### **CONSTRUCTION PRICE INDEX**

(Input Cost Index for the construction of a single storey house)

### 2nd Quarter 2011

#### 1. Introduction

This issue of the Economic and Social Indicators presents the monthly Construction Price Index (residential) for the second quarter of 2011 with second quarter 2009 as base period. Figures showing the evolution of the index during the past twelve months are also included.

The methodology used for compiling the index is given in the annexed technical notes. Figures have been rounded to one or two decimal places although they have been calculated to many decimal places.

### 2. Evolution of the Construction Price Index (July 2010 to June 2011)

Chart 1 shows the movement of the Construction Price Index from July 2010 to June 2011, with the second quarter of 2009 as base. The index which stood at 100.9 in July 2010 decreased to 100.8 in August 2010 due to a slight decrease in the prices of steel bars. The index remained at 100.8 in September 2010 and thereafter registered an increasing trend to reach 104.5 in April 2011, mainly due to higher prices of paint, steel bars, timber joinery & carpentry, plumbing, hardcore, sand, aggregate, block and electrical installation. In May 2011 the index decreased to 104.4 mainly explained by lower prices of steel bars and remained unchanged in June 2011.

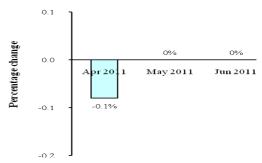


### 3. Changes in the Construction Price Index (April to June 2011)

The Construction Price Index, which stood at 104.5 at the end of March 2011 remained mostly at the same level in April 2011, as a result of a decrease of 1.6% in the prices of steel bars offset by increases of 1.9% in the prices of electrical installation, 0.1% in metal openings, 0.1% in plumbing and 0.2% in adhesive.

In May 2011, the index registered a slight decrease to reach 104.4 mainly due to decreases in the prices of both steel bars and galvanized corrugated cast iron sheet (-0.5%) partly offset by higher prices of metal openings (0.9%) and timber joinery (0.5%).

In June 2011 the index remained unchanged at 104.4 mainly as a result of increases in the prices of both galvanized corrugated iron sheet and adhesive (0.5%). timber joinery (0.9%) and hire of plant (1.0%) that were offset by decreases in the prices of steel bars (0.6%).



Compared to the corresponding months of the previous year, the index shows overall increases of 5.7% for April 2011, 4.2% for May 2011 and 4.0% for June 2011 (Table 1.3).

6.0 Percentage change 4.0

May 2011

Apr 2011

2.0

0.0

Percentage change from corresponding month of previous year

### 4. Changes by Input Categories

Changes by input categories are shown in Tables 1.1 to 1.5.

During the second quarter of 2011, no change was registered in the "Labour" and "Transport" sub-indices.

The "Hire of Plant" sub-index remained unchanged during the months of April and May 2011 and increased by 1.0% in June 2011 to reach 101.0.

The "Materials" sub-index decreased by 0.1% from 105.0 in March 2011 to 104.9 in April 2011 due to lower prices of steel bars (-1.6%) partly offset by increases in the prices of electrical installation (1.9%), metal openings (0.1%), plumbing (0.1%) and adhesive (0.2%).

In May 2011 although the sub-index remained at 104.9, decreases of 0.5% were observed in the prices of both steel bars and galvanized corrugated cast iron sheet. These decreases were offset by higher prices of metal openings (0.9%), timber joinery (0.5%) and plumbing (0.2%).

In June 2011 the sub-index dropped slightly by 0.1% to reach 104.8 mainly as a result of a 0.6% decrease in the prices of steel bars which was partly offset by increases in the prices of both galvanized corrugated iron sheet and adhesive (0.5%) and timber joinery (0.9%).

The net monthly contributions of the input categories to the index during the period July 2010 to June 2011 are shown in Table 1.4.

Quarterly averages of the monthly indices by input category and the percentage change from quarter to quarter are shown in Table 1.5.

### 5. Changes by Work Category

Changes by work category are shown in Tables 2.1 to 2.5.

During the month of April 2011, the 1.6% decrease in the prices of steel bars resulted in a 1.2% decrease in the "Reinforcement" work category. The "Electrical installation" work category registered a 1.5% increase following an increase of 1.9% in the prices of electrical installation.

In May 2011, the decrease of 0.5% in the prices of steel bars resulted in a 0.3% decrease in the "Reinforcement" work category and the "Metal openings" work category

registered an increase of 0.6% due to a rise of 0.9% in the prices of metal openings.

In June 2011 the "Reinforcement" work category went down by 0.5% following a decrease of 0.6% in the prices of steel bars, whilst the "Electrical installation" work category increased by 0.1% due to an increase of 0.2% in the prices of electrical items. The "Earthworks" work category registered an increase of 0.6% following higher rates for hire of plant (1.0%).

Table 2.4 shows the net monthly contributions of the work categories to the index since July 2010.

Quarterly averages of the monthly indices by work category and the percentage change from quarter to quarter are shown in Table 2.5.

