Re-Lifing Commercial Buildings

Design and construction solutions for existing buildings

As a building owner, are you concerned that your building:

- **may be obsolete in 10 years?**
- **may not be able to meet the energy-efficiency demands of federal or state government tenants?**
- **may see outgoings spiral as utility costs increase?**
- **might not be able to attract the best tenants?**
- **could be part of the problem, rather than part of the solution?**

If you or your clients answered 'yes' to any of these questions, you may need to 're-Life' your building …

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What is re-Lifing?

The resources listed in this document describe the design and construction opportunities available to building owners who wish to re-Life their properties. They do not yet examine management opportunities, which may also help owners improve the efficiency of their existing stock.

Re-Lifing is the process whereby existing buildings undergo significant refurbishment or transformation in order to extend their useful life.

It allows owners to improve the serviceability of their buildings and apply the principles of ecologically sustainable development (ESD).

Key elements to re-Lifing a commercial building include:

- project management
  - analysing market demands by building type, location and tenancy
- floor space optimisation and structural capacity
  - providing flexible internal spaces to allow for changes in work practices
- recycling and waste management
  - minimising construction waste
- residual service life
  - understanding the condition of the building
- sustainability and building efficiency
  - enhancing the building's green rating through façade and building services engineering solutions.

Business case and benefits of re-Lifing

There is increasing reason for owners of existing buildings to re-Life their properties to maximise their efficiency and retain their appeal to tenants.

By re-Lifing their building, a property owner can:

- deliver reduced operating and maintenance costs
- reduce energy and water consumption, saving money on utility costs
- deliver improved returns on investment and potentially higher rental income
- help to improve an organisation's reputation and corporate reporting results
- be future-proofed against future tenant demands and government regulation
- reduce the environmental footprint of an existing building
- deliver sustainability improvements for reduced construction expenditure
- deliver indoor environment quality improvements, making it a more enjoyable workspace and improving productivity
- make a building more attractive to investors and tenants alike.

Critical steps in re-Lifing

The resources listed in this document outline the decision-making processes required during a re-Life by focussing on the critical steps listed below.

Project management

Nature and scope of work (objective and market research)

Nature and scope of work (type of contract)

Market demand by type and location

Financial planning (current value vs potential value)

Capital allowances / Taxation depreciation considerations

Planning authority restrictions / considerations

Perceptions of tenants

Pre-commitments by tenants

Key project risks (cost, quality and schedule)

Selection and appointment of consultants

Decanting

Occupational health and safety issues

Modifying existing documents

Management of tenants

Floor space optimisation and structural capacity

Structural condition appraisal

Change of use of floors

Relocate/ renew services

Structural capacity

Recycling and waste management

Hazardous waste

Impacts of incorporating ecologically sustainable development

Waste transportation costs

Recycling potential

Residual service life

Condition assessment

Defects – structural

Defects – functional

Status of structural health

Life of elements and components of building

Performance monitoring

Security

Sustainability and building efficiency

Purpose of refurbishment

Pollution

Indoor air quality

Cost analysis sustainability and bid efficiency

Energy saving potential

Lighting and noise

Building fire safety

Disability access

Project life cycle assessment

Advantage of recycling over new

Influence of / on National Emissions Trading Scheme

Re-Lifing Commercial Buildings — on-line resources

The *Your Building* web portal at www.yourbuilding.org has a range of re-Life resources and project reports, developed by the CRC for *Construction Innovation,* as well as extensive information on sustainable commercial buildings. These resources on *Your Building* are listed below.

'Delivering a Re-Life Project'

The project examined the re-Lifing of three 30- to 40-year-old government buildings in Brisbane, Melbourne and Sydney to bring them up to the standards of modern office operation and environmental performance.

Re-Lifing paper

Re-Lifing Commercial Buildings: Critical steps and decision-making flowcharts

Project report on re-Lifing

Delivering a Re-Life Project — research report

Appendix B1 — A summary of state-of-the-art residual service life methods / models

Appendix B2 — Condition survey record

'Regenerating Construction to Enhance Sustainability'

Project reports focussing on sustainability and building efficiency

Eco-efficiency Assessment of Building Refurbishment — eco-efficiency re-design to achieve a smaller ecological footprint within budget

Design Guidelines for Delivering High Quality Indoor Environments — improved indoor environment quality and performance, as demonstrated by improved health, well-being and productivity

Occupant Health, Well-being and Productivity — healthier and more productive working environments as measured by the performance of occupants determined pre- versus post-refurbishment

Guidelines for Waste Minimisation in Office Building Refurbishments — waste minimisation through re-design for dis-assembly

Supporting material

Building certification — a Queensland-based review. Submissions from other states invited to enquiries@yourbuilding.org

Case study development

Case studies on re-Lifing projects are sought for submission to *Your Building*, the website for sustainable commercial building. If you have suitable material or if you need assistance in its development, please contact enquiries@yourbuilding.org

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