

THE CONSTRUCTION MANAGEMENT SUMMIT 2012

KEMPTON PARK, 20 – 21 JUNE 2012

CONSTRUCTION MANAGEMENT IN SOUTH AFRICA THE ACADEMIC PERSPECTIVE

PROFESSOR JOHN SMALLWOOD

Context of the presentation / Presenter's background (1)

- **5-Year BSc (Building Management) (included Honours) (1980 – 1984)**
- **MSc (Constr Man) (1995)**
- **PhD (Constr Man) (2000)**
- **M&R (EP) (Pty) Ltd. bursary student**
- **Worked during vacations**
- **1st Year June / July – shutter hand, deckhand etc. 80c / hr 9 hrs / day**
- **Worked in various departments**
- **Employed 'full time' during 4th and 5th years (1983 / 4)**
- **Managed Holiday Inn, Summerstrand project in 5th year**
- **Worked as a construction surveyor after graduating**
- **Ended contracting career as a Contracts Manager, 31 May 1990**

Context of the presentation / Presenter's background (2)

- **SAIB:**
 - Student Member (1981 - 1984)
 - Affiliate Member (1985 - 1986)
 - Full Member (1987 - ?)
 - East Cape Branch Committee (1985 - ?)
 - Member of Council (1988, 1989, 1991 - current)
 - Junior Vice-President (1992 & 1993)
 - Senior Vice-President (1994 & 1995)
 - Acting President (July 1995 - February 1996)
 - President (March 1996 - April 1998)
 - Past President (May 1998 - April 2000)
 - Along with Mark Massyn, initiated the incorporation of the SAIB into the CIOB – 1997?
- **CIOB (Africa):**
 - Member of Council (January 2005 - June 2006)

Introduction (1)



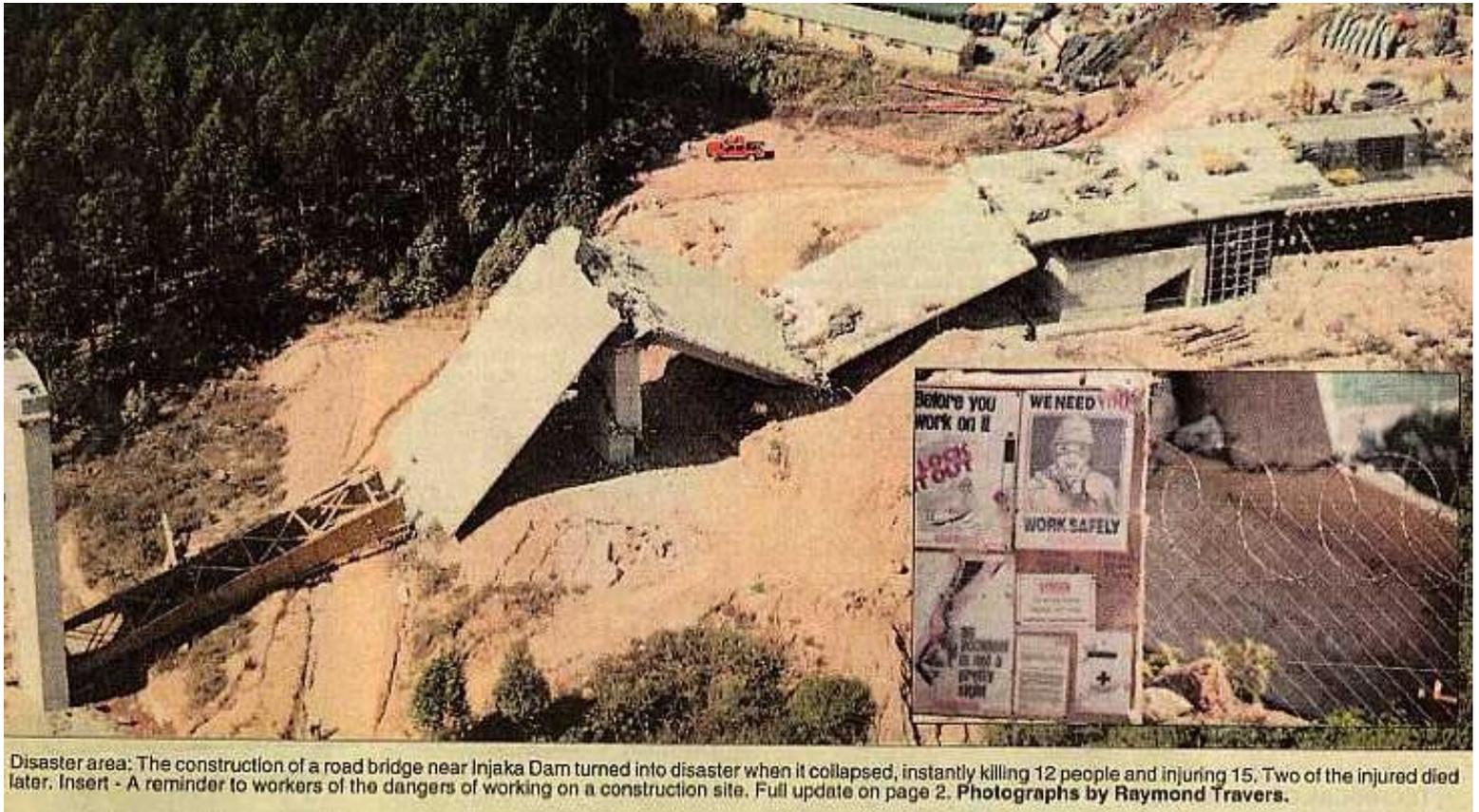
Pretoria North Shopping Centre slab collapse, October, 1996 (Davis, 1996)

