#### CONSTRUCTION PRICE INDEX

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

### 1st Quarter 2019

#### 1. Introduction

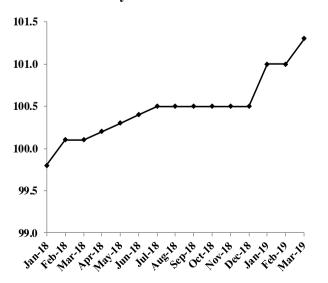
This issue of the Economic and Social Indicators presents the monthly Construction Price Index (residential) for the period first quarter 2018 to first quarter 2019 with first quarter 2018 as base period. Previous published series were computed using the second quarter of 2009 as base. A review of the specifications and weights was necessary to account for changes with respect to both inputs and technology that have occurred since 2009. The methodology used to compile the index has also been amended. As from 2018 onwards, the price relatives of individual items are calculated using geometric mean instead of arithmetic mean.

The methodology used for compiling the index and the changes in the weights structure are 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 (January 2018 to March 2019)

Chart 1 shows the movement of the Construction Price Index from January 2018 to March 2019 with the first quarter of 2018 as new base. The index which stood at 99.8 in January 2018, increased gradually to 100.5 in July 2018 and remained constant up to December 2018. In January 2019, the index jumped to 101.0, remained at the same level in February 2019 and reached 101.3 in March 2019.

Chart 1: Construction Price Index January 2018 to March 2019



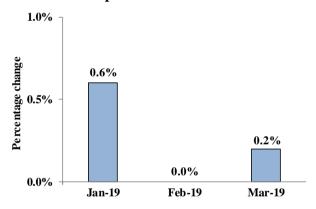
# 3. Changes in the Construction Price Index (January to March 2019)

The Construction Price Index, which stood at 100.5 at the end of December 2018, increased by 0.6% to reach 101.0 in January 2019, mainly due to higher wages following the 2019 salary compensation and increases in the prices of hardcore (remplissage) materials (1.3%), timber carpentry (1.0%) and granite (0.3%).

The index remained unchanged in February 2019.

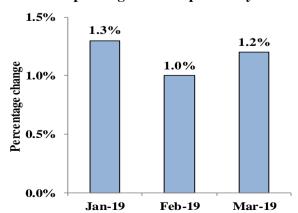
The index registered an increase of 0.2% in March 2019 to reach 101.3 mainly due to increases of 5.7% and 0.8% in the prices of cement and premixed mortar respectively. However, the effect of these increases was partly offset by a decrease of 0.5% in the prices of steel bars.

Chart 2: Percentage change from previous month



Compared to the corresponding months of the previous year, the index increased by 1.3% in January 2019, 1.0% in February 2019 and 1.2% in March 2019. (Table 1.3).

Chart 3: 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 first quarter of 2019, no change was registered in the "Transport" sub-index.

The "Labour" sub-index increased by 1.9% from 100.0 in December 2018 to 101.9 in January 2019 as a result of salary compensation. It remained unchanged during the months of February and March 2019.

The "Hire of Plant" sub-index which stood at 100.0 in December 2018 increased by 1.7% to reach 101.7 in January 2019 due to hire rates for hire of machinery. No change was registered in February and March 2019.

The "Materials" sub-index increased by 0.1% in January 2019 due to the following price increases: hardcore materials (1.3%), timber carpentry (1%) and granite (0.3%). The sub-index registered no change in the February 2019. In March 2019, the sub-index rose by 0.3% to reach 101.1, mainly due to increases in the prices of cement (5.7%) and premixed mortar (0.8%), coupled by fall in the prices of steel bars (-0.5%).

The net monthly contributions of the input categories to the index during the period January 2018 to March 2019 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.

In January 2019 all work categories, except "External openings", were affected by the 1.9% increase in wages.

In February 2019, no changes were observed.

