

conservation house whare kaupapa atawhai



SB07

15 November 2007

Belinda Tuohy

photo: Paul McCredie

architecture +



project brief

- optimise site potential
- enhance the Indoor Environment Quality
- use environmentally preferable materials
- minimise energy consumption
- protect and conserve water
- optimise operational and management practices



tenant: Department of Conservation
tenant's property advisor: Bogacki Property Consultants
tenant's project manager: Impact Project Management
building owner and developer: The Wellington Company
building owner's project manager & QS: Gill Consultants

main contractor: McKee Fehl Constructors

architect: architecture +
structural, fire and services engineers: Sinclair Knight Merz
ESD consultant: e Cubed Consulting
acoustic consultant: Marshall Day Acoustics
resource planner and surveyor: Connell Wagner
landscape designer: Janey Christopherson

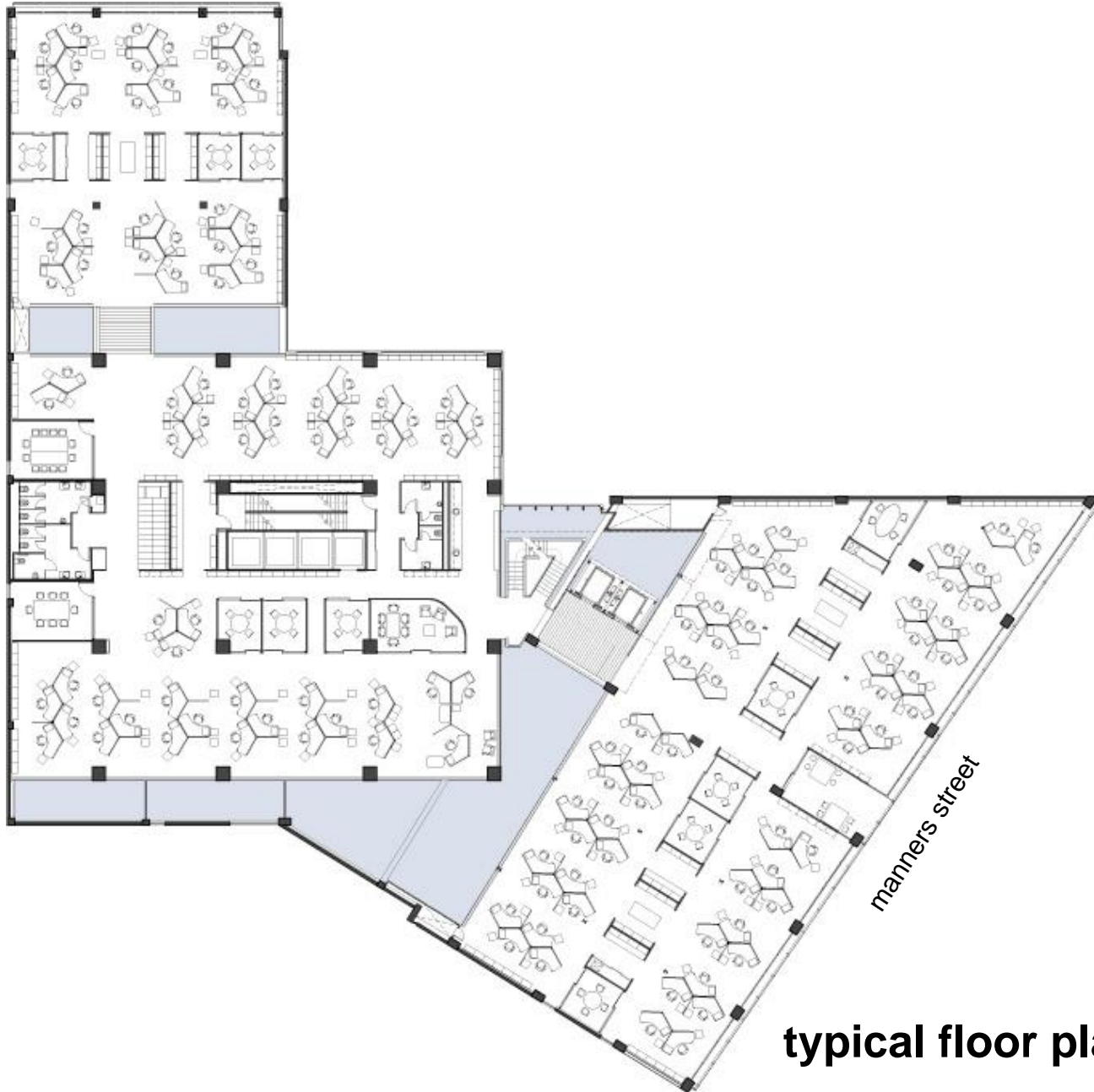


design response

- central glazed atria
- double-skin facades
- low rise typology
- open plan offices
- roof top café and landscaping