#### 6. Past Trends

Table 3.1 summarises the monthly indices, the quarterly and yearly averages as well as the percentage changes in the yearly average since 2000. Indices for the years 2000 and 2001 have been worked out using as base the fourth quarter of 1993, while the base period for the calculation of the index from 2002 up to first quarter 2009 is the fourth quarter of 2001. As from April 2009 the base period used is the second quarter of 2009.

The series are not strictly comparable because of different base periods. However, for some particular purposes, comparison between the series may be necessary. A chain linked series with base period second quarter 2009 has been worked out and is given in table 3.2.

Central Statistics Office Ministry of Finance and Economic Development Port Louis August 2011

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(Base: 2nd Quarter 2009 = 100)

Table 1.1: Monthly sub-indices by input category, July 2010 to June 2011

Input Catagonias	Weight			202	10					20	11		,
Input Categories	weight	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
LABOUR	28.2	101.2	101.2	101.2	101.2	101.2	101.2	103.3	103.3	103.3	103.3	103.3	103.3
HIRE OF PLANT	3.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.0
MATERIALS:	64.2	100.9	100.7	100.7	101.7	102.0	102.1	102.2	104.3	105.0	104.9	104.9	104.8
Hardcore (remplissage)	1.8	109.5	109.5	109.5	109.5	109.5	109.5	109.5	113.5	116.2	116.2	116.2	116.2
Cement	12.7	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2
Sand	4.2	113.2	113.2	113.2	113.2	113.2	113.2	113.2	117.3	119.4	119.4	119.4	119.4
Aggregate	3.4	110.2	110.2	110.2	110.2	110.2	110.2	110.2	114.2	117.3	117.3	117.3	117.3
Block	5.2	103.3	103.3	103.3	103.3	103.3	103.3	103.3	106.4	108.8	108.8	108.8	108.8
Steel bars (armature)	10.6	102.4	101.2	101.2	104.0	105.1	105.5	105.2	109.4	109.9	108.2	107.6	107.0
Galvanised corrugated cast iron sheeting	0.6	100.0	100.0	100.0	100.0	100.0	100.0	101.2	102.1	102.1	102.1	101.5	102.1
Timber: (a) Carpentry	3.9	100.2	100.2	100.2	101.4	101.7	102.6	101.6	104.8	104.6	104.6	104.6	104.6
(b) Joinery	1.6	100.0	100.0	100.0	100.2	100.1	100.1	100.6	100.6	101.5	101.5	102.1	102.9
Aluminium openings	4.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Metal openings	2.7	104.9	104.9	105.6	105.6	105.6	105.6	105.7	106.4	106.4	106.5	107.4	107.5
Ceramic tiles	0.8	100.0	100.0	100.0	100.0	100.0	100.0	99.1	99.1	99.1	99.1	99.1	99.1
Adhesive	1.7	100.3	100.3	100.3	100.3	100.3	100.3	101.0	101.0	101.0	101.2	101.2	101.6
Paint	2.5	101.2	101.2	101.2	110.8	110.8	110.8	111.2	111.3	111.3	111.3	111.3	111.3
Plumbing	1.5	100.1	100.1	100.1	100.2	100.4	100.4	101.2	101.4	101.7	101.8	102.0	102.0
Sanitary installation	2.2	102.0	102.0	102.0	102.0	102.6	102.8	102.7	103.1	103.1	103.1	102.9	102.9
Electrical installation	4.7	99.9	99.9	99.9	99.9	101.6	101.6	103.7	107.2	107.8	109.9	109.9	110.1
TRANSPORT	4.3	100.0	100.0	100.0	100.0	100.0	100.0	109.1	109.1	109.1	109.1	109.1	109.1
Total	100.0	100.9	100.8	100.8	101.4	101.6	101.7	102.8	104.1	104.5	104.5	104.4	104.4

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(Base: 2nd Quarter 2009 = 100)

Table 1.2: Percentage change from previous month by input category, July 2010 to June 2011

						% ch	ange from	m previo	us month				
Input Categories	Weight	Jul 10	Aug 10	Sep 10	Oct 10	Nov 10	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	May 11	Jun 11
LABOUR	28.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
HIRE OF PLANT	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
MATERIALS:	64.2	0.9	-0.2	0.0	0.9	0.3	0.1	0.1	2.0	0.7	-0.1	0.0	0.0
Hardcore (remplissage)	1.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.4	0.0	0.0	0.0
Cement	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sand	4.2	2.8	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.8	0.0	0.0	0.0
Aggregate	3.4	6.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	2.7	0.0	0.0	0.0
Block	5.2	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.2	0.0	0.0	0.0
Steel bars (armature)	10.6	0.0	-1.2	0.0	2.8	1.1	0.4	-0.3	3.9	0.5	-1.6	-0.5	-0.6
Galvanised corrugated cast iron shee	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.8	0.0	0.0	-0.5	0.5
Timber: (a) Carpentry	3.9	0.0	0.0	0.0	1.2	0.3	0.9	-1.0	3.1	-0.2	0.0	0.0	0.0
(b) Joinery	1.6	0.0	0.0	0.0	0.2	-0.1	0.0	0.5	0.0	0.9	0.0	0.5	0.9
Aluminium openings	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metal openings	2.7	0.0	0.0	0.7	0.1	0.0	0.0	0.1	0.7	0.0	0.1	0.9	0.0
Ceramic tiles	0.8	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	0.0	0.0	0.0	0.0	0.0
Adhesive	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.5
Paint	2.5	0.0	0.0	0.0	9.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Plumbing	1.5	0.0	0.0	0.0	0.1	0.2	0.0	0.8	0.3	0.3	0.1	0.2	0.1
Sanitary installation	2.2	2.0	0.0	0.0	0.0	0.5	0.2	0.0	0.3	0.0	0.0	-0.1	0.0
Electrical installation	4.7	0.0	0.0	0.0	0.0	1.7	0.0	2.1	3.3	0.6	1.9	0.1	0.2
TRANSPORT	4.3	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0
Total	100.0	0.5	-0.1	0.0	0.6	0.2	0.1	1.0	1.3	0.4	-0.1	0.0	0.0