During the month of March 2019, the "Grey building" sub-index increased by 0.4% as a result of increases in the prices of cement (5.7%) and premixed mortar (0.8%), partly offset by decreases in the prices of steel bars (-0.5%). At the level of work categories, the following changes were observed: "Concrete works" (0.6%), "Blockwork" (0.3%), "Plastering to ceilings and walls" (0.4%), "Screeding to floors and roofs" (2.2%) and "Reinforcement" (-0.4%).

Table 2.4 shows the net monthly contributions of the work categories to the index since January 2018.

Quarterly averages of the monthly indices by work category and the percentage changes 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 2009. The base period for the calculation of the index as from 2009 up to 2018 is the second quarter of 2009. As from 2018 the base period used is the first quarter of 2018.

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 first quarter 2018 has been worked out and is given in Table 3.2.

Statistics Mauritius
Ministry of Finance and Economic Development
Port Louis
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Contact persons: Mr. E. Romjon (Ag. Statistician)

Ms. F. Victor (Senior Statistical Officer)

**Statistics Mauritius** 

LIC Centre Port-Louis Tel: 208 1800 Fax: 213 0234

 ${\bf Email: cso\_construction@\ govmu.org}$ 

(Base: 1st Quarter 2018 = 100)

Table 1.1: Monthly sub-indices by input category, January 2018 to March 2019

Lumant Cata a series	<b>XX</b> 7 - 2 - 1-4						20	18							2019	
Input Categories	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
LABOUR	24.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.9	101.9	101.9
HIRE OF PLANT	5.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.7	101.7	101.7
MATERIALS :	68.6	99.7	100.1	100.2	100.4	100.4	100.6	100.7	100.7	100.7	100.7	100.7	100.7	100.7	100.7	101.1
Hardcore (remplissage)	2.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.8	100.8	100.8	100.8	100.8	102.1	102.1	102.1
Damp proofing	0.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cement	4.1	97.2	101.1	101.7	101.7	101.7	101.7	101.7	101.7	101.7	101.8	101.8	101.8	101.8	101.8	107.6
Aggregate	3.1	100.0	100.0	100.0	100.0	100.0	100.3	100.3	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5
Block	3.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Premixed concrete	13.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Premixed mortar	5.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.8
Steel bars (armature)	6.4	99.0	100.4	100.3	100.8	101.6	102.6	103.5	103.8	103.5	103.1	103.1	103.1	103.1	103.1	102.6
Timber: (a) Carpentry	1.9	99.8	100.1	100.1	101.6	101.6	101.6	101.8	101.8	101.8	101.9	101.9	101.9	102.9	102.9	102.9
(b) Joinery	2.1	100.0	100.0	100.0	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.6
Aluminium openings	13.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tiles and granite	3.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.2	100.2	100.2
Adhesive	0.2	100.0	100.0	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3
Paint	1.0	99.7	100.2	100.2	100.2	100.7	102.3	102.9	102.9	102.9	103.0	103.0	103.0	103.0	103.0	102.6
Laminated flooring	2.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Plumbing	3.9	99.1	100.4	100.4	100.4	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5	100.5
Sanitary installation	0.7	100.1	100.1	99.9	99.9	99.6	99.8	100.0	100.0	100.0	99.3	99.3	98.9	98.9	98.9	98.9
Electrical installation	1.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1	100.1	99.6	99.6	99.6	99.6
TRANSPORT	2.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total	100.0	99.8	100.1	100.1	100.2	100.3	100.4	100.5	100.5	100.5	100.5	100.5	100.5	101.0	101.0	101.3

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(Base: 1st Quarter 2018 = 100)

Table 1.2: Percentage change from previous month by input category, February 2018 to March 2019

