

BUILDING CONTROL in 'OZ'



| THE "OZ" EXPERIENCE

Introduction

- | *Until 1990 all Building Control in Australia was controlled by Local Authorities (City Councils)*
- | *Each State had its own Building Act to regulate building control*
- | *1990 - Uniform Building Code was introduced by Federal Govt.*

Introduction

- | *1998 - Private Certification introduced*
- | *Qualified Building Surveyors allowed to certify Building Approvals and Construction*
- | *Some Local Authorities ceased Building Approvals & left it to Private Certifiers*

Introduction

- | Majority of Building Approvals and Certification of Construction now carried out by Private Certifiers in Queensland & also in other States.*
- | Private Certifiers are accountable to Govt. Building Authorities in each State.*
- | These Authorities continue to impose responsibilities that are not really part of the Private Certifier's business.*

Current Situation

- *Town Planning carried out at two levels:*
 - *Regional (State)*
 - *Local (Cities & Towns)*
- *Building Code of Australia (BCA 2008)*
 - *Deemed to Satisfy Provisions*
 - *Performance Requirements*
- *Other Regulations*
 - *Australian & International Standards*

Current Situation

| Regional Planning

- State determines overall planning for the Region*
- Infrastructure - Main Roads, Dams, Railways, Ports.*

| Local Planning

- Each city/town is responsible for its own area*
- Commercial developments determined by Plot Ratios and/or boundary setbacks & envelopes*
- Residential developments determined by boundary setbacks and/or envelopes*

Building Code of Australia

| *Prescribes the Classification of Buildings, e.g.*

Houses *Class 1a*

Minor Structures *Class 1b*

Apartments *Class 2*

Hostels *Class 3*

Caretaker's *Class 4*

Offices *Class 5*

Shops *Class 6*

Carparks *Class 7*

Laboratories *Class 8*

Hospitals *Class 9a*

Assembly Buildings *Class 9b*

Building Code of Australia

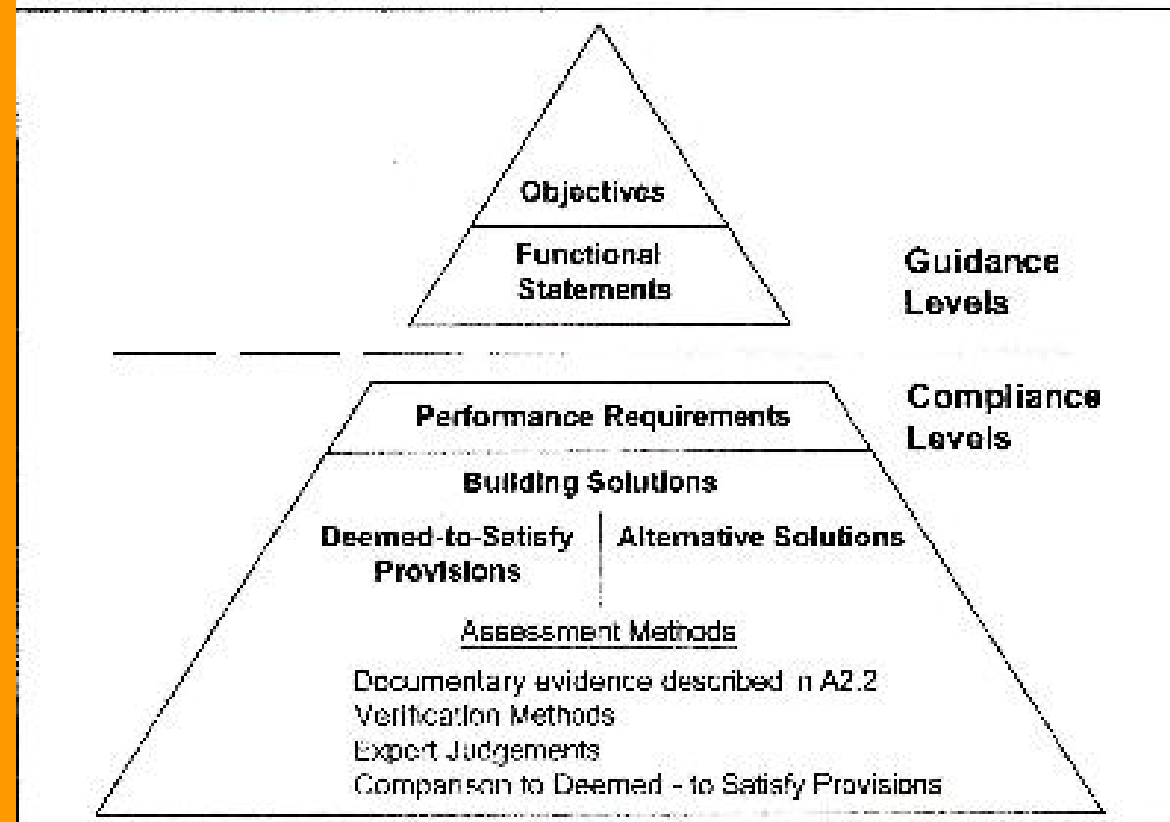
- | *Specifies methods / systems of construction that are acceptable for the different Classifications of buildings (Deemed to Satisfy [DTS] provisions)*
 - *the required fire ratings for a floors/walls/roofs*
 - *whether sprinklers, smoke detectors or other fire services are required*
 - *distance between buildings on adjoining properties*
 - *number of exits required (fire rated/non fire rated)*
 - *escape distances/widths of escape*
 - *requirements for people with disabilities*
 - *sanitary requirements*

