

PREPARATION OF BILL OF QUANTITIES USING COMPUTERS

BY

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Project Report

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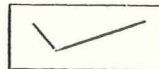
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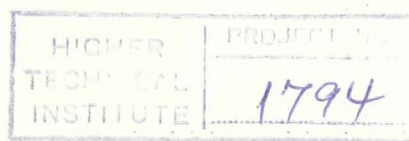
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## INTRODUCTION

The main object of this Project is to utilize the power of computer through a convenient software package to prepare a Bill of Quantities. It gives the benefits and the applications of the computer in the quantity surveying, and also information about the Bill of Quantities. It makes suggestions, about what computers have to offer in order to compete with the traditional methods used by quantity surveyors as well as suggestions about what the quantity surveyor has to do to face the new technological age.

A quite good project including basement, ground floor in two levels was chosen for preparing the Bill of Quantities.

The Wessex computerised system was used for the take-off of quantities by using a digitiser and also to prepare a Bill of Quantities. A description of how the system works as well as the advantages and disadvantages are written in this project. All measurements were calculated net as specified in the SMM7, and the trade method was used for preparing the Bill of Quantities. Moreover, samples of taking-off are given using the manual way for the purpose of comparison the results with the method of a digitiser.

As far as the estimating process is concerned, a programme called 'Case' was used for estimating the Bill. A brief description of how the system works together with a sample of built-up rates and a sketch showing the process of estimating are given, so that the reader of this project can obtain a visual impression. Moreover, break-down of various rates and costs are given showing labour, plant and materials.

Some difficulties were arised at the very early time of using the Wessex computerised system. These difficulties were firstly due to the descriptions in the library, which were in the form of SMM6, so prepared, to help also Engineers and the contractors to use the system. In addition, because of this, some descriptions were appkared to have a different unit of measurement compared with the SMM7. In order to overcome this, some descriptions were changed, together with their unit in accordance with the SMM7, and some others remained the same. Secondly, the rates in the database of the computer were in English pounds and in English way of estimating. However, the latter was solved by using the 'Case' estimating system.

Some errors, like duplication of a letter or inserting an unrelated figure in the descriptions or inconsistency in the drawing of vertical division (column) lines in the Bill of Quantities, are due to error in the programme of the computer.

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