Install Catalogue	<b>XX</b> 7-2-1-4						2018							2019	
Input Categories	Weight	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
LABOUR	24.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
HIRE OF PLANT	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
MATERIALS:	68.6	0.5	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.3
Hardcore (remplissage)	2.0	0.0	0.0	0.0	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Damp proofing	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cement	4.1	4.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.7
Aggregate	3.1	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Block	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Premixed concrete	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Premixed mortar	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Steel bars (armature)	6.4	1.4	0.0	0.5	0.8	1.0	0.9	0.3	-0.3	-0.3	0.0	0.0	0.0	0.0	-0.5
Timber: (a) Carpentry	1.9	0.2	0.0	1.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
(b) Joinery	2.1	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Aluminium openings	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tiles and granite	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.3	0.0	0.0
Adhesive	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paint	1.0	0.5	0.0	0.0	0.5	1.6	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.4
Laminated flooring	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plumbing	3.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sanitary installation	0.7	0.0	-0.2	0.0	-0.3	0.2	0.2	0.0	0.0	-0.7	0.0	-0.4	0.0	0.0	0.0
Electrical installation	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	0.0	0.0
TRANSPORT	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	0.3	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.2

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(Base: 1st Quarter 2018 = 100)

Table 1.3: Percentage change from corresponding month of previous year by input category, January 2019 to March 2019

Input Categories	Weight		nge from correspo	onding month
. 0	Ü	Jan 19	Feb 19	Mar 19
LABOUR	24.1	1.9	1.9	1.9
HIRE OF PLANT	5.0	1.7	1.7	1.7
MATERIALS:	68.6	1.1	0.6	0.9
Hardcore (remplissage)	2.0	2.1	2.1	2.1
Damp proofing	0.2	0.0	0.0	0.0
Cement	4.1	4.8	0.7	5.8
Aggregate	3.1	0.5	0.5	0.5
Block	3.2	0.0	0.0	0.0
Premixed concrete	13.9	0.0	0.0	0.0
Premixed mortar	5.0	0.0	0.0	0.8
Steel bars (armature)	6.4	4.2	2.7	2.3
Timber: (a) Carpentry	1.9	3.0	2.8	2.8
(b) Joinery	2.1	3.5	3.5	3.6
Aluminium openings	13.3	0.0	0.0	0.0
Tiles and granite	3.6	0.2	0.2	0.2
Adhesive	0.2	0.3	0.3	0.0
Paint	1.0	3.4	2.9	2.4
Laminated flooring	2.4	0.0	0.0	0.0
Plumbing	3.9	1.4	0.0	0.0
Sanitary installation	0.7	-1.2	-1.2	-1.0
Electrical installation	1.5	-0.4	-0.4	-0.4
TRANSPORT	2.2	0.0	0.0	0.0
Total	100.0	1.3	1.0	1.2

(Base: 1st Quarter 2018 = 100)

Table 1.4: Net monthly contributions of input categories to the index, February 2018 to March 2019

Innut Catagories	Weight						2018							2019	
Input Categories	Weight	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
LABOUR	24.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00
HIRE OF PLANT	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
MATERIALS:	68.6	0.31	0.02	0.14	0.05	0.09	0.07	0.04	-0.02	-0.02	0.00	-0.01	0.05	0.00	0.24
Hardcore (remplissage)	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Damp proofing	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cement	4.1	0.16	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
Aggregate	3.1	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Block	3.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Premixed concrete	13.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Premixed mortar	5.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Steel bars (armature)	6.4	0.09	0.00	0.03	0.05	0.06	0.06	0.02	-0.02	-0.02	0.00	0.00	0.00	0.00	-0.03
Timber: (a) Carpentry	1.9	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
(b) Joinery	2.1	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aluminium openings	13.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tiles and granite	3.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Adhesive	0.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paint	1.0	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Laminated flooring	2.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plumbing	3.9	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sanitary installation	0.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electrical installation	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
TRANSPORT	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.0	0.31	0.02	0.14	0.05	0.09	0.07	0.04	-0.02	-0.02	0.00	-0.01	0.60	0.00	0.24

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(Base: 1st Quarter 2018= 100)

Table 1.5: Quarterly average of monthly indices and percentage changes by input category, 1st Quarter 2018 to 1st Quarter 2019