Building Code of Australia

- *Performance Requirements*
 - *These outline the acceptable parameters for developing Alternative Solutions other than using the DTS provisions.*
 - *Alternative Solutions must be assessed according to one or more of the Assessment Methods*
 - *Assessment Methods (or combination of them) are used to determine that a Building Solution complies with the Performance Requirements*

Current Situation

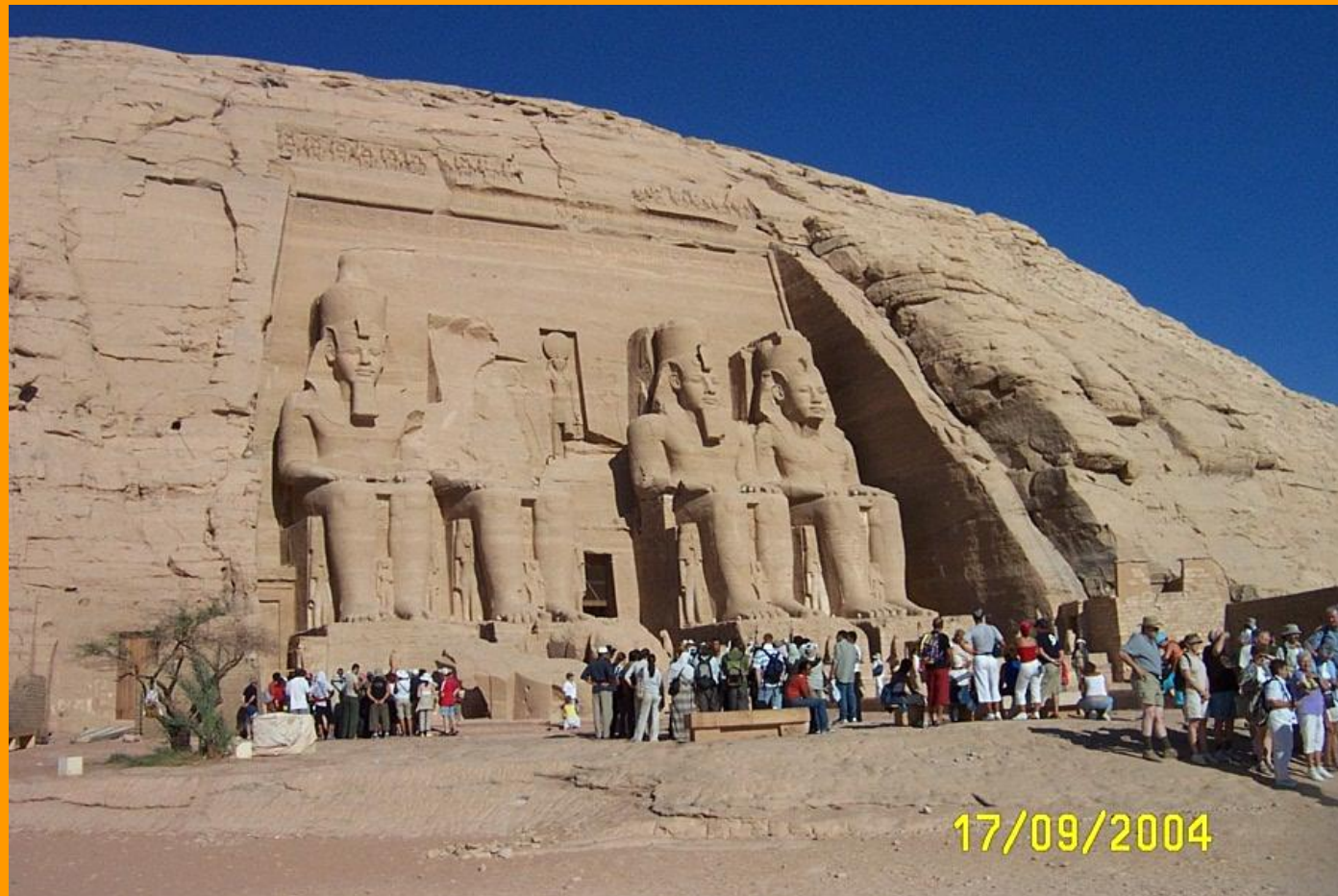
Figure A0.3 — BCA Structure



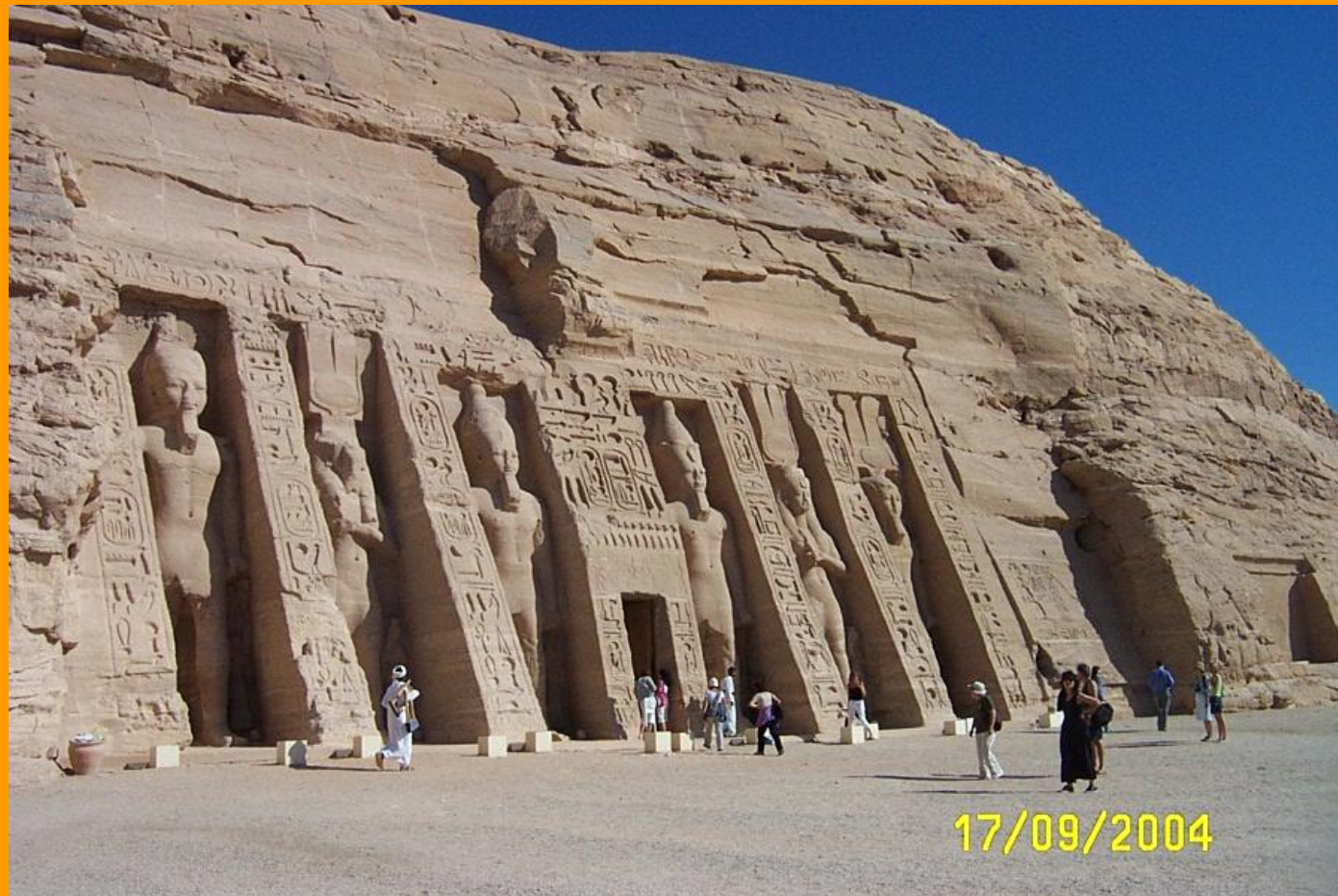
Shanghai



Ramses II Tomb



Nefertiti's Tomb



Pyramid of Chefren



Standards

| *Australian Standards*

- *Referenced in the BCA for use in conjunction with DTS Provisions & Performance Requirements*
- *Cover a variety of matters concerning building systems, installation of products, fire services*

| *International Standards*

- *Some International Standards are acceptable for use with the BCA (as applicable), e.g.*
 - *NFPA Standards*
 - *British Standards*
 - *Other approved International Standards*

Future Building Control

- | Many systems of Building Control operate in the various countries of the world*
- | Some good - others not so good*
- | In Australia the system is in the hands of private certifiers and local authorities - it is considered effective, but in many ways it is over - regulated*
- | In other countries, building control is still left up to the professionals involved with the building, i.e. architects, engineers and qualified builders*
- | What then is the future of Building Control?*

Australia

- | *Immediate future - not much difference*