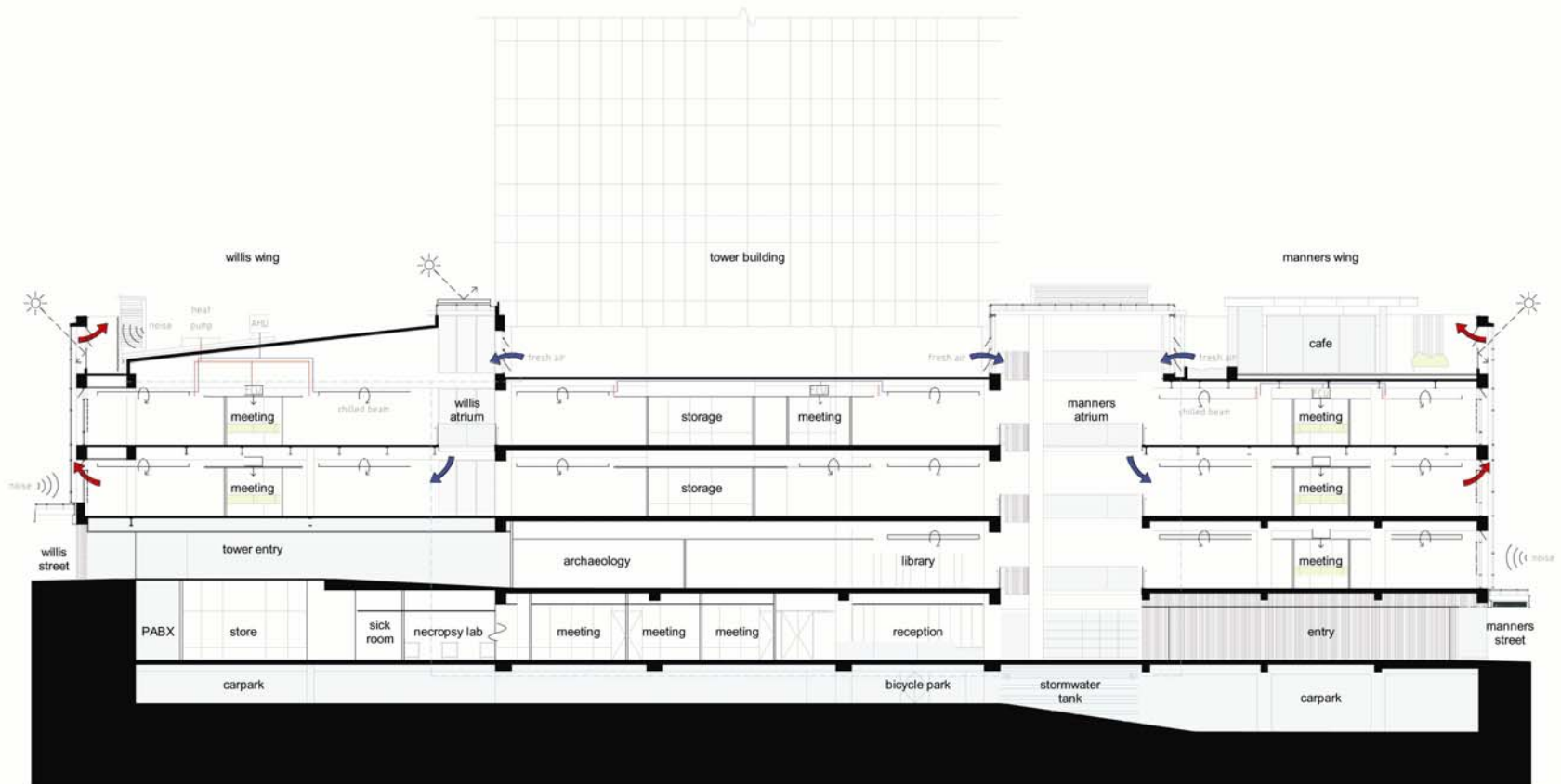
willis street



manners street

typical floor plan





section

architecture +

optimise site potential

- cradle-to-cradle urban regeneration
- a new paradigm for office environment in Wellington
- a highly visible demonstration of DOC's commitment to conservation



photo: Paul McCredie

minimise energy consumption

- natural ventilation
- *chilled beam* mechanical ventilation
- passive building elements
thermal mass, night purge,
double glazing
- DALI lighting system
automatic daylight dimming,
presence detection
- low embodied energy
existing structure, timber framing