			20	18		2019	%	change from p	revious quar	ter
Input Categories	Weight	1st Qr	2nd Qr	3rd Qr	4th Qr	1st Qr	2nd Qr 2018	3rd Qr 2018	4th Qr 2018	1st Qr 2019
LABOUR	24.1	100.0	100.0	100.0	100.0	101.9	0.0	0.0	0.0	1.9
HIRE OF PLANT	5.0	100.0	100.0	100.0	100.0	101.7	0.0	0.0	0.0	1.7
MATERIALS:	68.6	100.0	100.5	100.7	100.7	100.9	0.5	0.2	0.0	0.2
Hardcore (remplissage)	2.0	100.0	100.0	100.6	100.8	102.1	0.0	0.5	0.2	1.3
Damp proofing	0.2	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Cement	4.1	100.0	101.7	101.7	101.8	103.7	1.7	0.0	0.1	1.9
Aggregate	3.1	100.0	100.1	100.4	100.5	100.5	0.1	0.3	0.1	0.0
Block	3.2	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Premixed concrete	13.9	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Premixed mortar	5.0	100.0	100.0	100.0	100.0	100.3	0.0	0.0	0.0	0.3
Steel bars (armature)	6.4	100.0	101.7	103.6	103.1	103.0	1.7	1.9	-0.4	-0.2
Timber: (a) Carpentry	1.9	100.0	101.6	101.8	101.9	102.9	1.6	0.2	0.0	1.0
(b) Joinery	2.1	100.0	103.5	103.5	103.5	103.5	3.5	0.0	0.0	0.0
Aluminium openings	13.3	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Tiles and granite	3.6	100.0	100.0	100.0	99.9	100.2	0.0	0.0	0.0	0.2
Adhesive	0.2	100.0	100.3	100.3	100.3	100.3	0.3	0.0	0.0	0.0
Paint	1.0	100.0	101.0	102.9	103.0	102.9	1.0	1.9	0.1	-0.1
Laminated flooring	2.4	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Plumbing	3.9	100.0	100.5	100.5	100.5	100.5	0.5	0.0	0.0	0.0
Sanitary installation	0.7	100.0	99.8	100.0	99.1	98.9	-0.2	0.2	-0.8	-0.3
Electrical installation	1.5	100.0	100.0	100.0	99.9	99.6	0.0	0.0	-0.1	-0.3
TRANSPORT	2.2	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.3	100.5	100.5	101.1	0.3	0.2	0.0	0.7

(Base: 1st Quarter 2018 = 100)

Table 2.1: Monthly sub-indices by work category, January 2018 to March 2019

W. L.C.	*** * 14						20	18							2019	
Work Categories	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1. Grey building	58.3	99.7	100.1	100.2	100.3	100.3	100.5	100.6	100.6	100.6	100.6	100.6	100.6	101.2	101.2	101.6
1.1. Earthworks	4.5	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.3	100.3	100.3	100.3	100.3	102.1	102.1	102.1
1.2. Concrete works	19.3	99.7	100.1	100.2	100.2	100.2	100.2	100.2	100.2	100.2	100.3	100.3	100.3	100.3	100.3	101.0
1.3. Reinforcement	7.9	99.2	100.3	100.3	100.7	101.3	102.1	102.9	103.1	102.8	102.6	102.6	102.6	102.9	102.9	102.5
1.4. Formwork (coffrage)	6.5	100.0	100.0	100.0	100.4	100.4	100.4	100.5	100.5	100.5	100.5	100.5	100.5	102.0	102.0	102.0
1.5. Blockwork	6.8	99.8	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.8	100.8	101.1
1.6. Plastering to ceilings and walls	9.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.9	100.9	101.3
1.7. Screeding to floors and roofs	4.0	98.9	100.4	100.6	100.6	100.6	100.7	100.7	100.7	100.7	100.8	100.8	100.8	101.5	101.5	103.7
2. External openings	12.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
3. Internal openings and joinery works	2.7	100.0	100.0	100.0	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	102.1	102.1	102.1
4. Tiling	3.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.5	100.5	100.5
5. Painting	1.9	99.8	100.1	100.1	100.1	100.4	101.3	101.6	101.6	101.6	101.7	101.7	101.7	102.5	102.5	102.3
6. Parquet	2.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.1	100.1
7. Kitchen fit-out	2.2	100.0	100.0	100.0	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.9	101.8	102.5	102.5	102.6
8. Bathroom fit-out	1.7	100.0	100.0	99.9	99.9	99.8	99.9	100.0	100.0	100.0	99.7	99.7	99.6	99.6	99.6	99.6
9. Electrical works	2.2	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	100.4	100.4	100.4
10. Plumbing and Drainage	6.7	99.5	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	101.2	101.2	101.2
11. Site overhead costs	5.8	100.0	100.0	100.0	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	100.1	101.3	101.3	101.3
Total	100.0	99.8	100.1	100.1	100.2	100.3	100.4	100.5	100.5	100.5	100.5	100.5	100.5	101.0	101.0	101.3