Introduction (2)



Investec Office Complex scaffolding collapse, Sandton, August, 1997 (Prinsloo, 1997)

Introduction (3)



Injaka Bridge collapse, Mpumalanga, July, 1998 (Travers, 1998)

Introduction (4)



Coega Bridge collapse, Port Elizabeth, November, 2003 (Markman, 2003)

Introduction (5)



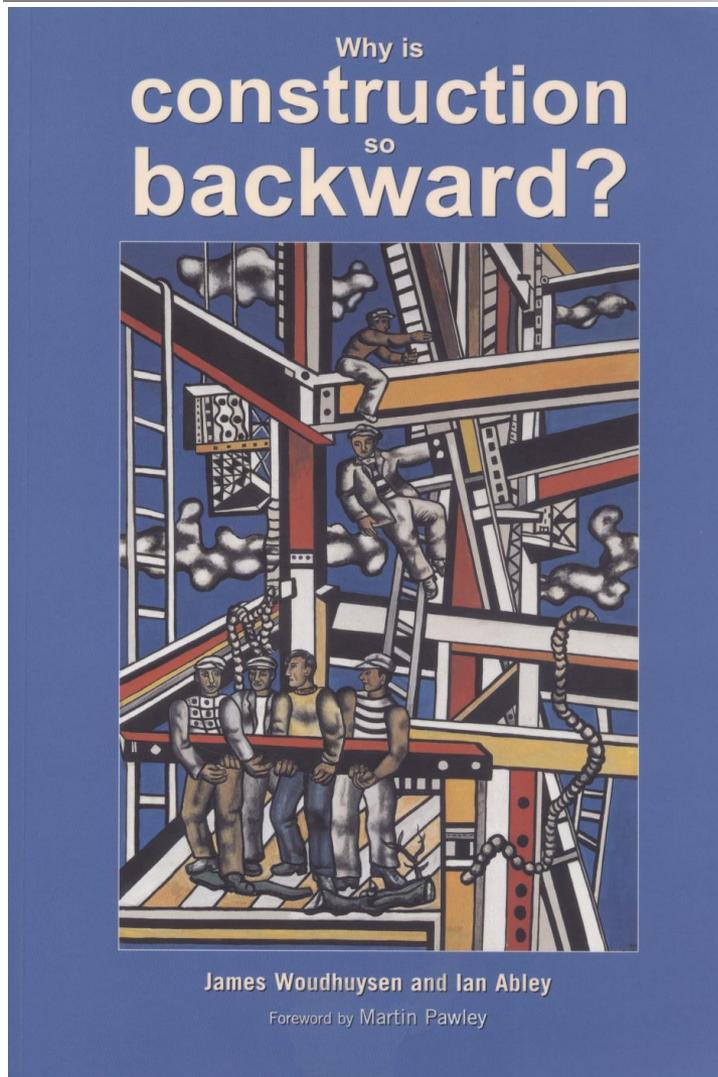
Coega Bridge collapse, Port Elizabeth, November, 2003 (Markman, 2003)

