Consulting Engineers – Delivering Quality in the Built Environment

Good design is good investment, and to achieve quality in the Built Environment there must have good design. This relies on the capabilities of the design team and the level of resources applied to the task.

Existing quality buildings are easily recognisable, they are in harmony with their surroundings. They are aesthetically pleasing. They have low maintenance cost. They have happy contented inhabitants. Recognising an existing quality building or structure is one thing, but how do you plan a new quality project? Firstly we must examine the overall life cycle cost of a building. Research has shown that a typical project life cycle cost is as follows:-

Therefore to achieve quality in the built environment we must take cognisance of these costs. The construction cost must be within the client’s budget or the project will not get built.

However if the budget estimate is too low and we try to meet the client’s requirements by reducing the specification and quality of the building, it will inevitably lead to an increase in the Operation and Replacement Cost. For example if our aim is to have “an energy efficient building with inbuilt measures to reduce maintenance”, and to achieve a construction cost saving we decide to reduce the quality of our weathering of the building or insulation quality, we are transferring a minor capital cost saving to a major operation cost.

For a quality building there is a balance between “Operation and Replacement Cost” and “Construction Cost”, and this can only be achieved by putting more time and effort into the design phase.

Adequate funding for planning and design early in a project can result in substantial savings either in the construction phase or operational phase or possibly in both.

Therefore to achieve Quality in the Built Environment we must give more recognition to the effect of the design. It has been shown that the addition of only one percent of the life cycle costs added to the design phase of a project could result in saving to the total project life cycle costs much greater than the total increased design fees.

Good design is good investment and good design has to be funded adequately. Hence the virtual abandonment in the USA and many other countries of fee bidding for design in favour of a quality based assessment recognising the influence of design on overall life cycle costs.

Consulting Engineers can deliver and do deliver quality in the Built Environment especially when funded properly.