(Base: 2nd Quarter 2009 = 100)

Table 1.3: Percentage change from corresponding month of previous year by input category, July 2010 to June 2011

					% cha	nge from c	orrespond	ing month	of previou	ıs year			
Input Categories	Weight	Jul 10	Aug 10	Sep 10	Oct 10	Nov 10	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	May 11	Jun 11
LABOUR	28.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
HIRE OF PLANT	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
MATERIALS:	64.2	0.5	0.9	1.0	1.8	2.1	2.2	2.4	4.4	7.7	7.5	5.1	4.7
Hardcore (remplissage)	1.8	5.3	5.3	5.3	5.3	5.3	5.3	5.3	9.1	11.8	11.8	10.3	10.3
Cement	12.7	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	-8.8	0.0	0.0	0.0	0.0
Sand	4.2	3.8	3.8	3.8	3.8	3.8	3.8	3.8	7.6	9.5	9.5	8.4	8.4
Aggregate	3.4	6.0	6.0	6.0	6.0	6.0	6.0	6.0	9.9	12.9	12.9	11.2	11.2
Block	5.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	4.4	8.6	8.6	7.5	7.5
Steel bars (armature)	10.6	8.7	10.5	10.5	13.6	14.8	15.3	14.9	19.5	24.2	22.3	10.4	4.5
Galvanised corrugated cast iron shee	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.1	2.1	2.1	1.5	2.1
Timber: (a) Carpentry	3.9	-5.1	0.0	0.0	1.2	1.5	2.4	1.4	4.6	4.4	4.4	4.4	4.4
(b) Joinery	1.6	0.0	0.0	0.0	0.2	0.1	0.1	0.6	0.6	1.5	1.5	2.1	2.9
Aluminium openings	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Metal openings	2.7	2.9	1.0	1.7	1.8	1.8	1.8	1.9	2.7	1.6	1.6	2.5	2.5
Ceramic tiles	0.8	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
Adhesive	1.7	0.3	0.3	0.3	0.0	0.0	0.0	0.7	0.7	0.7	0.9	0.9	1.4
Paint	2.5	3.1	3.1	3.1	9.5	9.5	9.5	9.9	9.9	9.9	9.9	9.9	9.9
Plumbing	1.5	0.3	0.0	0.0	0.1	0.3	0.3	1.1	1.3	1.6	1.7	1.9	1.9
Sanitary installation	2.2	2.0	2.0	2.0	2.0	2.6	2.8	2.7	3.1	3.1	3.1	2.9	2.9
Electrical installation	4.7	-0.1	-0.1	-0.1	-0.1	1.6	1.6	3.7	7.2	7.8	9.9	3.5	10.3
TRANSPORT	4.3	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.1	9.1	9.1	9.1	9.1
Total	100.0	0.3	0.6	0.6	1.1	1.4	1.4	2.5	3.8	5.8	5.7	4.2	4.0

Table 1.4: Net monthly contributions of input categories to the index, July 2010 to June 2011

				20	10					20	11		
Input Categories	Weight	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
LABOUR	28.2	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.00
HIRE OF PLANT	3.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
MATERIALS:	64.2	0.51	-0.13	0.02	0.59	0.23	0.09	0.07	1.31	0.46	-0.08	-0.02	-0.03
Hardcore (remplissage)	1.8	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.05	0.00	0.00	0.00
Cement	12.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sand	4.2	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.09	0.00	0.00	0.00
Aggregate	3.4	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.11	0.00	0.00	0.00
Block	5.2	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.12	0.00	0.00	0.00
Steel bars (armature) Galvanised corrugated cast iron	10.6	0.00	-0.13	0.00	0.30	0.12	0.04	-0.03	0.44	0.06	-0.19	-0.05	-0.07
sheeting	0.6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
Timber: (a) Carpentry	3.9	0.00	0.00	0.00	0.05	0.01	0.04	-0.04	0.13	-0.01	0.00	0.00	0.00
(b) Joinery	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01
Aluminium openings	4.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Metal openings	2.7	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.03	0.00
Ceramic tiles	0.8	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.00
Adhesive	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
Paint	2.5	0.00	0.00	0.00	0.23	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Plumbing	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sanitary installation Electrical installation	2.2 4.7	0.04 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.01 0.08	0.00 0.00	0.00 0.10	0.01 0.16	0.00 0.03	0.00 0.10	0.00 0.00	0.00 0.01
TRANSPORT	4.3	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00
Total	100.0	0.51	-0.13	0.02	0.59	0.23	0.09	1.04	1.31	0.46	-0.08	-0.02	0.00