Introduction (6)



Coega Bridge collapse, Port Elizabeth, November, 2003 (Markman, 2003)

Why is construction so backward? (1)



Why is construction so backward? (2)



'Melting' mastic asphalt, Canal Walk, Cape Town (Smallwood, 2000)

Generation Y (1)



Generation Y (2)

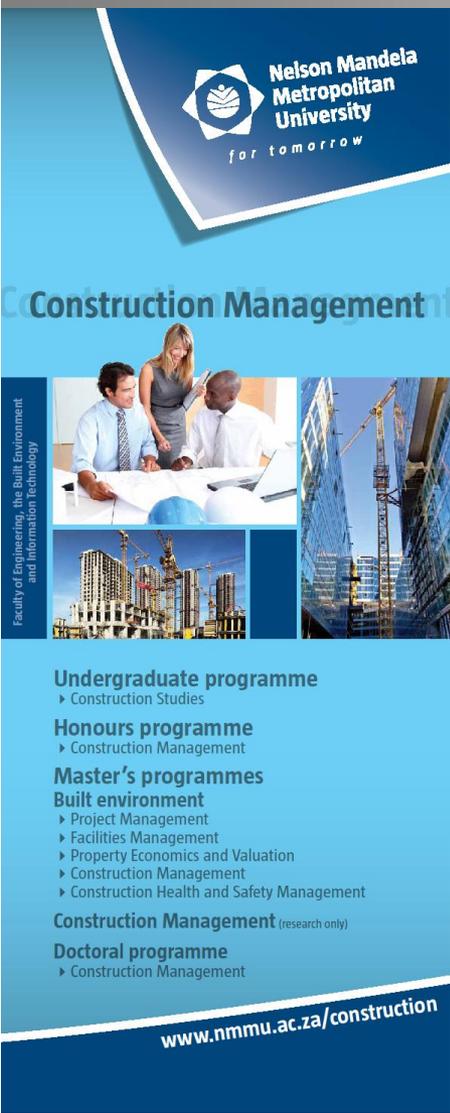
According to Hira (2007):

- **Different:**
 - Upbringing
 - Politics
- **Ambitious**
- **Demanding**
- **Loyalty – employer last on the list**
- **High expectations**
- **Information! In their heads! At their fingertips!**
- **Productive tasks**
- **Recognition**
- **Decorations – iPods, BlackBerrys, and laptops (tablets)**
- **Personal adornments (18-25 Year olds):**
 - > 30% have a tattoo
 - 33.3% have a piercing other than in the ear lobe

Generation Y (3)

- **Dress:**
 - Funky T-shirt
 - Blazer
 - Artsy jewelry
 - Silly socks
- **Hairstyle (author)**

Generation Y – How do we relate to them?



The brochure features the NMMU logo at the top left. Below it, the text 'Construction Management' is partially visible. The central part of the brochure contains three images: a group of three people (two men and one woman) looking at a laptop, a construction site with cranes, and a modern building under construction. To the left of these images is a vertical text label: 'Faculty of Engineering, the Built Environment and Information Technology'. Below the images, the following program details are listed:

- Undergraduate programme**
 - › Construction Studies
- Honours programme**
 - › Construction Management
- Master's programmes**
- Built environment**
 - › Project Management
 - › Facilities Management
 - › Property Economics and Valuation
 - › Construction Management
 - › Construction Health and Safety Management
- Construction Management** (research only)
- Doctoral programme**
 - › Construction Management

At the bottom of the brochure, the website address www.nmmu.ac.za/construction is displayed.

