Book review

Raw Concrete: The Beauty of Brutalism

B. Calder. William Heinemann, London, UK, 2016, ISBN 978-0-434-02244-1, £25.00, 406 pp.

This book, by an architectural academic and historian, covers the Brutalist era between 1955 and 1975. While it has already been reviewed a number of times in the national press, this particular review looks at it from a civil structural engineering perspective – many Brutalist buildings are akin, in scale and form, to bridges, retaining walls, power stations and so on, and the same issues tend to arise.

The Brutalist era developed out of post-war austerity, the welfare state and ever cheaper energy. Architects initially concentrated on function, lack of adornment and prefabrication, making full use of the tensile and flexural capabilities of reinforced concrete and steel, newly available in quantity. They were also soon considering the sculptural effect of their buildings and, by the late 1960s, some Brutalist buildings had a horror-film dominance predicted by fantasy artwork. The 1970s oil crisis and the failure of nuclear power to continue two centuries of unabated growth in available energy brought the Brutalist era to an end.

The book looks at eight separate British developments and/or the people behind them.

Chapter 1 is devoted to a tiny gem of a building, a plain concrete bothy on the far northwest coast of Scotland, hand-built in 1955 by a newly qualified architect, without regulatory input and seemingly as a form of therapy. There will be many computer-bound graduates today who would relish this healthy and expressive way of achieving requisite Initial Professional Development attributes.

Chapters 2 and 3 cover three large-scale, mainly residential, projects in London. Here the author shows that Brutalism was not the result of any one political mindset, rather it was an architectural trend brought about through engineering and construction technology advances.

New Court, Christ's College Cambridge, is an unashamedly Brutalist building located within an area of the city that had developed organically over a long period. Chapter 4 takes an unsurprisingly affirmative view in discussing this building's particular architectural worth in its traditional setting and thus, by inference, the movement's overall worth.

Professor Sir Leslie Martin's subtle influence in shaping the Brutalist movement is explored in Chapter 5. While he had a steering role in many projects, the internationally recognised Leicester Engineering Building (Figure 1) remains, perhaps, the best result of his artistic patronage.

Chapters 6 and 7 raise two of Brutalism's most obvious legacy issues – speculative commercial developments in which the architect's responsibility to the general public and to posterity was compromised, and the poor environmental performance of buildings from that era. The author uses significant exemplary projects in Glasgow to advance the argument that retention and sensitive modification, rather than complete demolition and reconstruction, is almost always the preferred option.

The title of Chapter 8, A Concrete Violin: The National Theatre, is succinct but appropriate. While this project emerged as an architectural

Figure 1. Leicester Engineering Building

masterpiece, never at any point did it run smoothly. In 1966, the Treasury rejected a large part of the outline design and set a limiting budget for the surviving element, thus placing the project managing architect, Denys Lasdun, under enormous pressure. The project's engineers, Flint & Neill, and the construction contractor, Sir Robert McAlpine & Sons, also had to address great challenges. Work on the difficult brownfield Thameside site started in 1969 and skilled labour shortages, trade union actions, the oil crisis and inflation all affected progress. Calder sums up his admiration '...looking at the finished building, it is hard to believe that the construction process was vexed by such endless difficulties: it is a Rolls-Royce of a concrete structure, magnificent in the ambition of its engineering and in the elegance of its construction craft'. It was opened in 1976.

Civil structural engineers should not be put off by the architectural origins and perspective of this book. It diligently, but with great generosity to all the people involved, from government ministers through to site craftsmen, portrays the political, client body, project management, design, detailing and construction activities that were required for Brutalist buildings but which are also typically required for any sizeable capital works project. There is much in this book that will be of enduring interest to most within the profession, at all grades.

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