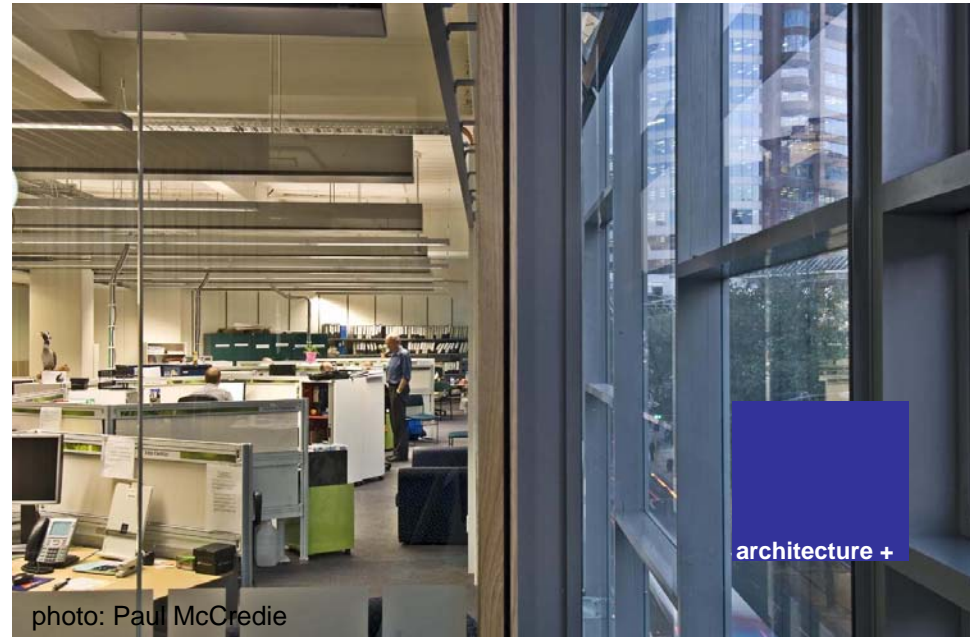