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(Base: 1st Quarter 2018 = 100)

Table 2.2: Percentage change from previous month by work category, February 2018 to March 2019

W I C 4	***					P	ercentage	e change f	rom prev	ious mon	ıth				
Work Categories	Weight	Feb 18	Mar 18	Apr 18	May 18	Jun 18	Jul 18	Aug 18	Sep 18	Oct 18	Nov 18	Dec 18	Jan 19	Feb 19	Mar 19
1. Grey building	58.3	0.4	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.0	0.4
1.1. Earthworks	4.5	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	1.7	0.0	0.0
1.2. Concrete works	19.3	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
1.3. Reinforcement	7.9	1.1	0.0	0.4	0.6	0.8	0.7	0.2	-0.2	-0.3	0.0	0.0	0.4	0.0	-0.4
1.4. Formwork (coffrage)	6.5	0.1	0.0	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
1.5. Blockwork	6.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.3
1.6. Plastering to ceilings and walls	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.4
1.7. Screeding to floors and roofs	4	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	2.2
2. External openings	12.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Internal openings and joinery works	2.7	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
4. Tiling	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.6	0.0	0.0
5. Painting	1.9	0.3	0.0	0.0	0.3	0.9	0.3	0.0	0.0	0.1	0.0	0.0	0.9	0.0	-0.2
6. Parquet	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
7. Kitchen fit-out	2.2	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.7	0.0	0.0
8. Bathroom fit-out	1.7	0.0	-0.1	0.0	-0.1	0.1	0.1	0.0	0.0	-0.3	0.0	-0.1	0.0	0.0	0.0
9. Electrical works	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.7	0.0	0.0
10. Plumbing and Drainage	6.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
11. Site overhead costs	5.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Total	100.0	0.3	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.2

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(Base: 1st Quarter 2018 = 100)

Table 2.3: Percentage change from corresponding month of previous year by work category, January 2019 to March 2019

Work Categories	Weight	_	nge from corresp of previous year	onding month
Work Caregories	Weight	Jan 19	Feb 19	Mar 19
1. Grey building	58.3	1.5	1.1	1.5
1.1. Earthworks	4.5	2.1	2.1	2.1
1.2. Concrete works	19.3	0.6	0.2	0.8
1.3. Reinforcement	7.9	3.7	2.6	2.2
1.4. Formwork (coffrage)	6.5	2.1	2.0	2.0
1.5. Blockwork	6.8	1.0	0.7	1.0
1.6. Plastering to ceilings and walls	9.3	0.9	0.9	1.3
1.7. Screeding to floors and roofs	4.0	2.6	1.1	3.1
2. External openings	12.2	0.0	0.0	0.0
3. Internal openings and joinery works	2.7	2.1	2.1	2.1
4. Tiling	3.8	0.5	0.5	0.5
5. Painting	1.9	2.7	2.4	2.2
6. Parquet	2.5	0.1	0.1	0.1
7. Kitchen fit-out	2.2	2.5	2.5	2.6
8. Bathroom fit-out	1.7	-0.4	-0.4	-0.3
9. Electrical works	2.2	0.4	0.4	0.4
10. Plumbing and Drainage	6.7	1.7	0.9	0.9
11. Site overhead costs	5.8	1.3	1.3	1.3
Total	100.0	1.3	1.0	1.2