- | *The building industry has become complicated with too many regulations, e.g.*
 - *Workplace Health & Safety / Access for People with Disabilities / Town Planning Conditions, etc*
- | *Building Certifiers require an education equivalent to a degree in Architecture or Engineering*
- | *Two big problems*
 - *- not enough Building Certifiers*
 - *- not enough on-the-job training*

Australia

| *Foreseeable Future*

- *Not much change from current situation*
- *State Governments will foist more responsibilities on to Private Certifiers*
- *Professional Indemnity Insurance will increase*
- *Local Authorities (City Councils) will cease to carry out building certification*
- *Building Certifiers will become professionals in the building industry much the same as Architects, Engineers and Quantity Surveyors*

Singapore

| *Current Situation*

- *Building Certification in Singapore is currently carried out by Architects who are still regarded in the same light as Master Masons.*
- *The Singaporean Government has developed electronic software for checking drawings. This software is leased to architectural firms who carry out self certification of projects and inspection of buildings under construction.*
- *All building approvals submitted to Singaporean Government which carries out random checks.*
- *This software was developed using the Building Code of Australia (BCA)!!!*

Singapore

| *Foreseeable Future*

- *The situation in Singapore is unlikely to change*
- *Traditional way of doing things may be further updated with technological improvements but the process will remain essentially as is.*

Tomorrow Land

