



## Australian Government

### Department of Infrastructure and Regional Development

Bureau of Infrastructure, Transport and Regional Economics



## BITRE Road Construction and Maintenance Price Index – 2014 update

### At a glance

The BITRE Road Construction and Maintenance Price Index (RCMPI) increased by 0.49 index points, between 2012–13 and 2013–14 (Table 1).

The largest contributor to this change was an increase in the prices of ‘site-based labour’ and ‘diesel fuel’. Increases in the prices of ‘office-based labour’, ‘cement and concrete’ and ‘quarry products’ explain the remainder of the change in the index.

These were counterbalanced, to a limited extent, by falls in ‘equipment hire/ depreciation’, ‘other materials (steel)’ and ‘bituminous materials’ over the same period.

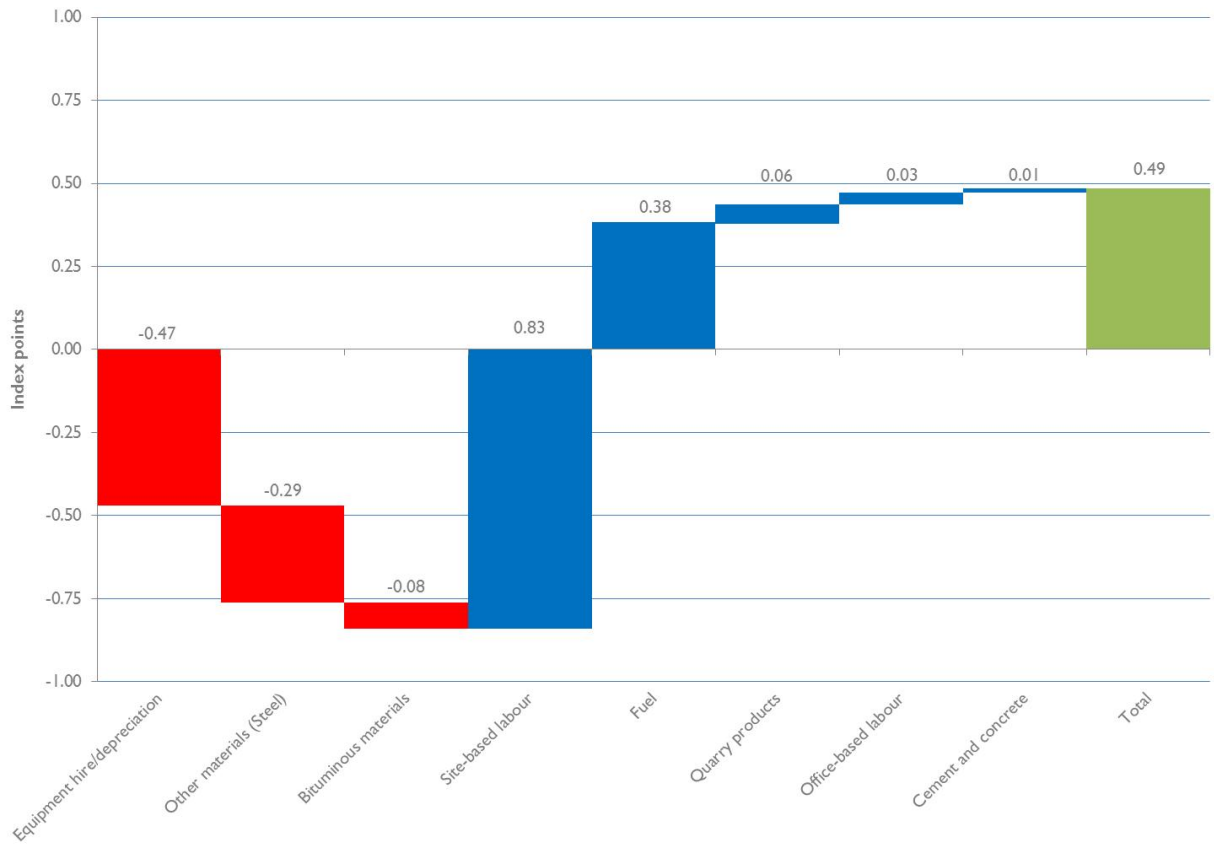
### I. Key Results

The cost of road construction and maintenance has increased by 0.49 index points between 2012–13 and 2013–14. The most significant contributors to the index increase were rises in ‘site-based labour’ and ‘fuel’ costs. They were counterbalanced, to a limited extent, by falls in ‘plant hire/ depreciation’, ‘other materials (steel)’ and ‘bituminous materials’ over the same period (Figure 1).

Figure 2 shows that between 2012–13 and 2013–14, the costs for road works changed at different rates depending on the type of works activity and type of road. The construction and maintenance of unsealed local roads had the largest cost increase of the road types reported, and maintenance costs increased more than construction costs. The RCMPI and its sub-indexes are also compared with the ABS Producer Price Index (PPI) for Road and Bridge Construction which increased 2.5 index points over the same period.

