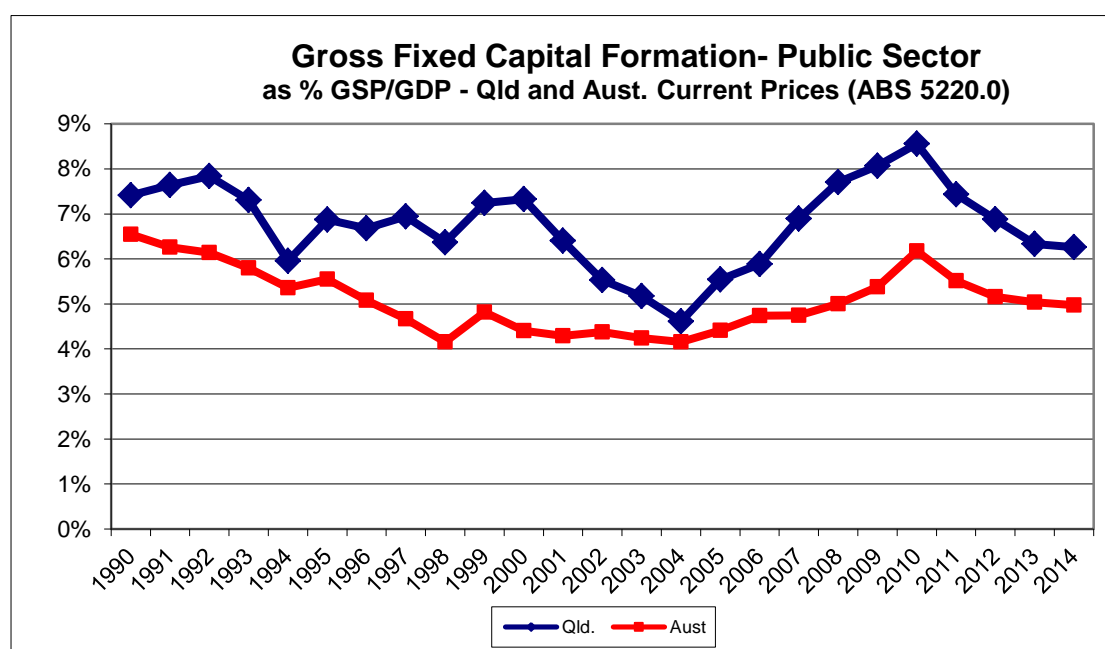
This update builds on the series of *Building our Future* reports which commenced in 2004. For example, key earlier findings remain highly relevant:

- A key finding of the 2009 report was that public capital outlays should be maintained at around 7% of Gross State Product (GSP) in the longer term if reasonable levels of infrastructure service were to be achieved.
- The 2013 update found that, by 2016, the cumulative backlog in infrastructure investment was expected to be greater than it was after the low level of infrastructure funding in the mid-2000s. The 2013 report also estimated that the forecast drop-off in public capital outlays from 2012/13 could see a drop in excess of 20,000 jobs in the construction sector by 2016. With multiplier effects, this could equate to over 40,000 jobs lost state-wide.

Recent Trends in Infrastructure Investment

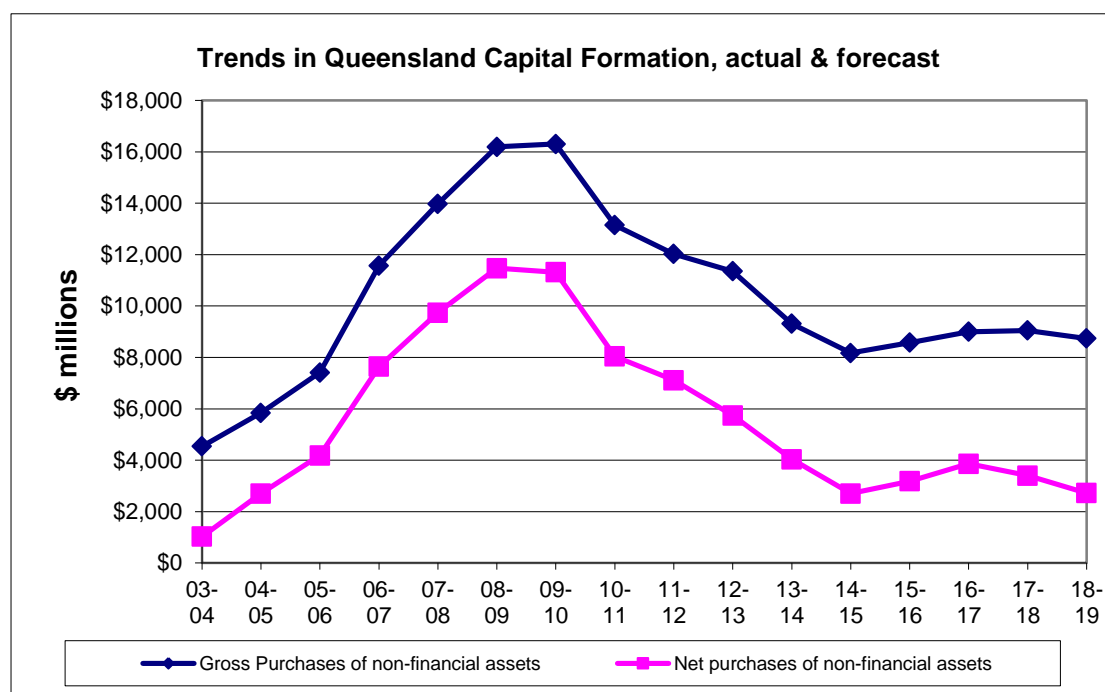
Successive *Building our Future* reports (2004, 2009, 2013 and 2015) identify the importance of public investment in economic infrastructure and its contribution to productivity and economic growth.

Analysis undertaken for the 2009 review showed a dramatic increase in public infrastructure investment in Queensland from 2004 to 2009, in absolute terms and relative to other States. However, the report noted that the upswing in infrastructure funding had not eliminated the backlog resulting from some 20 years of inadequate infrastructure investment.



In Queensland, gross fixed capital formation (GFCF) by the public sector as a percent of Gross State Product (GSP) increased from 4.6% in June 2004 to 8.6% by June 2010. Since 2010 there has been a significant decline. By June 2014, GFCF as a percent of GSP has fallen to 6.3%, well below the 7% of GSP advocated by the 2009 update.

While the analysis shows that public GFCF in Queensland was maintained at a relatively high level through to 2012, State Government budget forecasts provide a depressing picture in terms of investment in infrastructure through to 2018/19 as shown by the following figure. In real terms, no increased investment is expected in the period from 2014/15 to 2018/19.

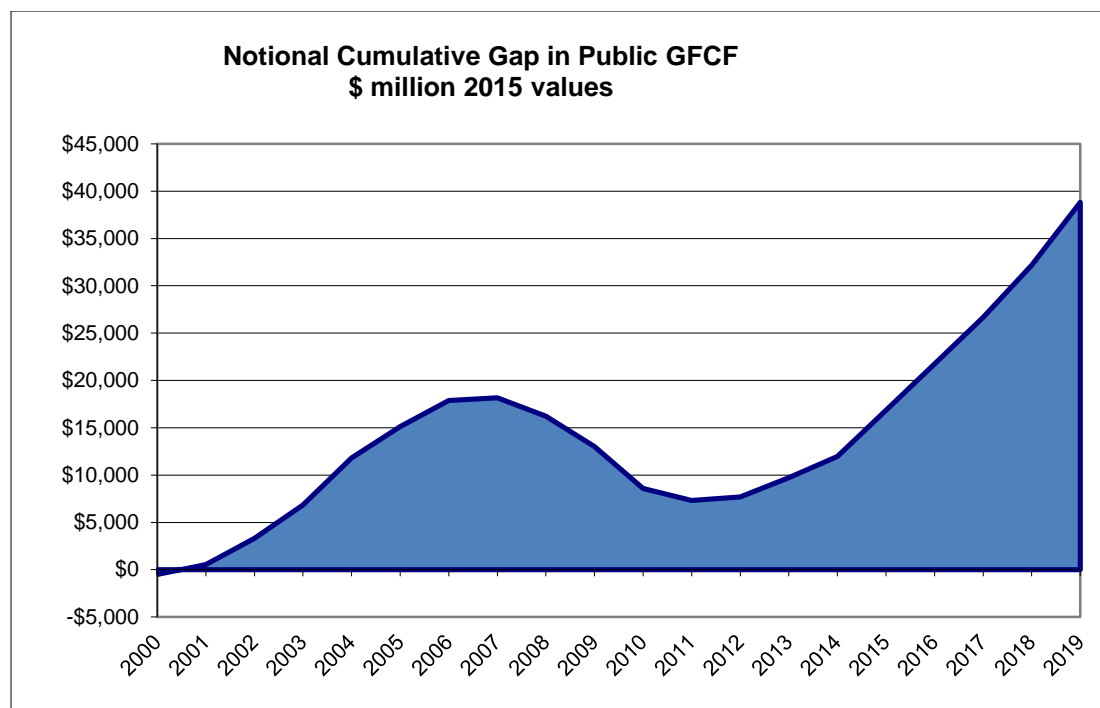


Source: Queensland Budget Papers

GFCF is expected to decline from the 2009/10 peak of \$16.3 billion to only \$8.7 billion in 2018/19, a decline of 47%.

