3. The Building Cost Information Service – BCIS

3.1 Generally

This service, originally titled the Building Cost Advisory Service was set up by the Royal Institution of Chartered Surveyors in 1962 to provide cost data for use by quantity surveyors on a subscription basis. The subscription can now be for access by computer or quarterly updates on paper. The quantity surveyors are also responsible for providing the data to the service for dissemination to the other subscribers. No matter what the format of the data originally received by the BCIS, the final presentation was in one of two standard formats. The first was a listing of contract information and cost over the 6 elements printed on A5 paper. This format has now been discontinued. The format we will use later in the module in worked examples etc. is known as the ‘full analysis’ explained on the next few pages and includes varying degrees of detail but always the contract information and a cost breakdown over 30 plus elements and sub-elements.

The School of the Built Environment subscribes to the paper version and photocopies of all BCIS files are available in the School Information Unit. For the exercise(s) in this module, a number BCIS analyses are reproduced by kind permission of the BCIS.

3.2 Analysis

The data in the database has been referred to as analyses of cost. We are discussing cost planning so why are now talking about analysis? Earlier in these notes reference was made to the cost control process from the start of the design to the agreement of the final account. Cost planning was the first part of the process, which happens before tenders for the work were invited. When the tenders had been received and a winning tender was about to be announced the (generally) three lowest tenders were subjected to keen financial scrutinies by the quantity surveyor. One of the things he could do was break down the tenderers’ offers into elemental costs and make comparisons with the cost plan to which the design team had been working. These breakdowns are what is properly termed ‘cost analyses’ and each is the analysis of the successful tenderer’s offer which is held in the BCIS database.

So, the cost analysed for each building is tender cost. The reasons for using tender cost are those used to argue against using the final account.

- Final accounts are complex and the allocation of variation costs to elements would be difficult.
- Long delay in preparing many final accounts would lead to data being out of date.
- Allocation of increased costs and contractors’ claims to elements would be difficult.
3.3 The database

The largest single source of data presented in elemental format is the BCIS – Building Cost Information Service. Analyses are grouped according to building type using CI/SfB classification. The full analyses can be presented in four parts, parts one and two always being given.

Parts one and two comprise:
- A single page giving all contractual details and major sub-totals of the tender amount
- A single page giving complete cost breakdown over elements and sub-elements in two forms – preliminaries allocated and un-allocated. We generally use the costs with preliminaries allocated.
- Element unit quantities and rates are sometimes given.

The six main elements used in cost analysis and planning are:
1. Substructures
2. Superstructures
3. Internal Finishes
4. Fittings and Furnishings
5. Services
6. External Works

In addition there is a slot for the presentation of the cost of Preliminary Works. Preliminary works costs cover a wide variety of work which cannot be conveniently allocated to just one trade or element within the overall cost. These include scaffolding for the works, large plant such as cranes, excavators, dump truck, lorries etc; temporary roads, hoardings, fences, temporary water and power supply, temporary drainage, site hutting, compounds etc. In the analyses, preliminary work is presented in two ways; allocated and unallocated. In the case of allocated preliminary costs the sum of money is proportioned over the other 6 elements and the sub-elements. In the case of unallocated preliminary costs the sum of money is shown separately after the element and sub-element costs.

Elements 2, 3, 5 and 6 are broken down into sub-elements as follows:
2A Frame
2B Upper floors
2C Roof
2D Stairs
2E External walls
2F Windows and external doors
2G Internal walls and partitions
2H Internal doors
3A Wall finishes
3B Floor finishes
3C Ceiling finishes
5A Sanitary appliances
5B Services equipment
5C Disposal installations
5D Water installations
5E Heat source
5F Space heating and air treatment
5G Ventilating systems
5H Electrical installations
5I Gas installations
5J Lift installations
5K Protective installations
5L Communications installations
5M Special installations
5N Builder’s work in connection
5O Builder’s profit and attendance
6A Site works
6B Drainage
6C External services
6D Minor building works

Any contingency sum included in the tender documentation is noted at the end of the analysis. The quantity surveyor always uses any figure for cost/m$^2$ GFA excluding contingencies.

The element unit quantity (EUQ) and element unit rate (EUR) are a new concept for the reader and require explanation now as familiarity with the terms and how they are arrived at is essential. Take, for example, sub-element 2H, internal doors. The analysis might present you with an element unit quantity for internal doors given as an area of doors or as a number of doors. Neither quantity would take any notice of differing sizes or specifications of these internal doors. All would be included in the one element unit quantity. The element unit rate would be obtained by dividing the cost of the sub-element by the EUQ.

It is obvious that neither quantities, nor rate, are anything like the bill quantity and rate with which the student will be familiar. The quantity is measured without reference to any rules of measurement and the rate can only be the broadest of averages of the cost of providing, say, a square metre of door complete with frame, stops, facing, paint glass, ironmongery etc. An alternative EUQ would be simply the number of internal doors. There could be several different standards and sizes of doors, some glazed, some not, some fire doors, some not and so on; it would make no difference to either method of measuring the EUQ.
A further and common example might be the EUQ given for sub-element 5A, sanitary appliances. This EUQ would be the sum total of all the sanitary appliances in the building; all the WCs, baths, wash hand basins, urinals, shower slabs and compartments etc. Again the EUR would be the ‘average cost’ of these appliances.