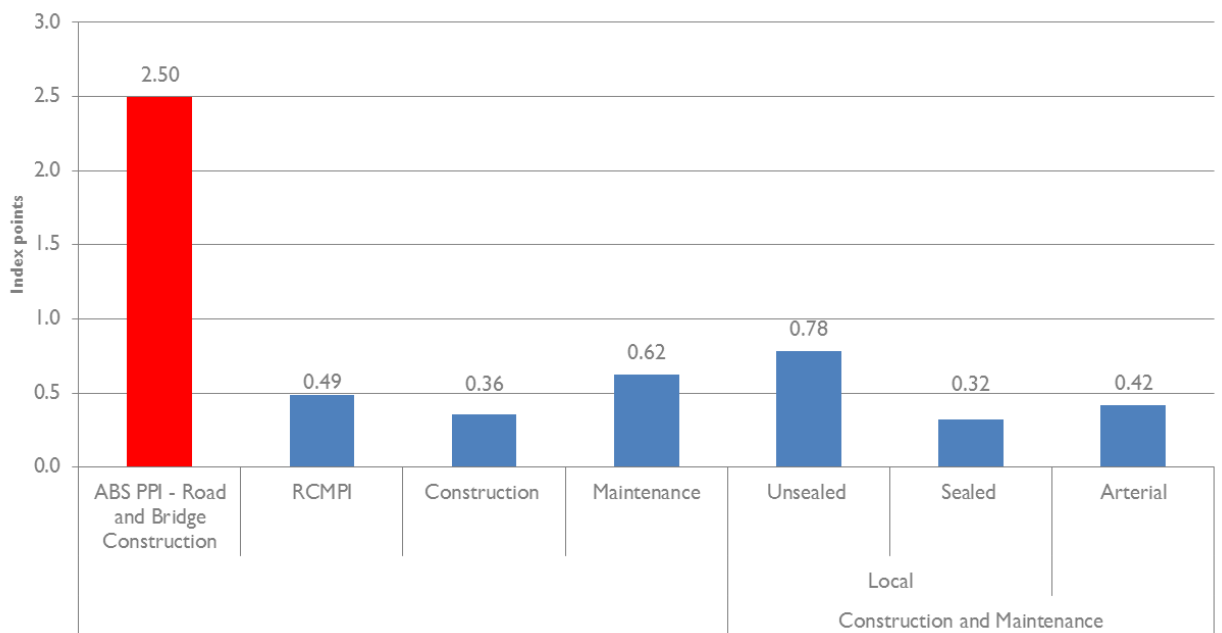
Table 1 shows the time series data of the RCMPI. Sub-indexes by activity and road type are provided in Table 2.

Figure 1: Contributions by inputs to the change in the BITRE RCMPI 2014 update (2014 data, 2013 input per cent shares) between 2012–13 and 2013–14



Source: BITRE estimates (2014).

Figure 2: Changes in the ABS Road and Bridge Construction PPI, the RCMPI and its sub-indexes, 2012–13 to 2013–14



Source: ABS (2014a), BITRE (2013) and BITRE estimates (2014).

Table I: BITRE Road Construction and Maintenance Price Index 2014 updates: 2014 input prices, 2013 input per cent shares (Quarterly, 2011–12=100)

Year	Quarter	RCMPI	RCMPI (Financial year basis)
2005	March	76.13	
	June	76.76	75.69
	September	78.54	
	December	79.01	
2006	March	79.24	
	June	80.41	79.30
	September	81.01	
	December	81.10	
2007	March	82.17	
	June	82.98	81.81
	September	84.59	
	December	85.93	
2008	March	86.64	
	June	89.32	86.62
	September	92.91	
	December	94.41	
2009	March	93.50	
	June	92.61	93.36
	September	92.27	
	December	92.40	
2010	March	92.20	
	June	93.12	92.50
	September	93.73	
	December	94.25	
2011	March	95.15	
	June	97.81	95.23
	September	99.02	
	December	99.84	
2012	March	99.84	
	June	101.30	100.00
	September	101.06	
	December	101.62	
2013	March	101.62	
	June	101.37	101.42
	September	101.96	
	December	101.59	
2014	March	102.08	
	June	101.99	101.90

Notes: Using 2011–12 as the Index reference period means that the average of the indexes for September quarter 2011, December quarter 2011, March quarter 2012 and June quarter 2012 is 100.

Source: BITRE estimates (2014).