After depreciation, the net result is a decline from \$11.3 billion in 2009/10 to only \$2.7 billion in 2018/19, a drop of almost 76%.

Current forward projections suggest that the infrastructure backlog will rapidly increase over the next five years. By 2019, the cumulative backlog in infrastructure investment may amount to some \$40 billion and will be much greater than it was after the low level of infrastructure funding in the mid-2000s.



In the period from 2014/15 to 2016/17, there will be an increase in Federal funding for transport infrastructure. This will be particularly significant for local government roads where Roads to Recovery funding in Queensland will increase from \$71.2 million in 2014/15 to \$200 million in 2015/16 and \$164 million in 2016/17.

With the civil construction industry having geared up to deliver the quantum of infrastructure work over the 2007 to 2012 period, the forecast reductions in funding commitment for infrastructure identified in forward budgets is expected to have significant impacts on employment.

This 2015 update report estimates that the forecast drop-off in public outlays from 2014/15 could see a further drop of around 10,000 jobs in the Queensland construction sector by 2019. With multiplier effects, this could equate to over 20,000 jobs lost state-wide. This is on top of the 30,000 jobs lost to the construction sector between 2008 and 2015.

While the need for adequate funding of infrastructure needs is apparent, there are other areas where reform can assist in improving the delivery process and gaining efficiencies. Reviews by the Productivity Commission and Infrastructure Australia have found a number of reforms to institutional arrangements and delivery processes are needed.

The need for a longer term and stable pipeline for infrastructure investment along with planning to avoid “boom-bust cycles” have been noted in these reports. Initiatives to unbundle large projects to provide a greater spread of competition have also been recommended.

1. Background

This report was commissioned by the Civil Contractors Federation to provide an update on trends in infrastructure investment in Queensland since the 2004, 2009 and 2013 *Building our Future* reports.

In the 2009 update of *Building our Future*, it was observed that Queensland's public investment in infrastructure had improved dramatically since the original report was published in February 2004. A key finding of the 2009 report was that public capital outlays should be maintained at around 7% of Gross State Product (GSP) in the longer term, if reasonable levels of infrastructure service were to be achieved.

However, in the 2013 update report, it was noted that Gross Fixed Capital Formation (GFCF) in Queensland was expected to decline from the 2009/10 peak of \$16.3 billion to only \$8.8 billion in 2015/16, a decline of 46%. The 2009 update found that, by 2016, the cumulative backlog in infrastructure investment in Queensland may be greater than it was after the low level of infrastructure funding in the mid-2000s.

The key objective of this 2015 review is to provide a current picture of infrastructure investment in Queensland and anticipated trends over the next 3 to 5 years.

The 2004 *Building our Future* Report noted there was compelling evidence from both Australian and international research that public capital investment increases the productivity of the private sector and is a key driver of economic growth.

Concerns in relation to the overall scale of ongoing engineering construction activity are reflected in a number of research reports.

The Australian Industry Group Performance of Construction Index (Australian PCI®)¹ fell to 38.8 in December 2012 from 42.6 in June 2009. Since the lows experienced in 2012, there has been a gradual increase in the PCI Index which was 47.8 in May 2015. This is still below the critical 50 points level marking the point between a declining or expanding construction industry. Survey respondents cited a lack of tendering opportunities, project delays and continued soft investment activity by clients as reasons for the ongoing decline in activity.

The Australian Construction Industry Forum (ACIF)² research notes that *“The biggest change is a reduction in engineering construction, now projected to amount to \$100 billion in 2014-15, a decline of 18 per cent on spending in 2013-14. The mining development boom is very definitely over. The slide in activity in this sector will continue over the next few years, reducing spending to \$86 billion by 2017-18. The slowdown in mining construction will lead to declines in spending on supporting activities such as construction of bridges, railways and harbours, and electricity and pipelines. A key bright spot in the outlook for engineering construction is in roads, which is expected to see steady strong growth in spending over the projection period”*.

¹ The Australian Industry Group Australian PCI® is a seasonally adjusted national composite index based on the diffusion indexes for activity, orders/new business, deliveries and employment with varying weights. A reading above 50 points indicates construction activity is generally expanding; below 50, that it is declining. The distance from 50 is indicative of the strength of the expansion or decline.

² Australian Construction Market Report, ACIF, July 2015

Infrastructure Australia³ notes that “... the overall quality of our infrastructure lags behind comparable nations” and that:-

- “Inadequate attention is being given to the level of service Australians need and expect from their infrastructure, how much different service levels cost, and how they will be paid for”;
- “Major reforms are needed to improve the way we plan, finance, construct, maintain and operate infrastructure”;
- “Australia will have to increase the amount of funding available from both public and private sources, to maintain and grow our infrastructure network”.

The Productivity Commission⁴ also focused on the need to improve planning, funding and delivery mechanisms noting that “... It is essential to reform governance and institutional arrangements for public infrastructure to promote better decision making in project selection, funding, financing and the delivery of services from new and existing infrastructure” and that “...There is significant scope to improve public sector procurement practices and lower bid costs for tenderers, with potentially large benefits for project costs and timing.”

Engineers Australia⁵ have been undertaking assessments of the standard of infrastructure at both the national and State level since 2001, although no updates have been undertaken since 2010.

In terms of civil infrastructure, the Engineers Australia Report for 2010 suggests a marginal decline in Queensland’s infrastructure, particularly in roads. Key recommendations of the 2010 Engineers Australia report were:

- Address the large and growing gap between the funds provided for maintenance and renewals of infrastructure and what is actually required to maintain asset quality and performance.
- Address the imbalance between urban and rural and remote communities regarding access to high quality, reliable infrastructure through additional funding, particularly to regional and remote local governments.
- While encouraging high levels of private sector investment in future public infrastructure programs, governments must concurrently increase their level of investment to meet future growth demands.

The poor standard of the major highway network across Australia is of particular concern in terms of road safety. According to the latest Australian Road Assessment Program (AusRAP) report⁶, 29% of the national highway surveyed in Queensland are rated as 2-star, 63% of roads are rated as 3-star, but only 6% carry a 4-star rating. Roads of concern with a high proportion of 1 or 2-star rated sections include the Bruce Highway, the Cunningham Highway, the Gore Highway, the New England Highway and the Warrego Highway. The report calculates that a Safer Roads Investment Program of \$1.5 billion in Queensland with a benefit cost ratio of 3.21 could save 10,400 fatalities and serious injuries over a 20 year period.

³ Australian Infrastructure Audit, Infrastructure Australia, April 2015

⁴ Productivity Commission Inquiry Report, Public Infrastructure, May 2014, p2

⁵ Engineers Australia, Infrastructure Report Cards, Queensland and Australia

⁶ Royal Automobile Association, Star Rating Australia’s National Network of Highways, 2013

2. Overview of Infrastructure Investment Trends

2.1. Queensland Fixed Capital Formation in National Context

Figure 2.1 details the gross fixed capital formation (GFCF) by the total public sector (including Australian Government) in Queensland relative to Australia as a whole, from June 1990 to June 2014.

The declining picture of infrastructure investment relative to Gross State Product (GSP), highlighted by the original 2004 *Building our Future* report, is apparent from 1990 through to 2004 as evidenced in Figure 2.1 and Table 2.2.

In Queensland, GFCF by the public sector increased from 4.6% in June 2004 to 8.6% by June 2010. Since 2010, there has been a significant decline with GFCF in Queensland representing only 6.3% of GSP in June 2014. GFCF in Queensland dropped below the 7% of GSP in 2012 and continued to fall through to 2014. The 7% of GSP as public sector GFCF was advocated by the 2009 *Building our Future* review as a desirable target.

For the Australian public sector as a whole, GFCF as a share of GDP was only 6.2% in June 2010, declining to 5.0% in June 2014.