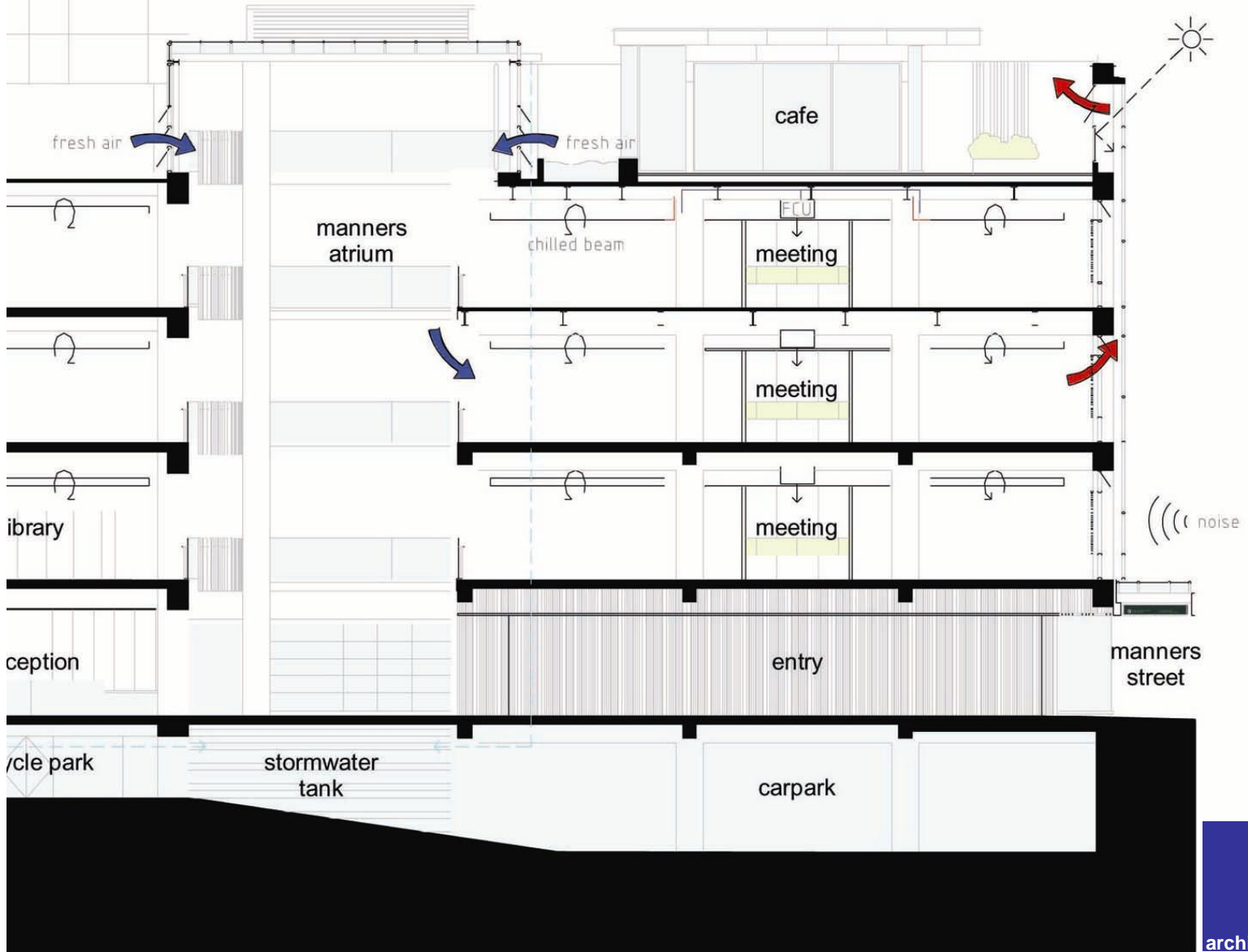