Respect for people – the public’s perceptions

- **One of the three principles of ‘Rethinking construction’ in the United Kingdom (UK)**
- **Principle due to the role of people**
- **Poll conducted by pollster YouGov in the UK (Construction Manager, 2003):**
 - **“Where would you like to work and why?”**
 - **Building sites ranked second out of seven places in terms of where people would least like to work**
 - **“Work is physically exhausting” and “sites are exposed to the elements” predominated among eleven**
 - **Followed jointly by “sites are dangerous” and “the work culture is harsh / aggressive”**
 - **Then “building sites are dirty”**

Respect for people (Lack of) (1)



Contents of portable toilet, Humansdorp (Pierce-Jones, 2006)

Respect for people (Lack of) (2)



Contents of portable toilet, SEP (Smallwood, 2007)

Respect for people (Lack of) (3)



Strapped 'down' worker (Mtola, 2008)

Respect for people (Lack of) (4)



'Outdoor dining', SEP (Smallwood, 2007)

Respect for people (1)



Mess facility, Sancti Spiritus, Cuba (Smallwood, 2007)

Respect for people (2)



Canteen, Kings Cross underground station project, London (Smallwood, 2002)

Respect for people (3)



Showers, Kings Cross underground station project, London (Smallwood, 2002)

Some historical insights (1)

- **CATE:**
 - ND: Construction Supervision & ND: Construction Surveying
 - HND: Construction Supervision & HND: Construction Surveying
 - ND: Plumbing Supervisor?
- **Technikons:**
 - ND: Building (1990)
 - BTech: Construction Management and BTech: Quantity Surveying (1993)
- **BIFSA / MBAs:**
 - Foresight of individuals → presentation of BSc (Building Management) programme at UP in 1962
 - A further 5 → 6 BSc programmes
 - NDF including liaison with the Technikons and the Universities

Some historical insights (2)

- **Quantity Surveying profession:**
 - Confused in the 1990s into the future → Project Management and Facilities Management etc.
 - Approached the SAIB to incorporate it into the ASAQS
 - Hybridisation commenced into BSc programmes
 - Hybrid programmes headed up by Qs
- **Professional recognition:**
 - SAIB endeavoured to secure such especially in the 1980s
 - DPW (?) delivered the 'knockout punch' into the establishment of the SACPCMP (Act 48 of 2000) – opposed by the engineers (& Qs?)

Why were Construction (Building) Management programmes developed?

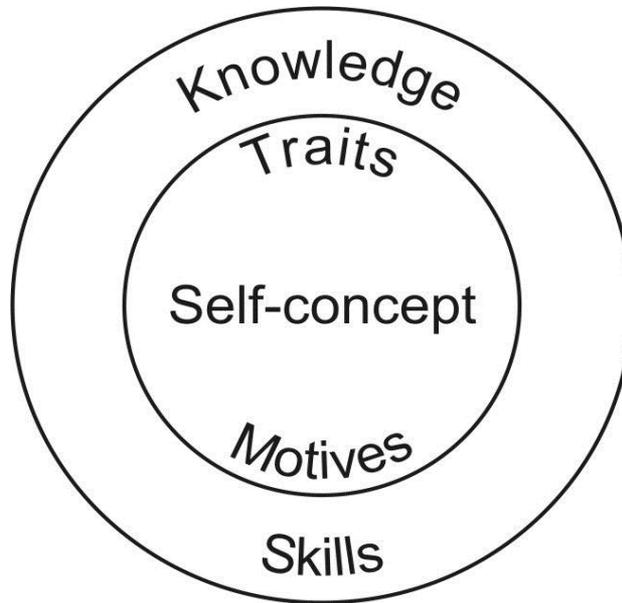
- People 'from the tools' and other disciplines (QS and Engineers) were not capable of managing construction (BIFSA)
- Increasing scale and complexity of buildings and structures

