

# **Reference Cost of Typical works items in Building Rehabilitation**

## 1. User Guide

### 1.1 Welcome for Use

#### 1.1.1 Objectives

This section aims at providing pricing information for typical work items in general rehabilitation works of private buildings. It is to facilitate the public in need, such as the building owners and Owners' Committee, to obtain reference and carry out analysis.

#### 1.1.2 Data Maintenance

To reflect the market trend and price fluctuation, data would be updated every 6 months at the market price of past two quarters (i.e. past 6 months) after first release. For example, the data at the market price of first quarter of 2021 would be published in the third quarter of 2021.

### 1.2 Prepare for Use

#### 1.2.1 Understand the nature of the data

The price information provided in this section are based on the contract prices of several completed projects that participated in URA's various subsidised schemes for building rehabilitation. The contracts involved were all based on tenders from the market.

The data in the contracts have been compiled and analysed to identify the major cost components of a rehabilitation project. Using the same approach, the sub-components and the underlying Typical Works Items can also be determined. The analysis then further derives the average prices of each item in various time period.

As such, the unit rates provided can be considered as an abstract of historical contract prices of building rehabilitation projects that participated in subsidised schemes.

#### 1.2.2 Understand the diversity of rehabilitation works

A building consists of many elements. After experienced from various degrees of depreciation, wear and tear, it brings great diversity to rehabilitation works. As a result, the related costs comprise many underlying factors and vary widely.

Among the various factors in the costs of rehabilitation works, those commonly encountered are work trades involved, extent of the rehabilitation, technical requirements, scale of the building, condition in use, difficulty on site, temporary protective measures and market situations.

These factors not only vary on their own, but also form various combinations with other factors. As such, even for the same work item with the same item description and tendered at the same time, the prices may still vary in different contracts.

## **Reference Cost of Typical works items in Building Rehabilitation**

### 1.2.3 Understand your building/property

What is the type of your building/property? How is the current condition? Is it similar to those participated in the subsidised schemes? Anything deviated from it?

Due to the diversity of works, the rehabilitation of a building/property may not be similar with the others, and the costs are also not that comparable. However, by understanding beforehand the condition of your building/property and the possible rehabilitation works required, it may help reduce part of such uncertainty.

### 1.3 Basic Component

#### 1.3.1 Model Bill for Building Rehabilitation Works

This is one of the items from a series of tender and contract reference standard documents provided on Building Rehabilitation Platform (BRP). It can be considered as the pricing schedule template of works, with clear and fair clauses for use by Owner's Corporation and building owners.

#### 1.3.2 Typical work items

In general works contracts for building rehabilitation, it is common to have contract sum and prices of work items. Out of which, many work items are commonly encountered as well as forming the critical part of the project costs, which can be compiled into a list of typical work items.

Adding with the analysis on contract prices of the completed projects participated in the subsidised schemes, the typical work items can be supplemented with pricing information for reference use.

#### 1.3.3 Measurement Unit

The unit used for measuring the quantities of the work items.

#### 1.3.4 Reference Unit Rate

Unit rates are given as "all-in", where material, labour and all other related expenses are included. The extent to be included are stated in detail under each work item.

All rates are provided with average value and range of values, all in Hong Kong Dollars.

The ranges provided have been processed, which concentrating on representative scenarios and filtering out special cases. Thus, the ranges may not cover all possible cases, but are more comparable with normal situation, which strengthen the value of the reference information.



## **Reference Cost of Typical works items in Building Rehabilitation**

- d) Please note that the price level stated, e.g. “x Quarter 20xx prices”, stands for the prices at the time of tender close, instead of the prices at the time of looking up the item;
- e) The description of each Work Items has two parts. The first part is the title of the Typical work items. It contains keyword of the works to ensure an efficient searching, like “timber doors” and “rainwater disposal pipes”;

The last part is the description of works and method of measurement. The information is more detailed and specific. If you wish to comprehensively understand the work items, you should read through this part;

- f) If you need to look up other work items, please repeat the above procedures;
- g) Unit rates may be updated from time to time. Please re-visit every time when you refer to it;
- h) When directly comparing the costs of different projects and each presenting at its own price level, it would be rather difficult to interpret;

There are also cases that difficulty is encountered when referring to historical data and deriving current market price for cost estimates during planning for a building rehabilitation;

To facilitate price comparison, the price index is generally applied for adjusting the reference data to the same price level for subsequent analysis;

- i) For the price index, it can be accessed via BRP, where the index numbers, basis of compilation and method of application are all available for further reference.

### 1.5.2 Notes for reading data

The appropriate use of the information would help the efficiency of the whole exercise. Therefore, when looking up the information, please note the following:

- a) Building rehabilitation works relate to several disciplines and the costs therefore vary due to several factors. It is necessary to base on professional knowledge (or appoint a professional team) and focus on the actual situation of each building/property in evaluating the need such that the certainty can be bolstered;

The content of this section is appropriate for the purpose of reference of basic information, aiming at strengthening the knowledge on building rehabilitation and preparing for the next.

## **Reference Cost of Typical works items in Building Rehabilitation**

- b) In case of doubt or question when looking up the information, e.g. not able to understand the terminology, specifications stated not in line with one's requirements, etc., professional persons or team should be consulted in the first instance. Avoiding assuming on one's own or adopting the information directly. You may also contact BR Platform for enquiry (Tel: 3188 1188 / Email: brp@mail1.ura.org.hk)
- c) Since most of the work contracts that this section is based on were formed well before the introduction of the Model Bill, many of the Typical work items may not necessarily be same as those in the Model Bill. When studying both, attention should be drawn to such deviation in between.
- d) Similar to other market, prices of the work items also contain inflation (or deflation) factor and would change from time to time. When referring to other sources of pricing data at the same time, please pay attention to the difference in price levels and consider if it is appropriate to compare directly.
- e) The Typical work items is the basis of information in this section. In general building rehabilitation works, each of these of items would have their reasonable volume of works and the pricing information are given on such basis.