photo: Paul McCredie

manners wing



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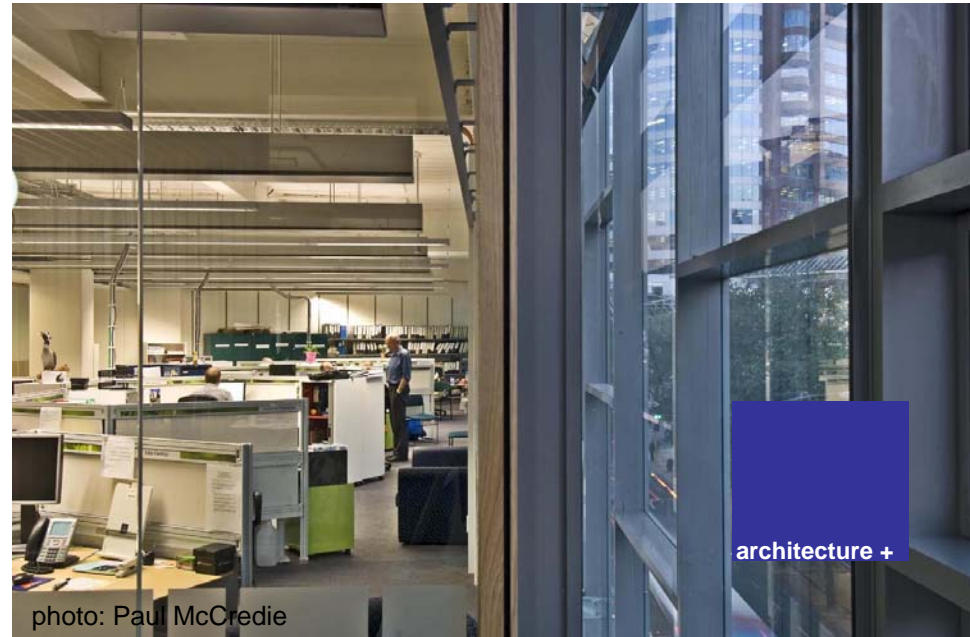


photo: Paul McCredie

transport

- public transport
adjacent bus stop, close proximity
to railway station
- alternative transport
bicycles parks, showers
- internal circulation
low rise typology, stairs



photo: Paul McCredie

protect and conserve water

- rainwater harvesting
65,000 L tank
- low flow fixtures
motion sensors

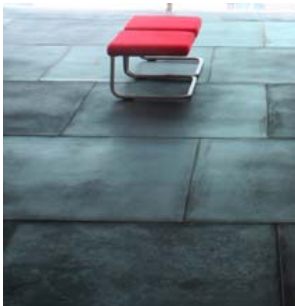


environmentally preferable materials

- waste minimised
existing structure, waste management strategy
- applied linings minimised
exposed structure and ceilings
- PVC minimised
Forbo Marmoleum flooring,
Wavin AS polypropylene pipes
- sustainable plantation timber
Radiata Pine, Hoop Pine and
Tasmanian Oak
- recycled content & recyclability
Burgess rubber flooring, Pink Batts,
Woven Image Echo panel,
Formway Life chair
- ODP potential minimised
zero ODP refrigerant



photo: Paul McCredie



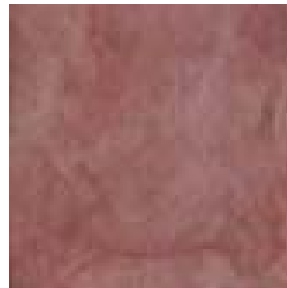
Burgess rubber



Formway Life chair



Wavin AS



Pink Batts



Woven Image Echo panel



Forbo Marmoleum



Ontera carpet tile



hoop pine

indoor environment quality

- low in VOCs, formaldehyde and allergens
Laminex E0 MDF, Resene paints
- excellent light quality
- visual interest
- open plan offices
- appropriate acoustic quality
ceiling absorption, white noise
- facilities amenity
utilities stations, storage, cafe
- external space
winter gardens, rooftop garden





operation and maintenance

- flexibility
floor plate, mechanical risers
DALI control
- building users' manual
- Building Management System