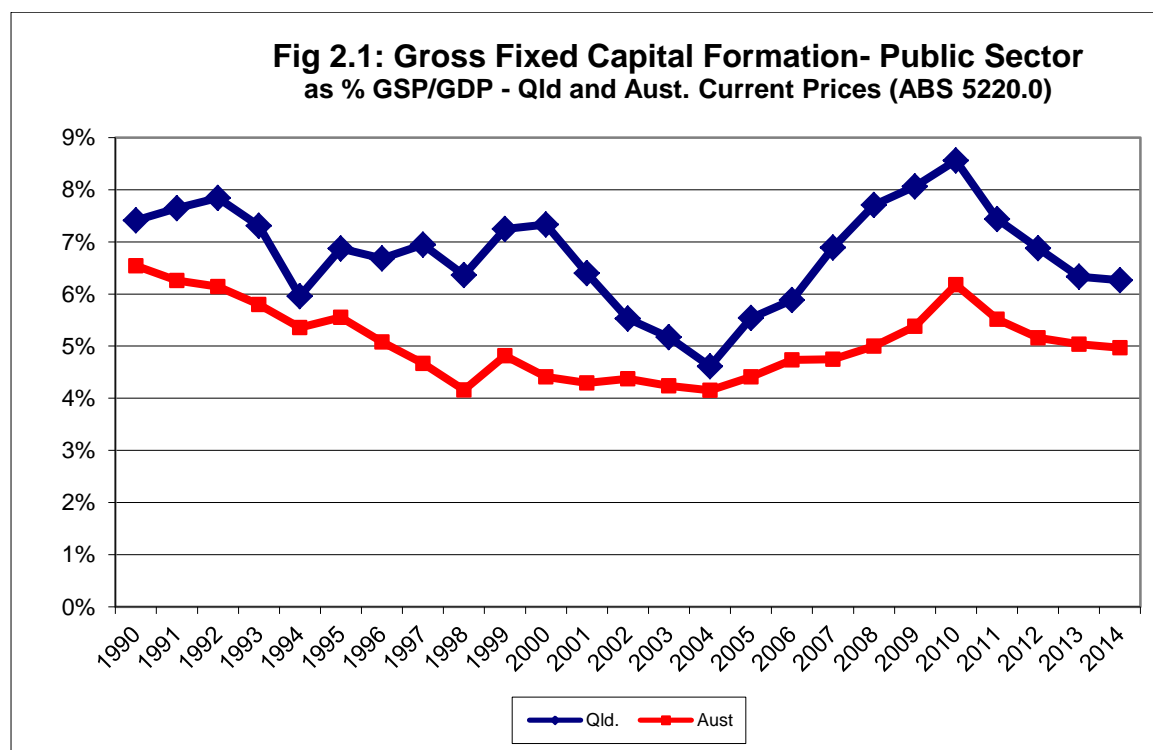
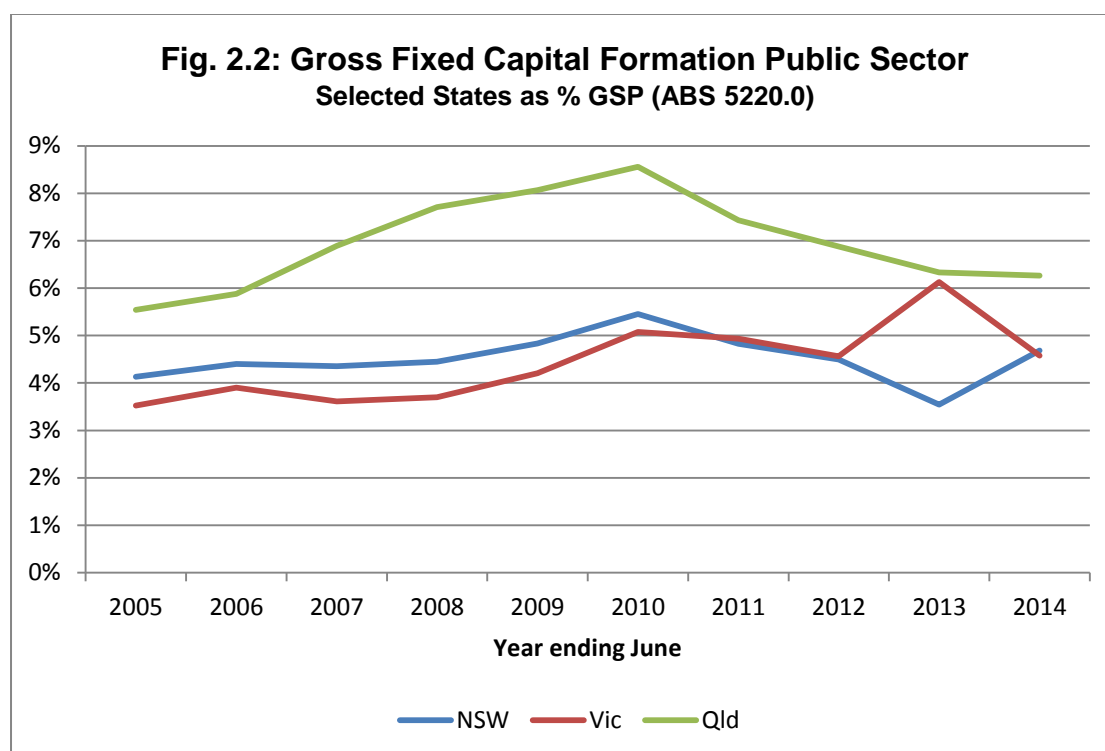


Figure 2.2 shows GFCF of the public sector for each of the larger Australian States. The figure shows that, over the period from 2005 to 2014, Queensland had a higher proportion of GSP devoted to public sector GFCF than either NSW or Victoria.

Table 2.2: GFCF Public Sector as % GSP/GDP

Year ending	Queensland	Australia
Jun-1990	7.4%	6.5%
Jun-1991	7.6%	6.3%
Jun-1992	7.8%	6.1%
Jun-1993	7.3%	5.8%
Jun-1994	6.0%	5.4%
Jun-1995	6.9%	5.6%
Jun-1996	6.7%	5.1%
Jun-1997	6.9%	4.7%
Jun-1998	6.4%	4.2%
Jun-1999	7.2%	4.8%
Jun-2000	7.3%	4.4%
Jun-2001	6.4%	4.3%
Jun-2002	5.5%	4.4%
Jun-2003	5.2%	4.2%
Jun-2004	4.6%	4.2%
Jun-2005	5.5%	4.4%
Jun-2006	5.9%	4.7%
Jun-2007	6.9%	4.7%
Jun-2008	7.7%	5.0%
Jun-2009	8.1%	5.4%
Jun-2010	8.6%	6.2%
Jun-2011	7.4%	5.5%
Jun-2012	6.9%	5.2%
Jun-2013	6.3%	5.0%
Jun-2014	6.3%	5.0%

Source: ABS 5220.0



2.2. Queensland State and Local Investment

Figure 2.3 provides more details of this change in Queensland by looking at gross fixed capital formation (GFCF) in real terms per capita for the Queensland State and Local public sector from 1998/99 to 2013/14.

Table 2.3 provides details for the period from 2005/06 to 2013/14 for both the State and Local Governments. Whereas in 2005/06 the State was investing some \$6.6 billion in fixed capital infrastructure, in 2009/10 this had risen to \$14.1 billion an increase of 114% in nominal dollars. However, since 2009/10, State GFCF has declined to \$9.84 billion, a drop of 30.2%.

For Local Government, GFCF was \$2.2 billion in 2005/06 increasing by 86% to \$4.1 billion in 2009/10. While this declined in 2010/11, it had risen to \$4.27 billion by 2013/14.

In 2010, the Queensland State and local public sector were investing \$4,474 per capita (2014 \$ values) in fixed capital infrastructure, compared with only \$2,678 per capita in 2006, a 67% increase in real terms. However, by 2013/14, GFCF per capita had fallen to \$2,988, a drop of 33% in real terms over four years from 2010.

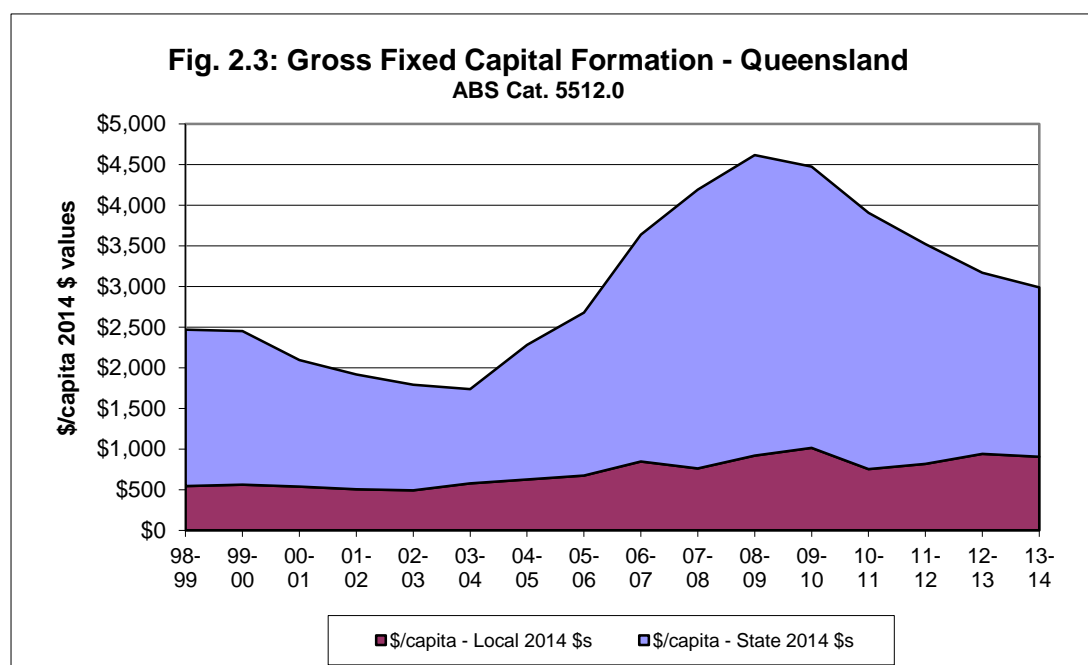


Table 2.3: Gross Fixed Capital Formation Queensland

	2005-06	2006-07	2007-08	08-09	09-10	10-11	11-12	12-13	13-14
GFCF - State \$m	\$6,550	\$9,596	\$12,724	\$14,365	\$14,131	\$13,597	\$11,713	\$10,056	\$9,840
GFCF - local \$m	\$2,199	\$2,909	\$2,822	\$3,569	\$4,141	\$3,245	\$3,538	\$4,242	\$4,271
Total GFCF \$m	\$8,749	\$12,505	\$15,546	\$17,934	\$18,272	\$16,842	\$15,251	\$14,298	\$14,111
\$/capita - State (2014 \$s)	\$2,005	\$2,791	\$3,430	\$3,697	\$3,460	\$3,153	\$2,704	\$2,228	\$2,084
\$/capita - Local (2014 \$s)	\$673	\$846	\$761	\$919	\$1,014	\$753	\$817	\$940	\$904
Total \$/capita (2014 \$s)	\$2,678	\$3,637	\$4,190	\$4,616	\$4,474	\$3,906	\$3,521	\$3,168	\$2,988

Source: ABS 5512.0

2.3. Private versus Public Sector Investment

Table 2.4 provides an overview of trends in public and private sector fixed capital investment in Queensland since 1990.