What is Construction Management? (1)

- **Traditionally: “Construction Management can be viewed in two dimensions, the management of the business of construction, and of projects per se.” (Fellows, Langford, Newcombe, and Urry, 2002)**
- **Three levels of management:**
 - Operational – the ‘concrete face’
 - Middle – functions and coordinating of projects
 - Top – strategic and overview of the organisation
- **Body of Knowledge:**
 - 9 Functions in an organisation
 - 5 Functions and 19 activities of management work
 - 11 Resources
 - 11 Project parameters
 - **Surface competencies:**
 - 70 Knowledge areas
 - 42 Skills
 - **Core competencies**

What is Construction Management? (2)

- **Core competencies:**
 - **Self-concept** - values, aptitude, attitude, and self-image
 - **Traits** - self-confidence, team player, and handles ambiguity
 - **Motives** - focus on client success, and preserves organization / personal integrity



(Sanghi, 2004)

What is Construction Management? (2)

- **Personality type:**
 - Two main personality types: Type A (intense and highly motivated) or Type B (laid-back and content)
 - **Construction Managers need to be:**
 - Intense and highly motivated
 - More extrovert than introvert
- **Implications:**
 - **Construction Management culture (Culture is the sum of total of the learned behaviour of a group of people that are generally considered to be the tradition of that people and are transmitted from generation to generation)**
 - **Construction Management ethos (The disposition, character, or fundamental values peculiar to a specific person, people, culture, or movement)**

Our stakeholders

- CBE
- SACPCMP
- CETA
- DPW
- cidb
- CIOB
- CIOB (Africa)
- MBSA
- MBAs
- Built environment

Questions presenters of Construction Management programmes should ask (1)

- **Why are there separate councils for Construction Management and Quantity Surveying?**
- **Why are there ‘separate’ professional associations / institutes for Construction Management and Quantity Surveying?**
- **Do students register for design programmes and then qualify as an architect or an engineer after a year specialisation?**
- **Would the ASAQS and SACQSP be delighted (or accredit programmes) if a Professor in Construction Management headed up a Quantity Surveying programme?**
- **Why did the hybrid departments and then hybrid programmes evolve? Was there an agenda?**

Questions presenters of Construction Management programmes should ask (2)

- **Can a Professor in Quantity Surveying champion two disciplines?**
- **Which discipline do the staff of hybrid departments champion?**
- **Why did the University of Pretoria remove Management from the department name?**
- **What construction management qualifications (UG and PG) and construction experience do staff have?**
- **What is the nature of the consulting work that staff undertake – complementary to construction?**
- **What specialist construction management status do staff have?**

The construction industry

- **Does it know what it is doing?**
- **Does it know what it needs to do in the future?**
- **Does it know what the world and the built environment will be like in 2050? Has it thought about this?**
- **How does it manage the business of construction?**
- **Why does it resort to collusion – can it not make money in an ethical manner?**
- **Why does it kill so many people?**
- **Why does it undertake rework?**
- **Has a poor image**

Do we / Are we?

- Provide direction to the built environment?
- Provide direction to the construction industry?
- Provide direction to the contracting sector?
- Respected by the built environment?
- Respected by the contracting sector?

The future

- CPMs manage most major projects (historical fact)
- Construction Management is the ‘gateway’ qualification for CPM
- Construction Management experience is critical for ‘eligibility’ to practice as a CPM
- The ‘greater’ percentage of Construction Management graduates practice as CPMs
- The ‘new’ CIOB definition provides the indication
- Construction Management graduates will manage the built environment (management, economics, and science and technology)
- Respect for people
- Change the way we design, procure, and construct (2050)
- Competent emotionally intelligent Construction Managers

Acknowledgements

To the following for their contributions to the discipline:

- BIFSA (including NDF) and MBAs
- MBSA and MBAs
- DPW
- cidb
- SACPCMP (& CBE)
- CIOB
- Then SAIB
- Doyens of Construction Management, in particular, the founders of the BSc programme and Prof Dries Hauptfleisch

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