Table 2: BITRE Road Construction and Maintenance Price Sub-Indexes 2014 updates: 2014 input prices, 2013 input per cent shares (Quarterly, 2011–12=100)

Year	Quarter	Road Construction	Road Maintenance	Arterial	Local Sealed	Local Unsealed
2005	March	76.20	75.93	75.55	76.31	76.85
	June	76.83	76.56	76.20	76.95	77.46
	September	78.58	78.37	78.02	78.70	79.31
	December	79.03	78.88	78.56	79.21	79.62
2006	March	79.22	79.15	78.81	79.40	79.77
	June	80.37	80.34	80.04	80.62	80.79
	September	80.99	80.93	80.63	81.14	81.53
	December	81.05	81.06	80.76	81.24	81.48
2007	March	82.10	82.12	81.76	82.26	82.67
	June	82.99	82.85	82.45	82.97	83.85
	September	84.53	84.55	84.18	84.59	85.27
	December	85.93	85.84	85.49	85.86	86.81
2008	March	86.62	86.58	86.27	86.60	87.41
	June	89.56	89.00	88.83	89.33	90.35
	September	93.77	91.99	92.44	93.07	93.87
	December	95.80	92.99	93.88	94.68	95.34
2009	March	94.86	92.10	92.95	93.72	94.35
	June	93.69	91.50	92.08	92.70	93.53
	September	92.96	91.54	91.79	92.22	93.22
	December	92.96	91.80	91.94	92.30	93.34
2010	March	92.59	91.76	91.70	91.94	93.36
	June	93.49	92.71	92.69	93.00	94.01
	September	93.95	93.45	93.30	93.57	94.59
	December	94.37	94.07	93.80	94.03	95.21
2011	March	95.28	94.95	94.57	94.80	96.52
	June	97.99	97.59	97.44	97.66	98.67
	September	99.11	98.93	98.98	99.01	99.16
	December	99.93	99.74	99.71	99.74	100.23
2012	March	99.76	99.92	99.90	99.88	99.66
	June	101.20	101.41	101.43	101.39	100.97
	September	101.00	101.15	101.28	101.14	100.58
	December	101.55	101.72	101.79	101.67	101.24
2013	March	101.52	101.75	101.81	101.64	101.23
	June	101.21	101.58	101.62	101.40	100.85
	September	101.59	102.38	102.40	102.09	100.94
	December	101.32	101.90	101.82	101.55	101.17
2014	March	101.85	102.35	102.23	101.95	101.92
	June	101.94	102.07	101.71	101.55	102.99

Notes: Using 2011–12 as the Index reference period means that the average of the indexes for September quarter 2011, December quarter 2011, March quarter 2012 and June quarter 2012 is 100.

Source: BITRE estimates (2014).

## 2. Explanatory notes

The RCMPI is an input-price index. It is used to measure the rate of change in the prices of goods and services, which are purchased by suppliers of road construction and maintenance services. It is intended to reflect trends in prices of major input components of road construction and maintenance.

The contribution of each input to the overall cost of road construction and maintenance work is determined by two factors: the unit price of the input and the input's per cent share in the total cost of road works.

The RCMPI is updated each quarter to reflect shifts in the price of inputs. The updates relied on quarterly data compiled by the Australian Bureau of Statistics (ABS) on input price changes and the Australian Institute of Petroleum on prices of diesel fuel.

Previously, the cost of bituminous materials was measured using the ABS (2014a) Producer Price Indexes series ID 2314822F which is no longer published. As a result price data for this input are now derived from the International Cargo Statistics database (ABS 2014c). This is done by dividing the total value of imports by their total weight for the following three Standard International Trade Classification (SITC) categories: '33541 – Petroleum bitumen and other residues of petroleum oils or of oils obtained from bituminous minerals', '33543 – Bituminous mixtures based on natural asphalt, on natural bitumen, on petroleum bitumen, on mineral tar or on mineral tar pitch' and '27897 – Bitumen and asphalt, natural; asphaltites and asphaltic rocks'.

Along with BITRE there were two other contributors to literature on road price indexes in Australia. In the past state road agencies have produced road construction and maintenance price indexes (see BTCE 1997). However, none of them have publicly released their road price indexes in recent times. ABS is the other contributor to literature on road indexes (see Box I).

### Box I: Comparing the BITRE RCMPI with the ABS Road and bridge construction output price index

From 2002, the ABS has published an output producer price index for the general construction industry in the Australian and New Zealand Standard Industrial Classification 1993 (ANZSIC93 subdivision 41). This index includes a component for 'Road and bridge construction' (ANZSIC93 subdivision 4121). Since 2005 this index has been published at both the national and state/ territory levels. The ABS index and the BITRE index are conceptually different because the 'Road and bridge' index is an output price index whereas the RCMPI is an input price index. The ABS 'Road and bridge' index takes into account the selling prices and includes changes in profit margins received by suppliers of road construction products. Despite the differences in scope between the ABS and RCMPI indexes, the two indexes diverge only slightly when compared with the RCMPI generally showing slower growth than the ABS index.

Source: BITRE (2013).

### 3. References

ABS 2014a, *Producer Price Indexes, Australia, June 2014*, ABS catalogue no. 6427.0, <<http://www.abs.gov.au/AUSSTATS>>

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