The private sector is the major investor in fixed capital formation (although not in roads, transport, water supply and sewerage infrastructure), responsible for 81.7% in the year ending June 2014.

Over the period shown in Table 2.4, the share of fixed capital investment by the public sector has averaged around 22%. The 2014 public share of 18.3% is below this long term average, suggesting a recent decline in the role of the public sector.

Over the period shown, the Queensland public sector GFCF as a share of GSP has averaged 6.7%, so its 2014 share of GSP at 6.3% is now below this average. In contrast, over the same period, the private sector GFCF as a share of GSP has averaged 23.7%. Its 2014 share at 27.9% of GSP is therefore substantially above the long term average. The table therefore shows a greater reliance on private investment in recent years.

Table 2.4: Gross Fixed Capital Formation, Public & Private Sectors, Queensland

Year ending	Public Sector \$m	Private sector \$m	Total \$m	Public sector share %	Public as % GSP	Private as % GSP
Jun-1990	\$4,478	\$14,472	\$18,950	23.6%	7.3%	24.0%
Jun-1991	\$4,709	\$12,754	\$17,463	27.0%	7.6%	20.7%
Jun-1992	\$5,132	\$12,508	\$17,640	29.1%	7.8%	19.1%
Jun-1993	\$5,192	\$14,329	\$19,521	26.6%	7.3%	20.2%
Jun-1994	\$4,463	\$16,720	\$21,183	21.1%	5.9%	22.3%
Jun-1995	\$5,545	\$18,858	\$24,403	22.7%	6.9%	23.4%
Jun-1996	\$5,755	\$18,800	\$24,555	23.4%	6.6%	21.8%
Jun-1997	\$6,403	\$20,117	\$26,520	24.1%	6.9%	21.8%
Jun-1998	\$6,206	\$20,932	\$27,138	22.9%	6.3%	21.5%
Jun-1999	\$7,425	\$22,386	\$29,811	24.9%	7.2%	21.8%
Jun-2000	\$7,943	\$24,126	\$32,069	24.8%	7.3%	22.3%
Jun-2001	\$7,439	\$22,906	\$30,345	24.5%	6.5%	19.7%
Jun-2002	\$7,157	\$27,479	\$34,636	20.7%	5.5%	21.2%
Jun-2003	\$7,068	\$33,346	\$40,414	17.5%	5.2%	24.4%
Jun-2004	\$7,002	\$38,798	\$45,800	15.3%	4.6%	25.6%
Jun-2005	\$9,373	\$42,932	\$52,305	17.9%	5.6%	25.4%
Jun-2006	\$11,313	\$49,777	\$61,090	18.5%	5.9%	25.9%
Jun-2007	\$14,723	\$56,986	\$71,709	20.5%	6.9%	26.7%
Jun-2008	\$17,823	\$64,147	\$81,970	21.7%	7.7%	27.7%
Jun-2009	\$20,828	\$65,170	\$85,998	24.2%	7.8%	25.2%
Jun-2010	\$21,503	\$57,037	\$78,540	27.4%	8.6%	22.7%
Jun-2011	\$19,953	\$63,005	\$82,958	24.1%	7.5%	23.5%
Jun-2012	\$19,609	\$80,002	\$99,611	19.7%	6.9%	28.1%
Jun-2013	\$18,262	\$83,379	\$101,641	18.0%	6.3%	28.9%
Jun-2014	\$18,558	\$82,591	\$101,149	18.3%	6.3%	27.9%

Source: ABS 5220.0

When roads, subdivisions, water, sewerage and drainage are considered, the dominant role is played by the public sector as shown by Table 2.5.

For roads, highways and subdivisions, some 62% of the value of work done over the fourteen year period shown was attributed to the public sector. For water, sewerage and drainage 76% of the expenditure was attributed to the public sector.

It is not clear whether the ABS definition of “work done by the private sector for the private sector” is actually all private work.

Overall, the figures in Table 2.5 reveal a substantial increase in road and water infrastructure investment from 2001 through to 2009.

However, between December 2008 and December 2014 the annual value of road infrastructure outlays decreased by 33% in real terms, while those for water infrastructure decreased by 63%.

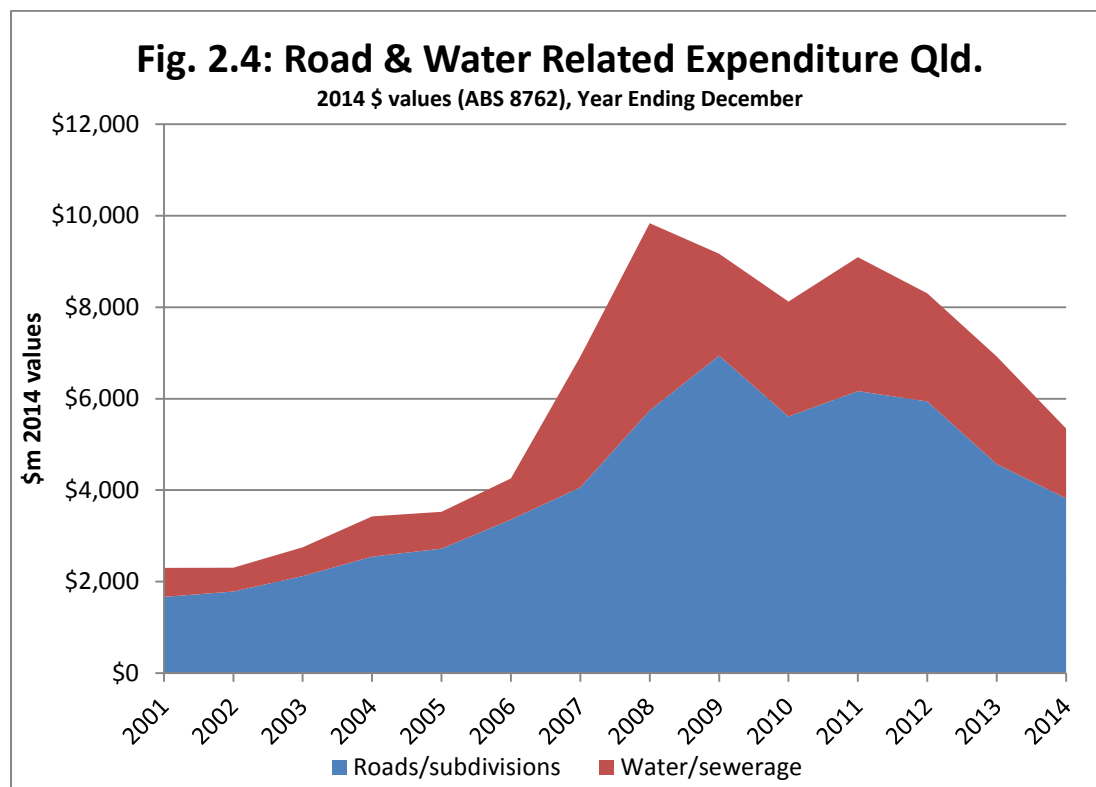
The water grid in SEQ was a major contributor to the increases shown for the water sector in 2008. Major road projects such as Clem 7 and the Airport Link would also have been important in maintaining road expenditure through to 2012.