- | The threat of Global Warming, Climate Change, and Energy Efficiency will have a dramatic effect on the location, design and construction of buildings.*
- | Innovation in design, technological change, sustainability and new materials will also all play an important part in the development of new styles of architecture.*
- | Building Control Regulations will be required to accommodate these matters.
For example, the Dubai Rotating Tower:*

Rotating Tower



The Challenge

- | Building Control officials will be confronted with many new problems as the building industry goes through its metamorphosis over the coming decades.*
- | The old order will not be sufficient to deal with these problems.*
- | A more comprehensive education, on-the-job training and a better understanding of the integration of the various construction disciplines in bringing a project from inception (design) to conclusion (construction) will be required.*
- | It will not be sufficient to assess compliance or non-compliance with building control regulations.*

The Challenge

- | *The Building Control Official will have to become:*
 - *Part Architect (appreciate principles of design)*
 - *Part Engineer (have a basic working knowledge of structures, mechanical, electrical, fire services and hydraulics).*
 - *Part Builder (be cognisant of the limitations of materials, building systems, and the building process).*
 - *Part Environmentalist (understand energy efficiency and sustainability practices).*

The Challenge

- | *In short, the Building Control Official must become a*

BUILDING CONTROL PROFESSIONAL

who works as part of the Design and Construction Team and is regarded by all as an equal, professionally.