(Base: 1st Quarter 2018 = 100)

Table 2.4: Net monthly contributions of work categories to the index, February 2018 to March 2019

WILCO	*** * 14						2018							2019	
Work Categories	Weight	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1. Grey building	58.3	0.25	0.02	0.06	0.05	0.07	0.06	0.04	-0.02	-0.02	0.00	0.00	0.37	0.00	0.24
1.1. Earthworks	4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.08	0.00	0.00
1.2. Concrete works	19.3	0.08	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.12
1.3. Reinforcement	7.9	0.09	0.00	0.03	0.05	0.06	0.06	0.02	-0.02	-0.02	0.00	0.00	0.03	0.00	-0.03
1.4. Formwork (coffrage)	6.5	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
1.5. Blockwork	6.8	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.02
1.6. Plastering to ceilings and walls	9.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.04
1.7. Screeding to floors and roofs	4.0	0.06	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.09
2. External openings	12.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Internal openings and joinery works	2.7	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
4. Tiling	3.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
5. Painting	1.9	0.01	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
6. Parquet	2.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7. Kitchen fit-out	2.2	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
8. Bathroom fit-out	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	0.00	0.00
9. Electrical works	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.01	0.00	0.00
10. Plumbing and Drainage	6.7	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
11. Site overhead costs	5.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Total	100.0	0.31	0.02	0.14	0.05	0.09	0.07	0.04	-0.02	-0.02	0.00	-0.01	0.60	0.00	0.24

(Base: 1st Quarter 2018= 100)

Table 2.5 Quarterly average of monthly indices and percentage changes by work category, 1st Quarter 2018 to 1st Quarter 2019

			20	18		2019	% (	change from p	orevious quar	ter
Work Categories	Weight	1st Qr	2nd Qr	3rd Qr	4th Qr	1st Qr	2nd Qr 2018	3rd Qr 2018	4th Qr 2018	1st Qr 2019
1. Grey building	58.3	100.0	100.4	100.6	100.6	101.4	0.4	0.3	0.0	0.8
1.1. Earthworks	4.5	100.0	100.0	100.3	100.3	102.1	0.0	0.2	0.1	1.7
1.2. Concrete works	19.3	100.0	100.2	100.2	100.3	100.5	0.2	0.0	0.0	0.3
1.3. Reinforcement	7.9	100.0	101.4	102.9	102.6	102.8	1.4	1.5	-0.4	0.2
1.4. Formwork (coffrage)	6.5	100.0	100.4	100.5	100.5	102.0	0.4	0.1	0.0	1.5
1.5. Blockwork	6.8	100.0	100.1	100.1	100.1	100.9	0.1	0.0	0.0	0.8
1.6. Plastering to ceilings and walls	9.3	100.0	100.0	100.0	100.0	101.0	0.0	0.0	0.0	1.0
1.7. Screeding to floors and roofs	4.0	100.0	100.7	100.7	100.8	102.2	0.7	0.0	0.1	1.5
2. External openings	12.2	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0
3. Internal openings and joinery works	2.7	100.0	101.3	101.3	101.3	102.1	1.3	0.0	0.0	0.8
4. Tiling	3.8	100.0	100.0	100.0	100.0	100.5	0.0	0.0	0.0	0.5
5. Painting	1.9	100.0	100.6	101.6	101.7	102.5	0.6	1.0	0.1	0.8
6. Parquet	2.5	100.0	100.0	100.0	100.0	100.1	0.0	0.0	0.0	0.1
7. Kitchen fit-out	2.2	100.0	101.9	101.9	101.8	102.5	1.9	0.0	0.0	0.7
8. Bathroom fit-out	1.7	100.0	99.9	100.0	99.6	99.6	-0.1	0.1	-0.3	0.0
9. Electrical works	2.2	100.0	100.0	100.0	99.9	100.4	0.0	0.0	-0.1	0.5
10. Plumbing and Drainage	6.7	100.0	100.3	100.3	100.3	101.2	0.3	0.0	0.0	0.9
11. Site overhead costs	5.8	100.0	100.1	100.1	100.1	101.3	0.1	0.0	0.0	1.2
Total	100.0	100.0	100.3	100.5	100.5	101.1	0.3	0.2	0.0	0.7