Table 2.5: Value of Engineering Work Done by Sector in Queensland, \$ 000's, 2014 values

Year ending	Roads, highways and subdivisions			Water storage and supply, sewerage and drainage		
	private	public	total	private	public	total
Dec-2001	\$440,999	\$1,226,061	\$1,667,060	\$181,405	\$452,899	\$634,303
Dec-2002	\$628,036	\$1,156,579	\$1,784,615	\$96,515	\$424,018	\$520,532
Dec-2003	\$1,088,477	\$1,033,483	\$2,121,959	\$134,735	\$494,998	\$629,732
Dec-2004	\$1,415,686	\$1,131,308	\$2,546,994	\$136,809	\$743,362	\$880,171
Dec-2005	\$1,336,935	\$1,385,205	\$2,722,140	\$182,351	\$622,823	\$805,174
Dec-2006	\$1,627,900	\$1,728,373	\$3,356,273	\$187,289	\$713,967	\$901,256
Dec-2007	\$1,615,457	\$2,446,443	\$4,061,900	\$273,681	\$2,584,395	\$2,858,075
Dec-2008	\$2,563,685	\$3,178,264	\$5,741,949	\$429,660	\$3,664,934	\$4,094,594
Dec-2009	\$2,897,176	\$4,044,070	\$6,941,246	\$398,097	\$1,829,862	\$2,227,959
Dec-2010	\$2,367,152	\$3,242,755	\$5,609,907	\$574,918	\$1,938,223	\$2,513,141
Dec-2011	\$2,209,169	\$3,957,036	\$6,166,206	\$1,049,969	\$1,877,454	\$2,927,423
Dec-2012	\$1,562,824	\$4,377,235	\$5,940,059	\$864,002	\$1,498,672	\$2,362,674
Dec-2013	\$1,098,583	\$3,471,114	\$4,569,697	\$778,457	\$1,575,841	\$2,354,298
Dec-2014	\$1,048,246	\$2,772,883	\$3,821,129	\$652,552	\$874,369	\$1,526,921
change 2001 to 2014	138%	126%	129%	260%	93%	141%
change 2008 to 2014	-59%	-13%	-33%	52%	-76%	-63%

Source: ABS 8762 Engineering Construction Activity – 2014 \$ values

The steep climb in the value of civil works from 2006 to 2009 is also apparent from Figure 2.4, as is the drop off in work from 2011 to 2014. From a peak in 2008, the real value of civil works in these two sectors combined had fallen by 45% to December 2014. ABS figures for the March Quarter 2015 show the total value of work in the road and water sectors to be the lowest in a quarter since March 2007.



The impact of the two-speed economy can be seen when the value of engineering work related to heavy industry (resource related) is compared with the total value of engineering work done as illustrated by Table 2.6.

Table 2.6: Value of Engineering Work Qld. – Total and Heavy Industry, \$'000s

Year ending	All sectors	Heavy Industry	% heavy	Non Heavy work
Mar-2001	\$4,714,212	\$399,065	8.5%	\$4,315,147
Mar-2002	\$4,615,305	\$495,034	10.7%	\$4,120,271
Mar-2003	\$5,468,691	\$1,570,280	28.7%	\$3,898,411
Mar-2004	\$5,345,024	\$1,147,626	21.5%	\$4,197,398
Mar-2005	\$6,749,857	\$1,292,446	19.1%	\$5,457,411
Mar-2006	\$8,814,814	\$2,528,413	28.7%	\$6,286,401
Mar-2007	\$11,966,539	\$3,797,290	31.7%	\$8,169,249
Mar-2008	\$15,712,288	\$4,020,125	25.6%	\$11,692,163
Mar-2009	\$20,493,548	\$5,627,174	27.5%	\$14,866,374
Mar-2010	\$20,091,626	\$6,469,952	32.2%	\$13,621,674
Mar-2011	\$21,110,911	\$8,242,738	39.0%	\$12,868,173
Mar-2012	\$32,181,105	\$17,165,897	53.3%	\$15,015,208
Mar-2013	\$40,162,173	\$24,476,297	60.9%	\$15,685,876
Mar-2014	\$42,934,440	\$28,298,491	65.9%	\$14,635,949
Mar-2015	\$32,859,999	\$21,188,803	64.5%	\$11,671,196

Source: ABS 8762 Engineering Construction Activity

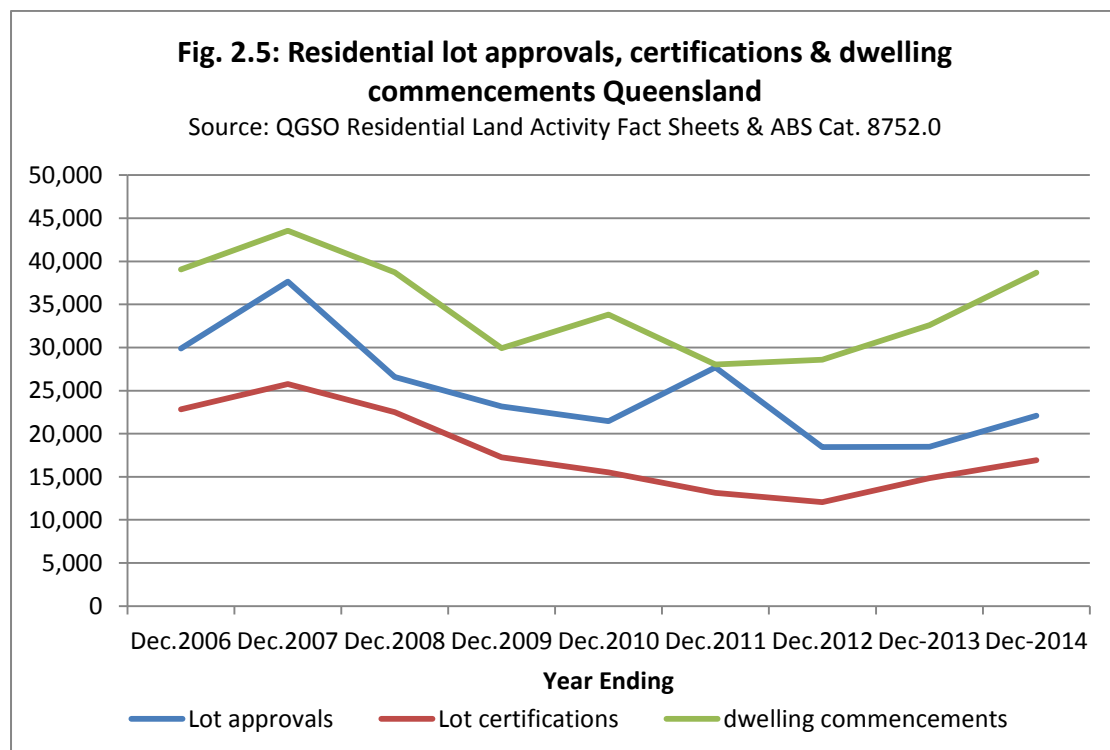
In 2001, heavy industry represented only 8.5% of engineering work done. For the year ending March 2015, heavy industry accounted for 64.5% of engineering work. However, the value of heavy engineering work declined in the year to March 2015, consistent with the end of the resources boom.

When heavy industry is taken away from the total, there has been very little change in other (non-heavy) engineering work between 2009 and 2014 (in current values). For the year ending March 2015, non-heavy engineering work dropped to its lowest value since 2007.

2.4. Residential Development Trends

Figures on residential lot approvals, certification and dwelling commencements, illustrated in Figure 2.5, show that residential construction activity declined significantly between 2007 and its lowest point in 2012.

Since 2012, the residential sector has shown signs of recovery, with dwelling commencements increasing by 35% in the two year period to December 2014.



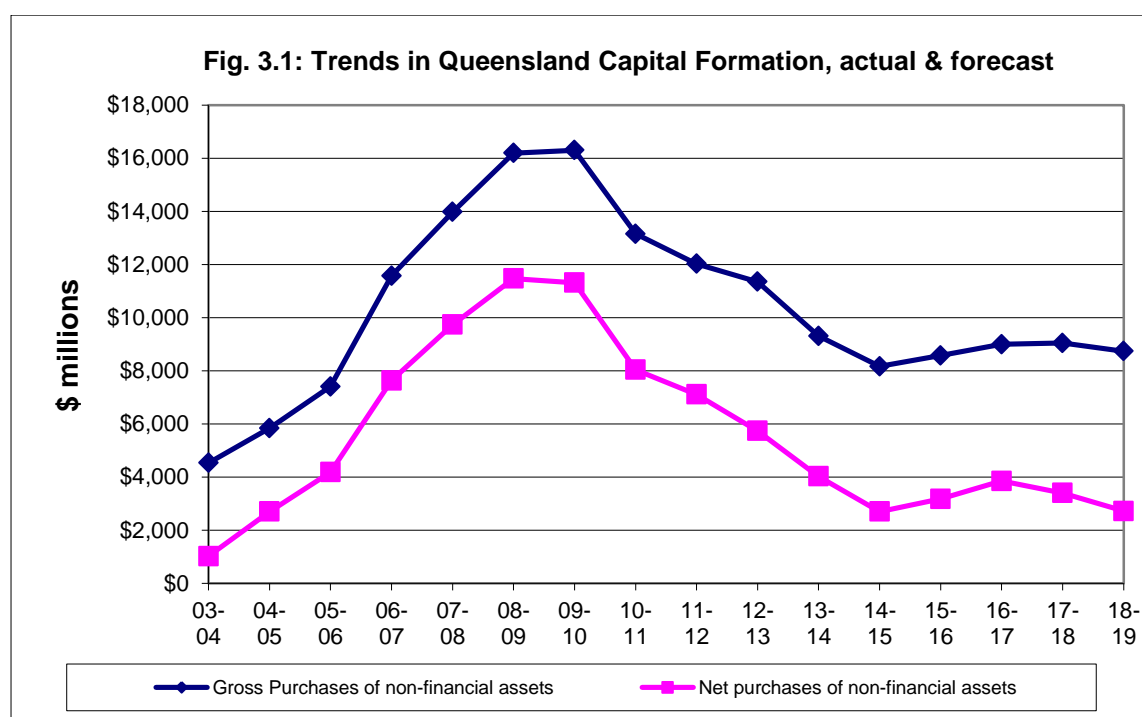
3. Forecast Trends in Capital Investment

3.1. Queensland Budget Forecasts

State Government budget forecasts provide a depressing picture in terms of investment in infrastructure through to 2018/19 as shown by Figure 3.1 and Table 3.1.