(Base: 2nd Quarter 2009= 100)

Table 1.5: Quarterly average of monthly indices and percentage changes by input category, 3rd Quarter 2010 to 2nd quarter 2011

Input Categories	Weight	20	10	20	11	% chang	e from previou	ıs quarter
Input Categories	Weight	3rd Qr	4th Qr	1st Qr 2011	2nd Qr 2011	4th Qr 2010	1st Qr 2011	2nd Qr 2011
LABOUR	28.2	101.2	101.2	103.3	103.3	0.0	2.0	0.0
HIRE OF PLANT	3.3	100.0	100.0	100.0	100.0	0.0	0.0	0.0
MATERIALS:	64.2	100.8	101.9	103.9	104.7	1.1	1.9	0.8
Hardcore (remplissage)	1.8	109.5	109.5	113.0	115.3	0.0	3.3	2.0
Cement	12.7	91.2	91.2	91.2	91.2	0.0	0.0	0.0
Sand	4.2	113.2	113.2	116.6	118.7	0.0	3.0	1.8
Aggregate	3.4	110.2	110.2	113.9	116.3	0.0	3.4	2.1
Block	5.2	103.3	103.3	106.2	108.0	0.0	2.8	1.7
Steel bars (armature)	10.6	101.6	104.9	108.2	109.1	3.2	3.2	0.9
Galvanised corrugated cast iron sheeting	0.6	100.0	100.0	101.8	102.1	0.0	1.8	0.3
Timber: (a) Carpentry	3.9	100.2	101.9	103.7	104.7	1.7	1.7	1.0
(b) Joinery	1.6	100.0	100.1	100.9	101.2	0.1	0.8	0.3
Aluminium openings	4.1	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Metal openings	2.7	105.0	105.6	106.2	106.5	0.5	0.6	0.3
Ceramic tiles	0.8	100.0	100.0	99.1	99.1	0.0	-0.9	0.0
Adhesive	1.7	100.3	100.3	101.0	101.0	0.0	0.7	0.1
Paint	2.5	101.2	110.8	111.2	111.3	9.5	0.4	0.0
Plumbing	1.5	100.1	100.3	101.4	101.6	0.2	1.1	0.2
Sanitary installation	2.2	102.0	102.4	103.0	103.1	0.4	0.5	0.1
Electrical installation	4.7	99.9	101.0	106.2	108.3	1.1	5.1	1.9
TRANSPORT	4.3	100.0	100.0	109.1	109.1	0.0	9.1	0.0
Total	100.0	100.9	101.6	103.8	104.4	0.7	2.2	0.5

## **Input Cost Index for the construction of a single storey house** (Base: 2nd Quarter 2009 = 100)

Table 2.1: Monthly sub-indices by work category, July 2010 to June 2011

Work Categories	Weight			20	10					20	11		
work Categories	weight	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1. Setting up	1.5	100.7	100.7	100.7	100.7	100.7	100.7	101.8	105.5	105.6	105.6	105.4	105.6
2. Setting out	0.5	100.8	100.8	100.8	100.8	100.8	100.8	101.7	111.6	111.5	111.5	112.0	112.0
3. Earthworks	3.3	105.5	105.5	105.5	105.5	105.5	105.5	106.7	108.9	110.4	110.4	110.4	111.1
4. Concrete	21.3	99.4	99.4	99.4	99.4	99.4	99.4	100.7	101.7	102.4	102.4	102.4	102.4
5. Reinforcement	14.6	101.3	100.4	100.4	102.4	103.2	103.6	104.8	107.8	108.2	106.9	106.5	106.0
6. Formwork (coffrage)	8.5	100.5	100.5	100.5	101.1	101.2	101.7	101.6	102.0	102.1	102.1	102.0	102.2
7. Blockwork	8.7	101.4	101.4	101.4	101.4	101.4	101.4	102.4	104.5	106.0	106.0	106.0	106.0
8. Softwood joinery	1.5	100.2	100.2	100.2	101.1	101.0	101.6	102.9	102.9	103.3	103.3	103.9	104.4
9. Aluminium Doors and Openings	6.0	100.5	100.5	100.5	100.5	100.5	100.5	101.1	101.1	101.1	101.1	101.1	101.1
10. Metal openings	4.1	103.8	103.8	104.3	104.6	104.7	104.7	105.4	106.0	106.0	106.0	106.6	106.6
11. Rendering to wall/ceiling (crepissage)	10.4	101.4	101.4	101.4	101.4	101.4	101.5	102.7	103.1	103.2	103.3	103.3	103.3
12. Bed & screed to floor/roof	3.8	101.2	101.2	101.2	101.2	101.2	101.2	102.2	102.9	103.2	103.2	103.2	103.2
13. Tiling	1.6	100.4	100.4	100.4	100.4	100.4	100.4	100.6	100.6	100.6	100.6	100.6	100.8
14. Painting	3.2	101.3	101.3	101.3	107.9	107.9	107.9	108.4	108.4	108.4	108.4	108.4	108.4
15. Plumbing and Drainage	5.0	101.3	101.3	101.3	101.3	101.6	101.7	102.6	102.8	102.9	102.9	102.9	102.9
16. Electrical installation	6.0	100.3	100.3	100.3	100.3	101.6	101.6	103.6	106.3	106.8	108.4	108.5	108.6
Total	100.0	100.9	100.8	100.8	101.4	101.6	101.7	102.8	104.1	104.5	104.5	104.4	104.4