Table 3.1: Construction Price Index - April 2009 to March 2019

Month				(Bas	se: 2nd Quart	er 2009 = 10	0)				(Base: 1st 2018 =	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018	2019
January		100.3	102.8	106.7	109.8	112.6	113.8	114.2	114.6	117.2	99.8	101.0
February		100.3	104.1	106.8	110.5	112.6	113.7	113.9	114.6	118.4	100.1	101.0
March		98.8	104.5	106.8	110.4	112.6	113.9	113.8	114.6	118.5	100.1	101.3
1st Quarter		99.8	103.8	106.8	110.2	112.6	113.8	114.0	114.6	118.1	100.0	101.1
April	100.2	98.8	104.5	108.6	110.9	112.6	114.0	113.8	114.7	118.6	100.2	
May	100.0	100.2	104.4	108.6	110.9	112.5	114.0	113.9	114.7	118.7	100.3	
June	99.8	100.4	104.4	108.6	111.0	112.5	114.1	113.9	114.7	118.8	100.4	
2nd Quarter	100.0	99.8	104.4	108.6	110.9	112.5	114.0	113.9	114.7	118.7	100.3	
July	100.6	100.9	104.3	108.7	111.0	112.4	114.1	114.1	114.8	119.0	100.5	
August	100.2	100.8	105.0	108.7	111.0	112.3	114.2	114.1	114.8	119.0	100.5	
September	100.2	100.8	105.2	108.8	111.1	112.3	114.3	114.1	114.9	118.9	100.5	
3rd Quarter	100.3	100.9	104.8	108.7	111.0	112.4	114.2	114.1	114.8	119.0	100.5	
October	100.3	101.4	105.4	108.8	111.2	112.4	114.2	114.1	114.9	118.9	100.5	
November	100.3	101.6	105.4	108.8	111.2	112.3	114.0	114.1	116.3	118.9	100.5	
December	100.3	101.7	105.5	108.9	111.5	112.3	113.8	114.1	116.3	118.9	100.5	
4th Quarter	100.3	101.6	105.4	108.8	111.3	112.3	114.0	114.1	115.8	118.9	100.5	
Yearly average		100.5	104.6	108.2	110.9	112.5	114.0	114.0	115.0	118.7	100.3	
% change in the yearly average		-0.1	4.1	3.5	2.4	1.4	1.4	0.0	0.8	3.2		

Table 3.2: Construction Price Index - January 2009 to March 2019 (Base period 1st Qtr 2018=100)