GFCF is expected to decline from the 2009/10 peak of \$16.3 billion to only \$8.6 billion in 2015/16, a decline of 47%. After depreciation, the net result is a decline from \$11.3 billion in 2009/10 to only \$3.2 billion in 2015/16, a drop of almost 72%. Forecasts through to 2018/19 show little change in GFCF in nominal dollar terms. In real terms, infrastructure funding will decline over the next four years based on 2015/16 budget forecasts.

The reductions in funding commitment for infrastructure identified in Figure 3.1 will have significant impacts on employment as discussed later in this report.



Source: Queensland Budget Papers

Table 3.1: Trends in GFCF, Queensland State Budget \$ millions

year	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19
Gross Purchases non-financial assets	\$16,305	\$13,151	\$12,030	\$11,355	\$9,312	\$8,170	\$8,574	\$9,000	\$9,048	\$8,740
Net purchases non-financial assets	\$11,316	\$8,042	\$7,114	\$5,742	\$4,033	\$2,703	\$3,184	\$3,857	\$3,402	\$2,722

Source: Queensland Budget Papers

The debt position of the State has been given as the main reason for the forecast forward budget measures, including the reduced expenditure on capital works. As Table 3.2 reveals, borrowings have increased significantly from \$51.7 billion in 2009/10 to an estimated \$74.1 billion in 2015/16 and a projected borrowing of \$78.8 billion by 2018/19. Relative to State operating revenue, this is an increase from a ratio of 1.08 in 2009/10 to 1.25 by 2018/19.

However, this level of debt is less than was shown in the 2013 update, based on 2012/13 State Budget estimates, where debt was expected to reach \$88.3 billion in 2015/16.

For all State Governments in Australia, the ratio of borrowing to operating revenue in the non-financial public sector in 2013/14 was 0.89. On this measure, public debt in Queensland is high relative to the rest of Australia.

Table 3.2: Queensland State Debt and Operating Revenue

	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19
Borrowing \$m	\$51,713	\$53,708	\$61,542	\$69,086	\$72,716	\$75,535	\$74,113	\$75,714	\$77,119	\$78,802
Operating revenue \$m	\$47,883	\$49,040	\$52,307	\$49,181	\$54,008	\$55,412	\$57,501	\$60,710	\$62,491	\$62,883
ratio borrowing to operating revenue	1.08	1.10	1.18	1.40	1.35	1.36	1.29	1.25	1.23	1.25

Source: Queensland Budget Paper #2 Table D.1 for non-financial public sector

3.2. State Infrastructure Plan

The Queensland Government released a Directions Paper in June 2015 which sets out the intended approach to the development of a *State Infrastructure Plan*. The Plan is scheduled for release in early 2016. The Directions Paper acknowledges the important contribution of infrastructure to a prosperous economy and liveable community. A *State Infrastructure Plan* was in development in 2011 but was not progressed during the term of the Newman Government.

Previously, the South East Queensland Infrastructure Plan and Program (SEQIPP) was intended as the guide for the State Government's infrastructure priorities to support the SEQ Regional Plan. First released in 2005, updates to SEQIPP were undertaken in 2009 and 2010. Since 2010, the Plan has not been updated.

3.3. Funding for Roads & Transport Infrastructure

3.3.1. Federal Funding

Table 3.3 provides details of Federal funding to the States for the period from 2011/12 to 2018/19 for road and transport infrastructure, based on Budget allocations (actual for 2011/12 to 2013/14).

According to these budget forecasts, Federal funding beyond 2014/15 is projected to peak in 2016/17.

Whereas the 2012/13 budget showed Australian Government road funding for the five year period from 2011/12 as only \$23.7 billion across all States, the 2015/16 budget shows funding of \$33 billion across Australia for the five years from 2014/15. Forecast Federal funding to Queensland is significantly greater than what was identified in the 2013 update (using 2012/13 budget forecasts), now totaling \$8.4 billion for the five years from 2014/15.

Over the eight year period shown, Federal funding to the States for transport and communications is forecast to average some \$6.4 billion annually, of which Queensland has averaged \$1.5 billion annually (24%). For the four year period from 2015/16 to 2018/19, Queensland will average \$1.8 billion annually or 26% of the Australia-wide allocation.

For 2015/16, budgeted expenditure for Queensland is 24% higher than the 2014/15 budget allocation. Australia-wide, funding is up 39% for 2015/16. Part of the reason for the expected lower growth in funding for Queensland is the Federal asset recycling program from which Queensland may not obtain an allocation as a consequence of the State Government decision not to sell public assets. Figures for all States in Table 3.3 do not include funding allocated for this program.

Table 3.3: Payments to States for Transport and Communication

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
2011/12	2,534,083	1,415,830	1,951,782	554,093	734,674	106,304	22,906	127,696	7,451,368
2012/13	1,102,577	875,512	790,954	519,430	175,883	71,513	3,829	80,772	3,620,470
2013/14	2,138,516	2,960,462	1,080,358	347,197	123,963	84,214	64,879	91,846	6,891,435
2014/15	1,679,748	487,561	1,222,122	1,100,585	140,474	56,989	48,499	119,444	4,870,422
2015/16	2,048,718	694,067	1,517,302	702,864	438,576	143,073	27,151	162,845	6,762,596
2016/17	3,145,262	555,171	2,419,737	828,769	517,584	156,430	11,461	84,510	9,203,924
2017/18	2,254,489	453,761	2,075,013	752,212	394,510	67,827	9,774	42,311	7,426,897
2018/19	1,379,223	286,301	1,206,352	521,706	251,178	76,909	9,285	34,431	4,860,385

Source: Commonwealth Budget Paper # 3, 12/13, 13/14, 14/15, 15/16, Table B1 (Total includes unallocated funds including asset recycling in 2015/16 budget)

Federal funding to Local Government for road infrastructure will increase significantly in both 2015/16 and 2016/17. The Federal Government has announced that Councils across Australia will receive an extra \$1.105 billion over the next two years from the Australian Government for local road and street works following the reintroduction of Consumer Price Index-linked fuel excise.

This is on top of an increase announced in the Budget for the Local Government Roads to Recovery Program (R2R) where an additional \$350 million was allocated across Australia on top of the \$350 million of normal R2R funding. For Queensland, instead of \$71.2 million in R2R funding in 2015/16 and 2016/17, councils will receive around \$200 million in 2015/16 and \$164 million in 2016/17. Councils are not required to match this additional R2R funding allocation.

Overall, the analysis suggests that there will be a significant increase in Federal road funding for Queensland through to 2017/18. If Queensland were also to receive an equitable share of the \$5 billion allocated for asset recycling, there could be at least an additional \$1 billion for Queensland infrastructure over the next four years.

3.3.2. State Funding

Table 3.4 shows the expenditure on road transport infrastructure by the State General Government sector over the period from 2004/05 to 2013/14. This table shows that road expenditure by the State peaked in 2012/13.

Table 3.4: Qld State General Government Road Expenditure

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Road transport \$m	\$1,232	\$1,319	\$1,608	\$1,744	\$2,313	\$2,167	\$2,801	\$2,955	\$3,672	\$3,127

Source: ABS Cat. 5512.0

Table 3.5 provides details of Transport and Main Roads (TMR) funding allocations under road programs identified in the Queensland Transport and Roads Investment Program (QTRIP) and State Budget documents. The table includes funding for the National Network, other State controlled roads, Natural Disaster Relief and Recovery as well as funding to councils through the Transport Infrastructure Development Scheme (TIDS).

Table 3.5: QTRIP Funding Allocations

	National Network \$m	State Network \$m	Total \$m
2009/10	\$1,456.3	\$3,433.3	\$4,889.6
2010/11	\$1,657.4	\$4,354.2	\$6,011.6
2011/12	\$2,208.8	\$4,282.4	\$6,491.2
2012/13	\$2,390.0	\$4,058.1	\$6,448.1
2013/14	\$1,743.4	\$4,063.3	\$5,806.7
2014/15	\$1,629.1	\$3,083.8	\$4,712.9
2015/16	\$1,257.3	\$2,392.8	\$3,650.1

Source: TMR QTRIP various years

Allocations for maintenance of the State-controlled network in 2015/16 of some \$771 million are relatively low compared with the replacement value of the road assets estimated at \$66.2 billion. This is equivalent to 1.2% of the asset value compared with a desirable allocation of around 2%.

This lower than desirable level of funding for asset maintenance has persisted for many years, suggesting there is now a very high backlog in maintenance requirements. Over the last ten years, the Queensland road maintenance backlog has potentially increased by \$3 billion.

The TMR Major Works to Competitive Tender Report (projects over \$1 million), for the twelve month period from April 2015 to March 2016, lists 27 projects with a total value of \$668 million. Two major projects (Bruce Highway Cooroy to Curra section and Peak Downs Highway) account for almost half of the total value of contracts in the current report.

4. Creating Jobs

The 2009 and 2013 reviews reported that there had been a significant increase in the construction workforce in Queensland to 2009. It was noted that there was a need to ensure some stability in the level of capital works expenditure to provide continuity in employment and avoid a “boom” and “bust” situation.