# **Input Cost Index for the construction of a single storey house** (Base: 2nd Quarter 2009 = 100)

Table 2.2: Percentage change from previous month by work category, July 2010 to June 2011

						% ch	ange fro	m previo	us month				
Work Categories	Weight	Jul 10	Aug 10	Sep 10	Oct 10	Nov 10	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	May 11	Jun 11
1. Setting up	1.5	0.4	0.0	0.0	0.0	0.0	0.0	1.1	3.6	0.1	0.0	-0.2	0.2
2. Setting out	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	9.7	-0.1	0.0	0.5	0.0
3. Earthworks	3.3	2.2	0.0	0.0	0.0	0.0	0.0	1.2	2.1	1.4	0.0	0.0	0.6
4. Concrete	21.3	1.3	0.0	0.0	0.0	0.0	0.0	1.2	1.1	0.7	0.0	0.0	0.0
5. Reinforcement	14.6	0.0	-0.9	0.0	2.0	0.8	0.3	1.2	2.9	0.4	-1.2	-0.3	-0.5
6. Formwork (coffrage)	8.5	0.0	0.0	0.0	0.6	0.1	0.4	0.0	0.4	0.0	0.0	0.0	0.2
7. Blockwork	8.7	1.4	0.0	0.0	0.0	0.0	0.0	1.0	2.0	1.4	0.0	0.0	0.0
8. Softwood joinery	1.5	0.0	0.0	0.0	0.9	-0.1	0.0	1.3	0.0	0.4	0.0	0.5	0.4
9. Aluminium Doors and Openings	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
10. Metal openings	4.1	0.0	0.0	0.4	0.4	0.0	0.0	0.8	0.5	0.0	0.0	0.6	0.0
11. Rendering to wall/ceiling (crepis	10.4	0.3	0.0	0.0	0.0	0.0	0.0	1.2	0.3	0.2	0.0	0.0	0.1
12. Bed & screed to floor/roof	3.8	0.4	0.0	0.0	0.0	0.0	0.0	1.0	0.6	0.3	0.0	0.0	0.0
13. Tiling	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2
14. Painting	3.2	0.0	0.0	0.0	6.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
15. Plumbing and Drainage	5.0	0.9	0.0	0.0	0.0	0.3	0.1	0.8	0.2	0.1	0.0	0.0	0.0
16. Electrical installation	6.0	0.0	0.0	0.0	0.0	1.3	0.0	2.0	2.6	0.5	1.5	0.1	0.1
Total	100.0	0.5	-0.1	0.0	0.6	0.2	0.1	1.0	1.3	0.4	-0.1	0.0	0.0

(Base: 2nd Quarter 2009 = 100)

Table 2.3: Percentage change from corresponding month of previous year by work category, July 2010 to June 2011