If a building rehabilitation project requires a much lesser volume of works, due to the difference in efficiency during manipulating the resources, the cost effectiveness may be affected. Please note when referring to the information in this section.

- f) Although the method of measurement has stated the item coverage of the unit rates [[Reference Link](#)], it does not mean that the whole coverage would happen on all cases. This means that not all cases are of the same combination of costs.

When referring to the unit rate ranges, one should also consider the situation of one's own building/property. For buildings with more complicated situation, even if the specifications are similar, the site difficulty may induce more procedures and the costs would become jacked up.

For example, when carrying out similar painting works to external walls, certain buildings include removal of abandoned objects and reinstatement. Thus, the costs of external wall painting for these building would be higher than the others.

## **Reference Cost of Typical works items in Building Rehabilitation**

- g) Basing on this observation, each value within the ranges of the unit rate is actually possible. Therefore, during analysis, one should focus on the factors that affect the costs because they are the root cause of the costs.

Others such as higher (or lower) than averages or close to upper (or lower) bound are views in analysis. They make the analysis become more objective, but are not the guides to be achieved.

In short, one should look from the root cause to interpret, averages and upper/lower bound are for reference only. The most important thing is to be able to interpret. This is the goal of the reference unit rates.

- h) Building Rehabilitation Works Price Index is basically for indicating the overall price movement of works. It is more suitable for comparing the costs of whole projects.

For individual work items, as the cost composition of items are different from one another, their price movement may not be similar. The Price Index is unable to reflect the price trend of each work item simultaneously.

If applying the Price Index to individual work items, it is necessary to make reference to other data at the same time to minimise misrepresentation.

- i) Given the diversity in building rehabilitation works, the diversity between special or odd cases are often substantial. Accordingly, the possible ranges of unit rates would become even wider.

This is predictable, only that they are not commonly encountered, which is more appropriate to follow professional person or team in dealing with them.

## 2. Methodology of Compilation

### 2.1 Sources of Data

#### 2.1.1 Historical data

The content of this section is compiled with reference to historical data. These data are extracted from the awarded contract prices of several projects in a series of subsidised schemes for building rehabilitation.

The contracts involved were all based on tenders from the market. The subsidised schemes are mainly “Operation Building Bright (OBB)” and “Integrated Building Maintenance Assistance Scheme (IBMAS)”.

## **Reference Cost of Typical works items in Building Rehabilitation**

### 2.1.2 Features of data

For the types of buildings that participated, about half of them are 9 storeys high or below. If classified by scale, about half comprise 40 units or below. If classified by age, more than half are 45 years old or above. If classified by District Council, 80% are in Yau Tsim Mong, Kowloon City, Sham Shui Po, Central & Western and Wan Chai Districts.

## 2.2 Compilation and Analysis

### 2.2.1 Database compilation

Since the terms and conditions in the tender and contract documents that prevailing in the building rehabilitation market vary from each other, the data collected have to go through a compilation process before they can be analysed.

The compilation process would also arrange the data into database format, standardise the classification and encode the data. This facilitates comparisons across projects for further analyse.

### 2.2.2 Basis of analysis

The analysis process is expected to be objective and comprehensive. Therefore, it is proceeded from technical and statistical perspective respectively. That includes eliminating those less comparable cases and keeping those more representable, which can strengthen the value of the reference information.

## 2.3 Item List and Unit Rates

### 2.3.1 Establish the list of Typical work items

Through the analysis on the pricing data of the works, the major cost components of a rehabilitation project can be identified. Using the same approach, the sub-components and the underlying major cost items can also be determined.

With such finding, the list of Typical work items is compiled and the average prices of each item in various period can also be derived.

## **Reference Cost of Typical works items in Building Rehabilitation**

### 2.3.2 Derive the unit rates

Since prices would change over time, computing average prices can only make use of data of the same period, if they are to be directly added up to get the arithmetic average.

However, this would limit the number of samples to be analysed and thus affect the representativeness. In view of such, the average prices of the Typical work items are obtained via the approach of regress analysis.

It is achieved by setting up a mathematical model for deriving the price movement, and then evaluating the most possible average during a given time period. Its advantage is that it can take in account data from a longer time period, covering more samples and contributing to a more convincing result.

### 3. Disclaimer

- 3.1 The reference information for costs of rehabilitation works and price index are for general reference only. No express or implied warranty is given to the accuracy or completeness of such information or its appropriateness for use in any particular circumstances. URA/BRP is not responsible for any loss or damages whatsoever arising from any cause whatsoever in connection with the above information or with this web site. URA/BRP reserves the right to make any amendment to the above information.
- 3.2 The Owners' Corporation (OC) / owners should bear in mind that the building rehabilitation cost is affected by various factors including but not limited to the scope of works and the scale of repair items , building size, building conditions and its state of maintenance and repair, choice of building materials used, and the prevailing market conditions of the trade, etc. In appointing suitable registered contractors, OCs / owners should obtain tender quotations from different registered contractors in an open tender for cost reference and analysis under proper professional cost advice and guidance from Authorized Person and / or other Building Professionals.