Figure 4.1 and Table 4.1 show recent trends in construction sector employment. It should be noted that ABS revisions have adjusted the figures previously reported in 2013, although the overall trend is much the same.

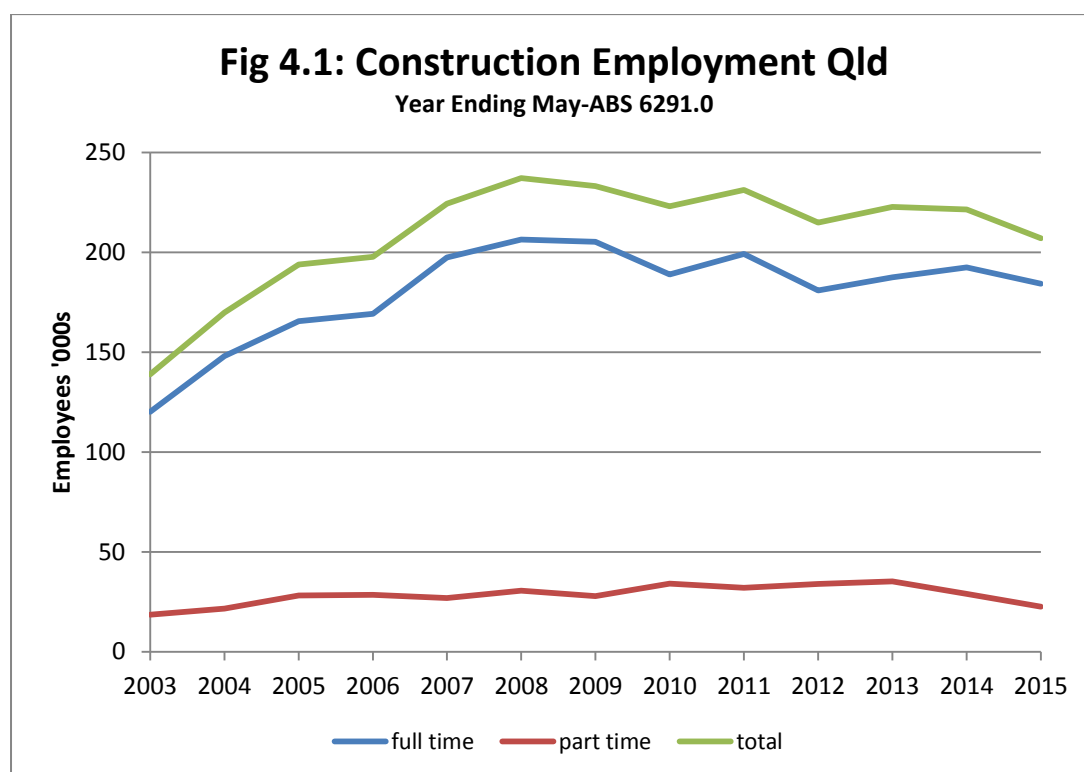


Table 4.1 shows that, between May 2003 and May 2008, the construction workforce increased by 70%, peaking at 237,000 in 2008. Since then, the total construction workforce in Queensland declined by 30,000 to May 2015. Between May 2014 and May 2015, there was a 7% decline in the total construction workforce.

It was estimated in the 2009 review that the projected level of public sector capital investment in Queensland beyond 2010 could result in a reduction of more than 30,000 full time jobs in the construction industry. This appears to have been a reasonably accurate forecast.

Member surveys conducted by the Civil Contractors Federation (Qld) in 2015 reveal that there was a 26% reduction in staff positions with member organisations over a twelve month period, while 76% of members considered conditions to be worse than in the GFC. The data in this 2015 update report supports these concerns within this sector of the civil construction industry.

Table 4.1: Construction Sector Workforce, Queensland 2003 to 2015

Year ending	full time '000s	part time '000s	Total '000s
May-2003	120.2	18.7	138.9
May-2004	148.2	21.7	169.9
May-2005	165.6	28.3	193.9
May-2006	169.3	28.6	197.8
May-2007	197.4	26.9	224.4
May-2008	206.5	30.6	237.1
May-2009	205.3	28.0	233.3
May-2010	188.9	34.1	223.0
May-2011	199.2	32.0	231.3
May-2012	180.9	34.0	214.9
May-2013	187.6	35.3	222.8
May-2014	192.5	29.0	221.5
May-2015	184.4	22.6	207.0

Source: ABS 6291.0

Based on recent ABS figures for wages in the construction industry⁷, it is estimated that for every \$1 billion of construction industry expenditure around 6,200 jobs are created.

Table 4.2 presents estimates of the number of full time jobs created directly by State public sector capital outlays (actual and forecast) in Queensland in the period from 2010/11 to 2018/19, assuming 6,200 jobs for every \$1 billion of construction industry expenditure in 2014.

Table 4.2: Construction Sector Employment Changes Qld based on State Budget Forecasts

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
Gross State Purchases of non-financial assets \$m	\$13,151	\$12,030	\$12,343	\$11,324	\$9,644	\$8,777	\$9,000	\$9,048	\$8,740
Estimated Construction Jobs Generated from above outlay	83772	75098	76282	70209	58597	52262	52519	51743	49481

The forecast drop-off in public outlays from 2014/15 could see a further drop in employment of around 10,000 jobs in the construction sector by 2019. With multiplier effects, this could equate to over 20,000 jobs lost state-wide. This job loss does not include any changes as a result of private sector construction outlays.

⁷ ABS Cat. 5220.0 shows 48.5% of construction industry income is devoted to wages while Cat. 6302.0 shows the average total weekly earnings for the construction industry was \$1,508 at November 2014

5. The Widening Infrastructure Deficit

The 2013 review noted that forward projections suggested that the infrastructure deficit would rapidly increase over the next five years. This 2015 review indicates that this cumulative backlog in infrastructure investment can be expected to continue to increase over the period through to 2019.

This 2015 analysis continues to paint a gloomy picture in terms of future investment in infrastructure in Queensland based on both Queensland and Federal Government budgets.

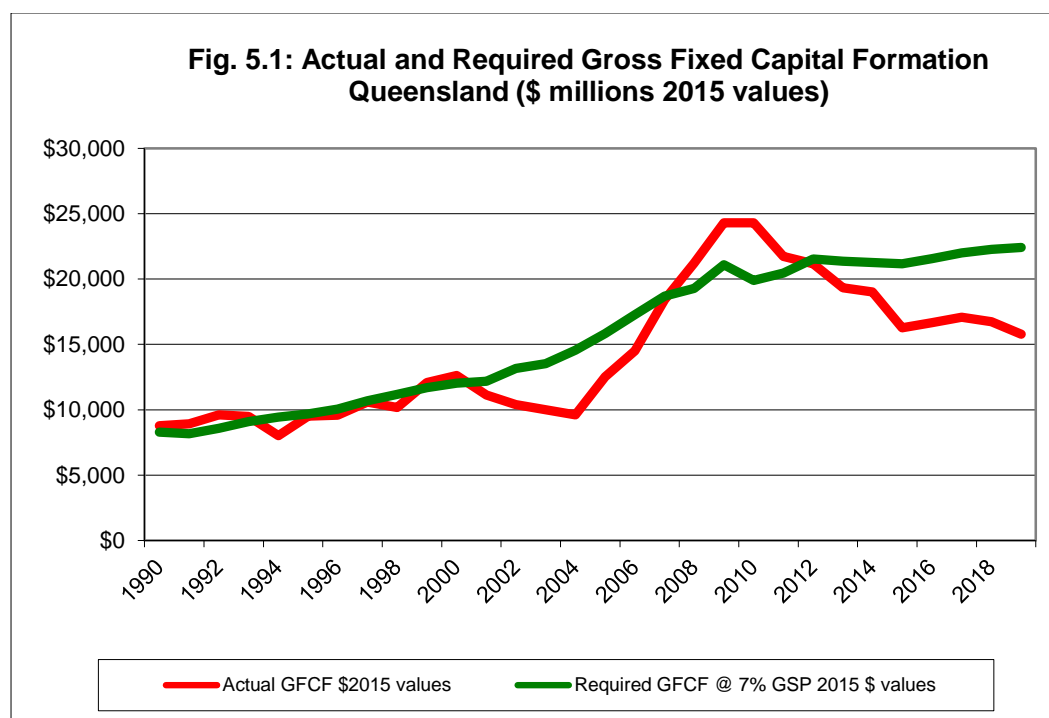
The required level of public GFCF in this analysis has been based on the 7% of GSP identified in the 2009 report as a desirable level of public sector investment.

Figure 5.1 shows the difference between this “required” level of gross fixed capital formation and the actual level, along with forecasts to 2019 based on 2015/16 State and Federal budget figures.