					% cha	nge from c	orrespond	ing month	of previou	ıs year			
Work Categories	Weight	Jul 10	Aug 10	Sep 10	Oct 10	Nov 10	Dec 10	Jan 11	Feb 11	Mar 11	Apr 11	May 11	Jun 11
1. Setting up	1.5	0.1	0.1	0.1	0.1	0.1	0.1	1.2	4.8	5.4	5.4	5.1	5.3
2. Setting out	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	10.7	10.6	10.6	11.1	11.1
3. Earthworks	3.3	2.9	2.9	2.9	2.9	2.9	2.9	4.1	6.3	7.8	7.8	7.0	7.6
4. Concrete	21.3	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-0.8	0.3	4.5	4.5	4.1	4.1
5. Reinforcement	14.6	6.3	7.5	7.5	9.7	10.6	10.9	12.2	15.4	18.7	17.3	9.0	4.7
6. Formwork (coffrage)	8.5	-2.4	0.0	0.0	0.6	0.7	1.1	1.1	1.5	1.5	1.5	1.5	1.7
7. Blockwork	8.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.8	2.9	6.6	6.6	5.9	5.9
8. Softwood joinery	1.5	0.3	0.3	0.3	0.9	0.7	1.3	2.6	2.6	3.1	3.1	3.6	4.1
9. Aluminium Doors and Openings	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6
10. Metal openings	4.1	2.1	0.9	1.3	1.5	1.5	1.5	2.3	2.8	2.1	2.1	2.7	2.7
11. Rendering to wall/ceiling (crepis	10.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.1	0.1	0.4	2.2	2.2	2.1	2.2
12. Bed & screed to floor/roof	3.8	-2.1	-2.1	-2.1	-2.1	-2.1	-2.1	-1.1	-0.5	2.5	2.5	2.4	2.4
13. Tiling	1.6	-0.1	-0.1	-0.1	-0.3	-0.3	-0.3	-0.1	-0.1	0.1	0.2	0.2	0.3
14. Painting	3.2	2.0	2.0	2.0	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	7.0
15. Plumbing and Drainage	5.0	1.0	0.9	0.9	0.9	1.2	1.3	2.2	2.4	2.5	2.5	2.5	2.5
16. Electrical installation	6.0	-0.1	-0.1	-0.1	-0.1	1.2	1.2	3.2	5.9	6.4	8.1	3.1	8.4
Total	100.0	0.3	0.6	0.6	1.1	1.4	1.5	2.5	3.8	5.8	5.7	4.2	4.0

Table 2.4: Net monthly contributions of work categories to the index, July 2010 to June 2011

				20	10					20	11		
Work Categories	Weight	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1. Setting up	1.5	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.00
2. Setting out	0.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
3. Earthworks	3.3	0.07	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.05	0.00	0.00	0.02
4. Concrete	21.3	0.23	0.00	0.00	0.00	0.00	0.00	0.26	0.23	0.15	0.00	0.00	0.00
5. Reinforcement	14.6	0.00	-0.13	0.00	0.30	0.12	0.04	0.18	0.44	0.06	-0.19	-0.05	-0.07
6. Formwork (coffrage)	8.5	0.00	0.00	0.00	0.05	0.01	0.04	0.00	0.03	0.00	0.00	0.00	0.02
7. Blockwork	8.7	0.12	0.00	0.00	0.00	0.00	0.00	0.08	0.18	0.13	0.00	0.00	0.00
8. Softwood joinery	1.5	0.00	0.00	0.00	0.01	0.00	0.01	0.02	0.00	0.01	0.00	0.01	0.01
9. Aluminium Doors and Openi	6.0	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
10. Metal openings	4.1	0.00	0.00	0.02	0.01	0.00	0.00	0.03	0.02	0.00	0.00	0.03	0.00
11. Rendering to wall/ceiling (cr	10.4	0.03	0.00	0.00	0.00	0.00	0.01	0.13	0.04	0.02	0.00	0.00	0.01
12. Bed & screed to floor/roof	3.8	0.02	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.01	0.00	0.00	0.00
13. Tiling	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14. Painting	3.2	0.00	0.00	0.00	0.21	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
15. Plumbing and Drainage	5.0	0.04	0.00	0.00	0.00	0.02	0.00	0.04	0.01	0.00	0.00	0.00	0.00
16. Electrical installation	6.0	0.00	0.00	0.00	0.00	0.08	0.00	0.12	0.16	0.03	0.10	0.00	0.01
TOTAL:	100.0	0.51	-0.13	0.02	0.59	0.23	0.11	1.02	1.31	0.46	-0.08	-0.02	0.00

(Base: 2nd Quarter 2009= 100)

Table 2.5 Quarterly average of monthly indices and percentage changes by work category, 3rd Quarter 2010 to 2nd quarter 2011

		201	0	20	011	% change	e from previou	ıs quarter
Work Categories	Weight	3rd Qr	4th Qr	1st Qr 2011	2nd Qr 2011	4th Qr 2010	1st Qr 2011	2nd Qr 2011
1. Setting up	1.5	100.7	100.7	104.3	105.6	0.0	3.6	1.2
2. Setting out	0.5	100.8	100.8	108.3	111.5	0.0	7.4	3.0
3. Earthworks	3.3	105.5	105.5	108.7	109.9	0.0	3.0	1.1
4. Concrete	21.3	99.4	99.4	101.6	102.2	0.0	2.2	0.6
5. Reinforcement	14.6	100.7	103.1	106.9	107.6	2.4	3.7	0.7
6. Formwork (coffrage)	8.5	100.5	101.3	101.9	102.0	0.8	0.6	0.1
7. Blockwork	8.7	101.4	101.4	104.3	105.5	0.0	2.8	1.1
8. Softwood joinery	1.5	100.2	101.2	103.0	103.2	1.0	1.8	0.2
9. Aluminium Doors and Openings	6.0	100.5	100.5	101.1	101.1	0.0	0.6	0.0
10. Metal openings	4.1	104.0	104.6	105.8	106.0	0.6	1.1	0.2
11. Rendering to wall/ceiling (crepissage)	10.4	101.4	101.4	103.0	103.2	0.0	1.6	0.2
12. Bed & screed to floor/roof	3.8	101.2	101.2	102.7	103.1	0.0	1.5	0.3
13. Tiling	1.7	100.4	100.4	100.6	100.6	0.0	0.1	0.0
14. Painting	3.2	101.3	107.9	108.4	108.4	6.5	0.5	0.0
15. Plumbing and Drainage	5.0	101.3	101.6	102.7	102.9	0.3	1.2	0.1
16. Electrical installation	6.0	100.3	101.2	105.6	107.2	0.9	4.4	1.5
TOTAL:	100.0	100.9	101.6	103.8	104.4	0.7	2.2	0.5