The third part is frequently included and comprises a broad specification of materials and components used. Occasionally EUQs are given and the quantity surveyor can then calculate the EURs.

The fourth part is occasionally given and would include very much reduced copies of accommodation plans, sections and elevations. Details are never given. These drawings are not suitable for detailed measurement but in the absence of element unit quantities in part 3, some notion of these can occasionally be gleaned from these copies. It is frequently possible to assess EUQs for doors and windows, internal doors, sanitary appliances etc from these drawings.

### 3.4 Choosing an analysis

The BCIS database has thousands of analyses of a wide range of projects. When looking for an analysis to use to help with cost planning, it is important to find those which are most like the project being costed.

The hard copy analyses are published in categories to make it easier to find the ones most like your project. The online service allows you to search using parameters which can target the search more specifically. The system allows you to search for projects:

- In the same sector (e.g. commercial, leisure, retail, education etc)
- With the same function (e.g. offices, swimming pool, shopping mall, secondary school etc)
- Of a similar type e.g. new build, renovation
- With the same number of floors
- Of a similar Gross Floor Area
- With a basement or air conditioning

It is important to understand there can be a wide variance in overall costs for projects where these parameters vary so targeting the search is vital.

### 3.5 Location Factors, TPI and Inflation

As well as the variances in parameters, there will always be location and inflationary factors. BCIS is unlikely to have an identical project, just constructed,
A few minutes up the road! For this reason, BCIS also publish Tender Price Indices (TPI) and location factors. These allow the user to index an analysis to be more like the project being costed.

The BCIS Tender Price Indices are based on accepted tenders for new building work with contract sums over £100,000 which have been priced in competition or by negotiation. The current average contract value in the sample is around £1 million.

The All-in TPI is an all encompassing index which covers new building work in the UK and includes all sectors. The index is based on a random sample of schemes selected from the BCIS membership.

The All in TPI is also forecast, based on the assumptions given in the BCIS Briefing. BCIS examines a wide variety of economic indicators and ad hoc models based on their trends. Historic figures for All in TPI are also available to help with updating the chosen analyses to be relevant for up to date cost planning.

Regional differences in demand and supply will have a consequential effect on tender prices in different parts of the country. BCIS print location factors for all areas of the country.

Any chosen analyses must be updated to allow for the location and inflationary factors, in order to make it relevant to the cost plan being produced.
Example of the BCIS All in TPI is uploaded to VISION

Since March 1988 the BCIS TPI series have been published on a 1985 mean = 100 base.

BCIS TPS - Location Factors – uploaded to VISION
Location factors are printed by Region and County. The table below gives Regional and some examples of County breakdowns for Scotland

3.6 Other sources of data

We have already mentioned the possibility that the quantity surveyor could keep data from tenders which he has taken in for previous contracts. And, with the wider use of computerised bill production, this is a worthwhile task which far from creating extra work for the quantity surveyor, is a by-product of the checking of the tenders.

Published data from the construction press has always been used in forecasting cost and the AJ (Architects Journal) has a long and distinguished history of publishing cost analyses on a regular basis. Early analyses were based on the magazine’s own interpretation of what elements comprised but the BCIS format has long since been adopted. The School keeps a comprehensive file of these analyses.

Building magazine also has a long history of publishing cost data but very little of this has been in the form of formal cost analyses. However the articles, which explore the trends in national and international economies as they affect the construction industry plus comment etc. on materials and labour costs and trends, are extremely useful.

Pricing books such as Spons keep information on cost per m2 prices as well as element unit rates and individual material rates for more detailed cost planning.

3.7 Limitations

It is worth noting all the mentioned sources have limitations and it is important to understand what these are.

BCIS
The information produced by BCIS is only as good as the information they receive. The number of submitted tender prices is relatively small and doesn’t necessarily reflect the market as a whole.

As an example, one area of Scotland, Aberdeen, has historically had a similar location factor as the rest of the country. However, over recent years, it has been a difficult market to predict in terms of tender costs. For various reasons, tenders tend to be limited to a few local contractors and as a result, prices aren’t considered competitive.
Allowances have had to be made in cost planning for this location factor.

Another problem is with the indices which aren’t forecast such as the Services indices. There isn’t really a comprehensive Services submission and so trying to find accurate services comparators can be difficult.

Journals
Again the journals are limited because of a lack of input. Much of the information is very broad brush and can only really be used for a cost /m2 comparison.

Spons / other pricing books
Pricing books can provide a good source of more detailed information; however, we must be careful when “cherry picking” individual rates and costs as often these are compiled as an overall average. These will also rely on the application of a location factor.

In house information
Depending on the size of your company, your in-house database can be very useful, or very limited. Larger companies will generally have several similar projects happening in several different locations and these can be used to provide an excellent source of costing information. It should be the first port of call for any rates as they will more accurately reflect the most current prices for similar works in a similar area. BCIS factors can be applied where required.

However, a smaller company will have only a limited number and size of projects from which to choose, so using these rates may be in-accurate. It is also the case that many larger companies don’t keep a robust database of this information and so it can be difficult to find from other parts of an organisation.