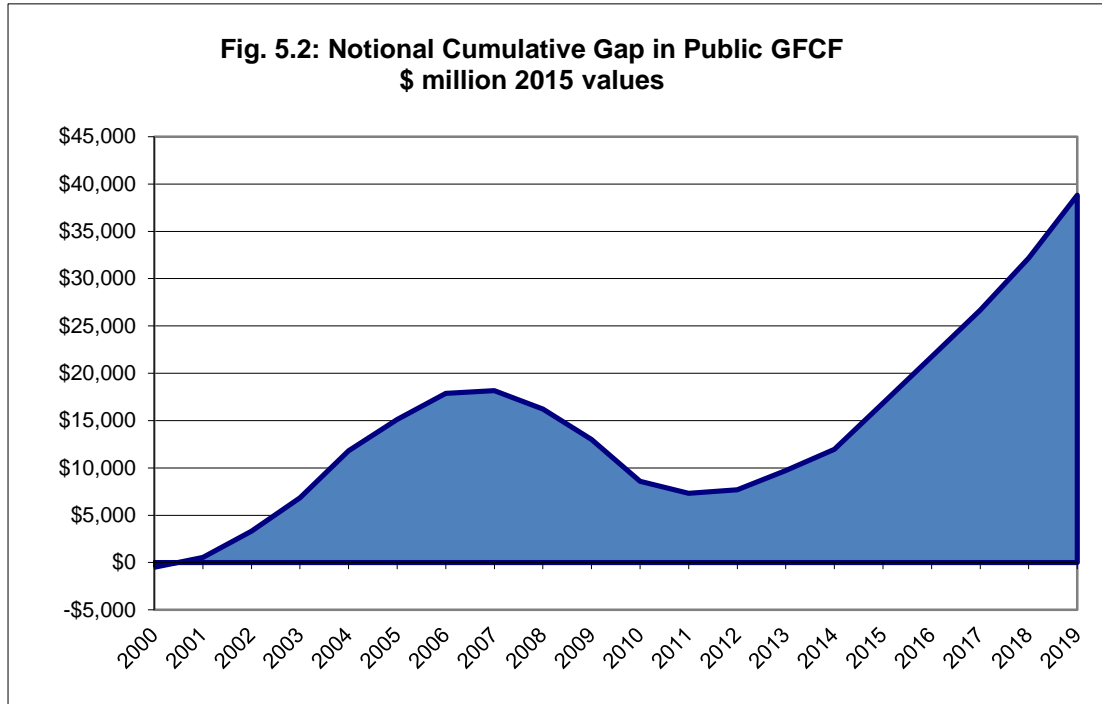
Figure 5.2 shows the notional cumulative infrastructure backlog based on Figure 5.1.

The two graphs illustrate the dramatic increase in the “gap” in the early 2000 period, the reduction in the “gap” through to 2011/12 and the anticipated increase in the “gap” over the period to 2019. Based on this analysis, the infrastructure backlog in 2015 is greater than it was in 2007.

While the infrastructure backlog had not been addressed even with high levels of investment in the 2004 to 2010 period, the potential for a significant increase in the infrastructure backlog is apparent from this analysis. By 2019, the notional infrastructure backlog relative to the 7% of GSP target will be approaching \$40 billion.



Source: ABS 5220.0 and Qld Budget Papers, Estimates for 2016 to 2019



In the context of this increasing “gap” in the current provision of infrastructure and what is required, Infrastructure Australia notes⁸ “... there is already a gap between the level of service required from our infrastructure and what is delivered... in the absence of an increase in infrastructure spending (on new projects and the maintenance of existing assets) and improvements in the way the nation manages its infrastructure, the gap will widen, and will pose significant challenges to Australians’ quality of life”.

⁸ Infrastructure Australia, Australian Infrastructure Audit, April 2015, p.30.

6. Improving the Delivery Process

While the need for adequate funding of infrastructure needs is apparent, as the analysis in this report shows, there are other areas where reform can assist in improving the delivery process and gaining efficiencies.

Key findings from the Productivity Commission Infrastructure Report⁹ include the following:

- *There is an urgent need to comprehensively overhaul processes for assessing and developing public infrastructure projects.*
- *It is essential to reform governance and institutional arrangements for public infrastructure to promote better decision making in project selection, funding, financing and the delivery of services from new and existing infrastructure.*
- *There is significant scope to improve public sector procurement practices and lower bid costs for tenderers, with potentially large benefits for project costs and timing.*
- *packaging major projects into smaller parts to increase the number of potential bidders where the benefits outweigh costs.*

Initiatives to unbundle large projects to provide a greater spread of competition have already been suggested by CCF to address some of the findings of the Productivity Commission report. Such a development would conceivably be a benefit to both the industry and the government.

While the Federal Government has accepted many of the Productivity Commission recommendations, it is not clear at this point what specific changes have been made to enhance infrastructure funding and delivery processes.

Infrastructure Australia¹⁰ notes that “...the overall quality of our infrastructure lags behind comparable nations” and that “... Australia will have to increase the amount of funding available from both public and private sources, to maintain and grow our infrastructure networks”. The report suggests a number of initiatives to improve the funding and delivery process. These include:

Pipeline of projects

Australia would benefit from a strong and consistent pipeline of well-planned infrastructure projects. This would provide greater certainty for infrastructure constructors and investors, and provide the basis for a well-resourced environment for project procurement and informed decision making.

Better planning

Best practice principles for infrastructure planning, procurement, delivery and operation have not been consistently implemented across governments. Improvements in infrastructure project appraisal and project selection (including the consistent use and transparent reporting of cost benefit analyses) are necessary if Australians expectations are to be realised.

Infrastructure Australia is currently developing an *Australian Infrastructure Plan*. This will be a 15 year Plan outlining a suite of recommended reforms as well as a comprehensive update of the nation’s list of priority large infrastructure projects.

⁹ Productivity Commission Inquiry Report, Public Infrastructure, May 2014, p 2 & p30

¹⁰ Australian Infrastructure Audit, Executive Summary, Infrastructure Australia, April 2015

While the Infrastructure Australia focus is on large projects (greater than \$100 million), the concept of a longer term pipeline of projects has merit for projects much smaller than this threshold.

While the proposed *Queensland State Infrastructure Plan* intends to provide a four year pipeline of projects that are approaching procurement and construction, a longer term pipeline would be desirable.

The Governor of the Reserve Bank of Australia (RBA) also commented recently on the importance of a pipeline of projects¹¹ noting *“... infrastructure spending has a role to play in sustaining growth and also in generating confidence ... it would be confidence-enhancing if there was an agreed story about a long-term pipeline of infrastructure projects, surrounded by appropriate governance on project selection ... The real economy would benefit from the steady pipeline of construction work – as opposed to a boom and bust ... We could unleash large potential benefits that at present are not available because of congestion in our transportation networks ... funding would be available, with long term interest rates the lowest we have ever seen or are likely to.”*

The CCF¹² has already advocated the need for a longer term and stable pipeline for infrastructure investment and the need to avoid “boom-bust cycles” noting that *“proper planning provides contractors with the certainty to make investment and employment decisions”*. This is consistent with the above statement by the Governor of the RBA on the role of a long term pipeline in enhancing confidence.

¹¹ Glenn Stevens , Governor, Reserve Bank of Australia, Address to the Economic Society of Australia, Brisbane, 10 June 2015

¹² Civil Contractors Federation, The Big 4 and CCF Qld Members’ Business Health, 2015

7. Conclusions

The 2004 *Building our Future* report identified the importance of public investment in economic infrastructure and its contribution to productivity and economic growth. The 2009 *Building our Future* update report highlighted the dramatic increase in public sector expenditure on economic infrastructure in Queensland in the five years to 2009. Funding in real terms for roads, water and sewerage in Queensland, more than doubled in the five years from 2004 to 2009.

The 2013 update revealed that the notional backlog in infrastructure investment dropped to its lowest level by 2011 as a result of the funding increases over the previous five years. The 2013 report identified that forward estimates painted a gloomy picture in terms of future investment in infrastructure in Queensland based on both Queensland and Federal Government budgets.

This 2015 update indicates that current forward projections suggest that the infrastructure backlog will rapidly increase over the next five years. By 2019, the notional cumulative backlog in infrastructure investment will be much greater than it was after the low level of infrastructure funding in the mid-2000s.

Forward estimates for road and transport funding to Queensland from the Federal Government are far more positive than was the case at the time of the 2013 update. Federal road and transport funding to Queensland is forecast to double between 2014/15 and 2016/17. Local Government road funding from the Federal Government will see a significant increase in the next two years.

Spending on road maintenance/renewal of the State-managed network in Queensland is low relative to the replacement value of the assets. This suggests there may have been a \$3 billion increase in the maintenance backlog over the last ten years.

Construction sector employment in Queensland has been falling over the period since 2008, reducing by some 30,000 jobs to May 2015.

The forecast drop-off in public outlays on GFCF in real terms from 2014/15 could see a further loss in construction jobs of around 10,000 jobs in the construction sector from 2015 to 2019. With multiplier effects, this could equate to over 20,000 jobs lost state-wide as a result in this decrease in real terms of public sector outlays on GFCF.

A number of government reports have pointed to the need to improve the delivery process for infrastructure across Australia. This includes reforming governance and institutional arrangements to promote better decision making, improving procurement processes, including unbundling of some major projects, as well as establishing a stable and consistent pipeline of well-planned projects. While there has been general acceptance by governments of such proposals, it is difficult at this point to see positive changes at the operational level.

The proposed *Queensland State Infrastructure Plan* is to establish a four year pipeline of projects that are approaching procurement and construction. However, a longer term pipeline would be desirable.

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