Table 3.1: Construction Price Index - January 2000 to March June 2011

	(Base: 4th )	~			(Base: 4	Ith Quart	er 2001 =	· 100)			(Base:2n	d Quarte = 100)	r 2009
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2009	2010	2011
January	120.4	124.9	100.3	105.8	109.5	118.7	126.7	140.7	159.0	166.0		100.3	102.8
February	120.4	124.9	100.5	106.8	112.2	122.5	127.3	140.7	159.0	166.0		100.3	104.1
March	120.5	125.0	100.6	107.0	112.3	122.5	127.3	141.2	157.9	163.5		98.8	104.5
1st Quarter	120.5	124.9	100.5	106.5	111.3	121.3	127.1	140.9	158.7	165.2		99.8	103.8
April	120.4	124.9	100.7	107.1	112.3	122.5	127.9	144.1	157.9		100.2	98.8	104.5
May	120.4	124.9	101.5	107.1	112.3	122.7	127.9	144.3	157.9		100.0	100.2	104.4
June	120.5	124.9	101.5	107.1	115.5	122.7	129.9	147.4	161.2		99.8	100.4	104.4
2nd Quarter	120.5	124.9	101.3	107.1	113.4	122.6	128.6	145.2	159.0		100.0	99.8	104.4
July	121.5	126.9	105.4	108.1	116.4	124.6	134.4	150.5	165.2		100.6	100.9	
August	121.6	127.4	105.4	108.6	116.4	124.6	135.1	151.3	167.5		100.2	100.8	
September	121.4	127.4	105.4	109.4	117.0	124.6	135.1	151.6	169.2		100.2	100.8	
3rd Quarter	121.5	127.2	105.4	108.7	116.6	124.6	134.9	151.1	167.3		100.3	100.9	
October	124.3	127.6	105.2	109.4	117.3	125.3	135.1	152.9	170.0		100.3	101.4	
November	124.4	128.4	105.3	109.5	117.8	126.1	136.9	151.1	168.7		100.3	101.6	
December	124.4	128.5	105.3	109.5	118.4	126.1	137.1	151.4	167.2		100.3	101.7	
4th Quarter	124.3	128.2	105.3	109.5	117.8	125.8	136.4	151.8	168.6		100.3	101.6	
Yearly average	121.7	126.3	103.1	107.9	114.8	123.6	131.8	147.2	163.4			100.5	
% change in the													
yearly average	1.4	3.8	4.6	4.7	6.3	7.7	6.6	11.8	11.0				

Table 3.2: Construction Price Index - January 2000 to June 2011 (base period 2nd Qtr 2009=100)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
January	57.8	59.9	61.7	65.0	67.3	73.0	77.9	86.5	97.8	102.1	100.3	102.8
February	57.8	59.9	61.8	65.7	69.0	75.3	78.3	86.5	97.8	102.1	100.3	104.1
March	57.8	59.9	61.9	65.8	69.1	75.3	78.3	86.8	97.1	100.6	98.8	104.5
1st Quarter	57.8	59.9	61.8	65.5	68.5	74.6	78.2	86.6	97.6	101.6	99.8	103.8
April	57.8	59.9	61.9	65.9	69.1	75.3	78.7	88.6	97.1	100.2	98.8	104.5
May	57.8	59.9	62.4	65.9	69.1	75.5	78.7	88.7	97.1	100.0	100.2	104.4
June	57.8	59.9	62.4	65.9	71.0	75.5	79.9	90.6	99.2	99.8	100.4	104.4
2nd Quarter	57.8	59.9	62.3	65.9	69.7	75.4	79.1	89.3	97.8	100.0	99.8	104.4
July	58.3	60.9	64.8	66.5	71.6	76.6	82.7	92.5	101.6	100.6	100.9	
August	58.3	61.1	64.8	66.8	71.6	76.6	83.1	93.0	103.0	100.2	100.8	
September	58.2	61.1	64.8	67.3	72.0	76.6	83.1	93.2	104.1	100.2	100.8	
3rd Quarter	58.3	61.0	64.8	66.9	71.7	76.6	82.9	92.9	102.9	100.3	100.9	
October	59.6	61.2	64.7	67.3	72.2	77.1	83.1	94.0	104.6	100.3	101.4	
November	59.7	61.6	64.8	67.3	72.4	77.6	84.2	92.9	103.7	100.3	101.6	
December	59.7	61.6	64.8	67.3	72.8	77.6	84.3	93.1	102.8	100.3	101.7	
4th Quarter	59.7	61.5	64.7	67.3	72.5	77.4	83.9	93.3	103.7	100.3	101.6	
Yearly average % change in the yearly	58.4	60.6	63.4	66.4	70.6	76.0	81.0	90.6	100.5	100.6	100.5	
average	1.4	3.8	4.6	4.7	6.3	7.7	6.6	11.8	11.0	0.1	-0.1	