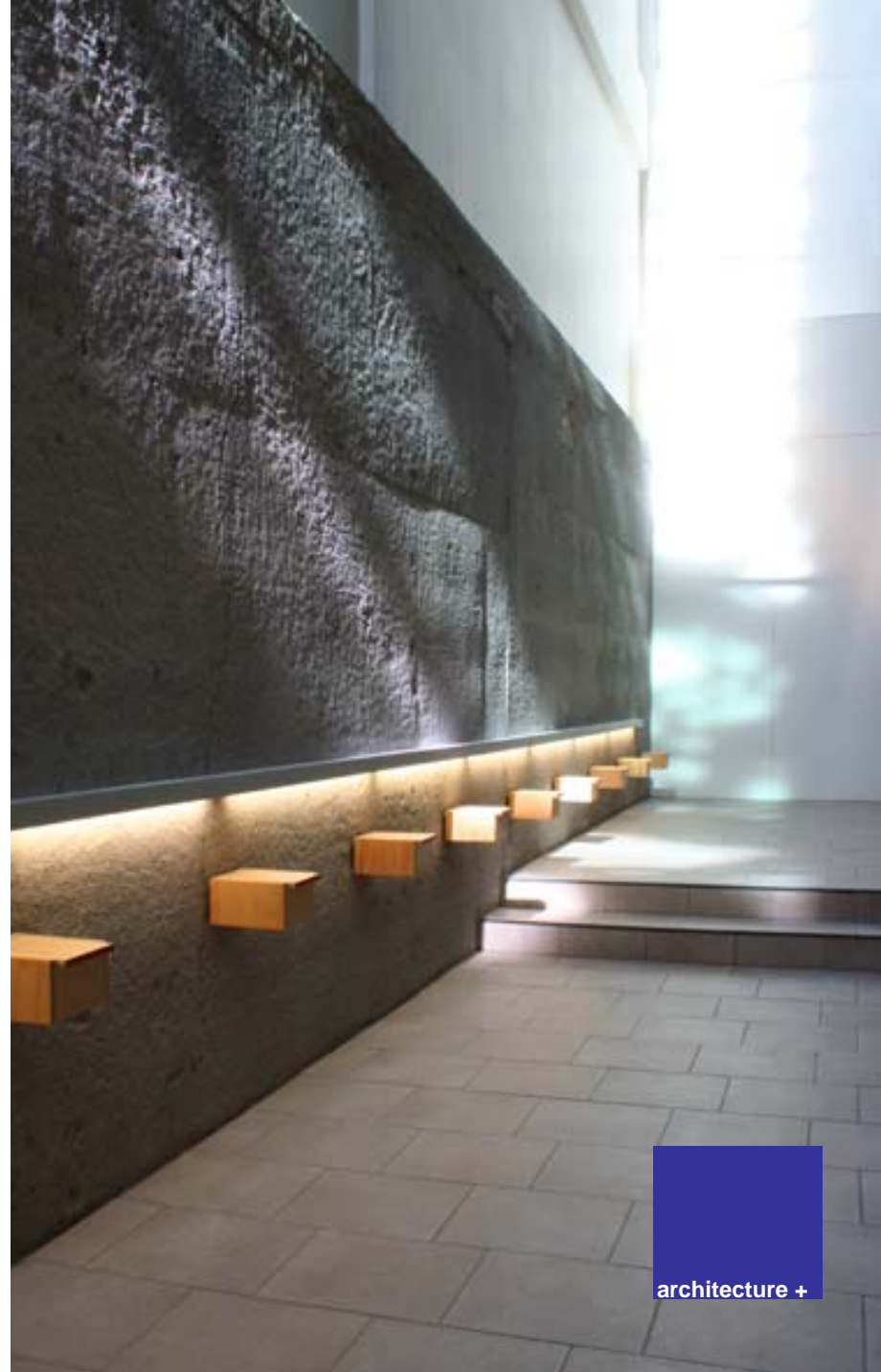
performance

- expected power saving 20%
- expected water saving 60%
- expected financial saving \$130,000 per year
- waste to landfill halved
- decreased staff sick leave
- decreased staff turnover
- increase in applicants for vacancies



awards

- Govt3 award
sustainable buildings/fitout category
- Property Council award
energy efficiency
'excellence' award in office category
- Illuminating Engineering Society
of Australia and New Zealand
'excellence' awards for reception and
café/roof lighting
- NZIA Resene awards
Wellington local award for architecture
and Resene colour award



lessons

- ESD requires additional resources
people, rating tools, product and material information
- include ESD in brief
set specific targets
- sustainable design reinforces good architectural design