Month	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	86.5	84.9	87.0	90.4	93.0	95.4	96.4	96.7	97.0	99.8	101.0
February	86.5	84.9	88.2	90.5	93.6	95.4	96.3	96.5	97.0	100.1	101.0
March	85.2	83.7	88.6	90.5	93.5	95.4	96.5	96.4	97.1	100.1	101.3
1st Quarter	86.0	84.5	87.9	90.5	93.4	95.4	96.4	96.5	97.0	100.0	101.1
April	84.9	83.7	88.5	92.0	93.9	95.4	96.6	96.4	97.1	100.2	
May	84.7	84.8	88.5	92.0	93.9	95.3	96.6	96.5	97.2	100.3	
June	84.5	85.0	88.5	92.0	94.0	95.3	96.7	96.5	97.2	100.4	
2nd Quarter	84.7	84.5	88.5	92.0	94.0	95.3	96.6	96.5	97.2	100.3	
July	85.2	85.5	88.4	92.1	94.0	95.2	96.7	96.6	97.2	100.5	
August	84.9	85.4	88.9	92.1	94.1	95.2	96.8	96.6	97.2	100.5	
September	84.9	85.4	89.1	92.2	94.1	95.1	96.8	96.6	97.3	100.5	
3rd Quarter	85.0	85.4	88.8	92.1	94.0	95.2	96.7	96.6	97.2	100.5	
October	85.0	85.9	89.3	92.1	94.2	95.2	96.7	96.7	97.3	100.5	
November	85.0	86.1	89.3	92.2	94.2	95.1	96.6	96.7	98.5	100.5	
December	85.0	86.2	89.3	92.2	94.4	95.1	96.4	96.7	98.5	100.5	
4th Quarter	85.0	86.1	89.3	92.2	94.3	95.2	96.6	96.7	98.1	100.5	
Yearly average	85.2	85.1	88.6	91.7	93.9	95.3	96.6	96.6	97.4	100.3	
% change in the yearly average		-0.1	4.1	3.5	2.4	1.4	1.4	0.0	0.8	3.0	

### **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, Statistics Mauritius 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 2017. This model dwelling was determined on the basis of the 2011 Housing Census data and developments assumed to have taken place during the period 2011 to 2017. 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. Seventeen 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 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 also shown for broad input categories of labour, plant, materials and transport, and also for "grey building".

### (v) Data collection

The data needed for the computation of the index are collected every month from a sample of around 70 outlets in 8 regions of the island. Prices are collected in respect of some 91 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:

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

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 1<sup>st</sup> quarter of 2018.

At the level of individual items, the Jevons formula is used to calculate price relatives, that is, the geometric mean is used to compute the lowest level indices.

#### (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 137 square meters (1,475 square feet) in floor area measured at plinth level to the external face of the external walls. The overall area is inclusive of 17 square metres (183 square feet) in respect of a garage.

It comprises three bedrooms, a living-dining room, a kitchen, a toilet, a bathroom, a porch 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 floors, walls of w.c. and bathroom and kitchen worktop, laminated flooring in bedrooms; 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. The dwelling is also equipped with solar water heater and water tank.

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.

# Changes in weights from 2009 to 2018 by input category

Input categories	2009	2018
LABOUR	28.2	24.1
HIRE OF PLANT	3.3	5.0
MATERIALS:	64.2	68.6
Hardcore (remplissage)	1.8	2.0
Damp proofing	-	0.2
Cement	12.7	4.1
Sand	4.2	-
Aggregate	3.4	3.1
Block	5.2	3.2
Premixed concrete	-	13.9
Premixed mortar	-	5.0
Steel bars (armature)	10.6	6.4
Galvanised corrugated cast iron sheeting	0.6	-
Timber: (a) Carpentry	3.9	1.9
(b) Joinery	1.6	2.1
Aluminium openings	4.1	13.3
Metal openings	2.7	-
Tiles and granite	0.8	3.6
Adhesive	1.7	0.2
Paint	2.5	1.0
Laminated flooring	-	2.4
Plumbing	1.5	3.9
Sanitary installation	2.2	0.7
Electrical installation	4.7	1.5
TRANSPORT	4.3	2.2
Total	100.0	100.0

# Changes in weights from 2009 to 2018 by work category

Work categories	2009	2018
Earthworks	3.3	4.5
Concrete works	21.3	19.3
Reinforcement	14.6	7.9
Formwork (coffrage)	8.5	6.5
Blockwork	8.7	6.8
Plastering to ceilings and walls	10.4	9.3
Screeding to floors and roofs	3.8	4.0
External openings	10.1	12.2
Internal openings and joinery works	1.5	2.7
Tiling	1.6	3.8
Painting	3.2	1.9
Parquet	-	2.5
Kitchen fit-out	-	2.2
Bathroom fit-out	-	1.7
Electrical works	6.0	2.2
Plumbing and Drainage	5.0	6.7
Site overhead costs (Setting up and setting out)	2.0	5.8
Total	100.0	100.0