#### **Technical Note**

### Methodology for the compilation of the Construction Price Index

#### (i) Introduction

A Construction Price Index measures the change in the level of construction prices. The construction industry is very broad and highly diversified with considerable variations from one type of construction to another. This makes it difficult to derive generalized indices that would be applicable to the industry as a whole. Hence, separate indices for the different types of construction need to be compiled. At present, the Central Statistics Office publishes an index that covers residential buildings only.

### (ii) Types of Construction Price Indices

Different approaches to index number compilation are used depending on the purpose for which the index is required. There are two main types of construction price indices:

### The Output Price Index

In this approach, specific projects representative of the various categories of construction works are selected as models and construction firms are surveyed and asked to provide estimates of the prevailing market prices for each of the projects. As such, the output price indices respond to the changes in prices of materials used and cost of labour, as well as changes in overhead costs and profits.

#### The Input Price Index

The index is based on prices of a representative selection of basic inputs (labour, plant, materials and transport) that go into the construction work. Hence, the input price index measures the change in the cost of resources to the contractor, and not the change in the price that the client pays.

The office opted for the input price index which, though more limiting than the output price index, is simpler and less expensive to construct and maintain.

### (iii) Selection of representative dwelling

Since it would have been too time-consuming and costly to include all major types of residential dwellings, it was decided to restrict the index to a model dwelling, representing the most common type of dwelling in 2007. This model dwelling was determined on the basis of the 2000 Housing Census data and developments assumed to have taken place during the period 2000 to 2007. The drawings of the prototype model dwelling were provided by the Mauritius Housing Company Ltd. A description of the model is given at paragraph (viii) below.

### (iv) Weighting scheme

The quantity survey work to determine the weighting pattern for the index was entrusted to a private Quantity Surveyor following established procedures.

Any given construction consists of an assembly of a certain number of stages or work categories. Sixteen stages or broad work categories were identified and detailed costs of inputs in terms of labour, plant, materials and transport that go into the construction of the selected model were calculated under each of the 16 work categories. The weights have been worked out in such a way that they can be presented in terms of inputs as well as work categories. For publication purposes, weights and sub-indices are shown not only for the 16 work categories, but also for the 4 broad input categories of labour, plant, materials and transport, the "materials" category being further sub-divided into 17 sub-categories.

Changes in the weight structure from 2001 to 2009 are given at the end of this technical note. It is noted that there has been some reclassification within work categories while new ones have been identified. Also within work categories there has been some changes in the product mix as well as the introduction of some new products.

#### (v) Data collection

The data needed for the computation of the index are collected every month from a sample of 50 outlets in 8 regions of the island. Prices are collected in respect of some 109 items, representative of all items that go into the computation of the index.

### (vi) Calculation of the Construction Price Index

The Construction Price Index is a weighted average of price relatives of individual items, based on the modified Laspeyres formula:

$$\boldsymbol{I_t} = \frac{\sum W_i \left( P_{it} / P_{io} \right)}{\sum W_i} x 100$$

where  $I_t = index$  for current period t

 $P_{io}$  = price of item i at base period 0

 $P_{it}$  = price of item i at current period t

 $W_i$  = weight of item i

The base period is the 2<sup>nd</sup> quarter of 2009.

#### (vii) Uses

- a) Construction price indices give an indication of the change in the level of prices of construction works. As such, they are used as deflators for the measurement of real growth in the construction sector.
- b) They are also useful for evaluating cost fluctuations in contracts regarding construction works and for renegotiating owner-tenant agreements.

### (viii) Description of model dwelling

The model used is a single storey (ground floor) detached house of 138 square metres (1,485 square feet) in floor area measured at plinth level to the external face of the external walls. The overall area is inclusive of 18.55 square metres (200 square feet) in respect of a garage.

It comprises three bedrooms, a living-dining room, a kitchen, two toilets, a utility room, a bathroom, a verandah and an attached garage. The building has concrete block walls, reinforced concrete flat roof, internal flush plywood doors, aluminium openings for windows and entrance door, screeded floor and roof, tiling to floor and walls of w.c. and bathroom and kitchen worktop; the ceilings and walls are rendered and painted both internally and externally. Plumbing, sanitary installation and electrical installation are included as well as drainage which is to be connected to the sewerage system.

Provision has been made, in the form of more substantial foundations and of stub columns on the roof, for converting the single into a two-storey house eventually. Site works are restricted to spreading and leveling surplus excavated material around the site.

The index excludes the cost of the building permit and the draughtman's fee.

It is assumed that although the house is not constructed by a contractor, the client has recourse to the services of a foreman.