

Consequences of Unforeseen Rework on Australian Construction Projects

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A case study approach

A Thesis

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by

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Statement of originality

The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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Abbreviations

ABC	Australian Broadcasting Commission
ABCC	Australian Building Construction Commission.
ABS	Australian Bureau of Statistics
AIB	Australian Institute of Building
ALP	Australian Labour Party
AMP	Australian Mutual Provident Society
ASC&J	Australian Society of Carpenters & Joiners
BCA	Building Code of Australia
BCI	Building Construction Industry
BLF	Builders Labourers Federation.
BPB	Building Professionals Board
BWIU	Building Workers Industrial Union
C'wth	Commonwealth
CC	Construction Certificate
CEO	Chief Executive Officer
CFMEU	Construction Forestry Mining Engineers Union
CPA	Communist Party of Australia
CPD	Continuing Practising Development
DA	Development Application
DLP	Democratic Labour Party
EBA	Enterprise Bargaining Agreement
EP&A	Environmental Planning & Assessment Act
FEDFA	Federated Engine Drivers & Firemen's Association
FIFO	Fly in fly out
FWA	Fair Work Australia
FWA	Fair Work Australia
FWB&C	Fair Work Building & Construction
GFC	Global Financial Crisis
HSC	Higher School Certificate
MBA	Master Builders Association
MMC	Modern Methods of Construction
NOLA	National Occupation Licencing Authority.
NSW	New South Wales

NZ	New Zealand
OFT	Office of Fair Trading
OHS	Occupational Health & Safety
OSM	Off Site Manufacture
PCA	Principal Certifying Authority
QC	Queens Council
RC	Royal Commission
RDA	Regional Development Australia
RPL	Recognised Prior Learning
RTO	Registered Training Organisation
S&T	Standards & Tolerances
SEPP65	State Environmental Planning Policy No 65
SEPP	State Environment Planning Policy
TAFE	Technical & Further Education
VBC	Victorian Building Commission
WC	WorkCover

Abstract

Rework is a phenomenon that has crept into the building construction industry and gained the interest of many academics. Rework is typically a product of faulty construction outcomes arising from a number of causes including shortcomings in professional management, design documentation and job site cultural environment resulting from ethnic differences and / or trades union involvement. The opportunity for this study arose after two similar projects were deemed distressed by their financiers and both required substantial rebuilding. These projects had a common thread of being constructed by Chinese builders, one from Hong Kong (CS1), the other (CS2) from the Peoples Republic of China. Both came under pressure from the Construction Forestry Mining Engineers Union (CFMEU), the union representing construction workers. It was initially thought that cultural ethnic differences combined with the CFMEU's influence on both projects were the catalysts for rework. However, subsequent investigation indicated that the regulatory environment allowed construction to continue unabated. The intention of this study was to unpack possible causations, collect them into themes and then gather data to answer the primary research question of why the two buildings were seemingly allowed to be constructed unchecked. A mixed method research methodology (MMR) was adopted for the data collection and triangulation principles for the data analysis. MMR was suited for this study as the quantitative results provided an overview of rework causation whilst the qualitative findings swayed the pendulum away from cultural causation to regulatory causation. Triangulation provided a threefold perspective from literature, external consultants and those physically working on the projects. This study is unique as it examined two straightforward high-rise buildings with similar attributes that were allowed to progress to a stage of distress. The study identified questionable construction methods, particularly on one project, whilst both projects underwent major removal and replacement of services. The initial premise of this study was the belief that both projects became distressed due to the ethnological cultural differences of both builders' management practices compared to the local 'home grown' methods of construction commonly adopted by the remainder of the workforce. It became evident that culture did play a minor role contributing to rework but the central pillar was something quite different as detailed in this study. Reluctance by Government to adopt regulatory changes suggested by Royal Commissions and Inquiries have created gaps within the regulatory environment allowing non-compliant works to be carried out unchecked and thus creating rework.

Personal Reflection

I commenced this study after completing in excess of 40 years in construction. During that period I undertook various short courses that were of personal interest as well as those that helped me with my business activities. At no time did I consider a higher degree, let alone in construction. As a result of a chance meeting with my thesis supervisor, who was visiting my site for his own research project, the prospect of further education became a consideration for me.

I am now in my fifth year at university lecturing part time whilst still maintaining my project management interest within industry. This close relationship with the university has prompted me to undertake two higher degree courses, one in research (MPhil) and the other a Masters in Project Management. This part of the journey is now nearing completion as I reflect back a number of key people who have assisted me on my way.

- A very understanding family.
- Two supervisors, A/Professor Willy Sher and Professor Tony Williams who have become more than just friends. The understanding, counsel, advice, teaching and mentoring they have given me is more than anyone could expect or ask for.
- My learned colleagues at the University of Newcastle.
- My colleagues within the Australian Institute of Building and the Master Builders Association.

From a mature age student perspective, the task of learning academic writing does not come easily, especially when one has been subjected to years of adversarial communiqués on construction projects. Perhaps that was one of the greater challenges to overcome. The other challenge is to put to one side self-opinionated subjectivity and let the data do the talking. One thing that I have learnt is that the more sound the data collected, the more reliable is the result.

Disclosure

The reason for selecting this research topic is my close and personal association with a distressed project I was appointed to manage to completion. The project was a major high profile one that underwent considerable rework and all concerned during this process could not fathom the sheer extent and cost required to rectify faulty workmanship. My close association with this project has afforded me access to all the key stakeholders associated with the project. To this I have added my own personal records gathered during my term on the project.