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(Architect, SPAB Scholar, ICOMOS NZ Chairperson)

The Contribution of Maintenance to Heritage Buildings and Sustainability





77. Northland houses:
 (a) Cottage in the Kaipara district; *Matakobe Museum*.
 (b) Bedgood Cottage, Waimate North. *HPT*.



45. Sawmiller's house with bark roof, Southland. *Wallace Museum*.

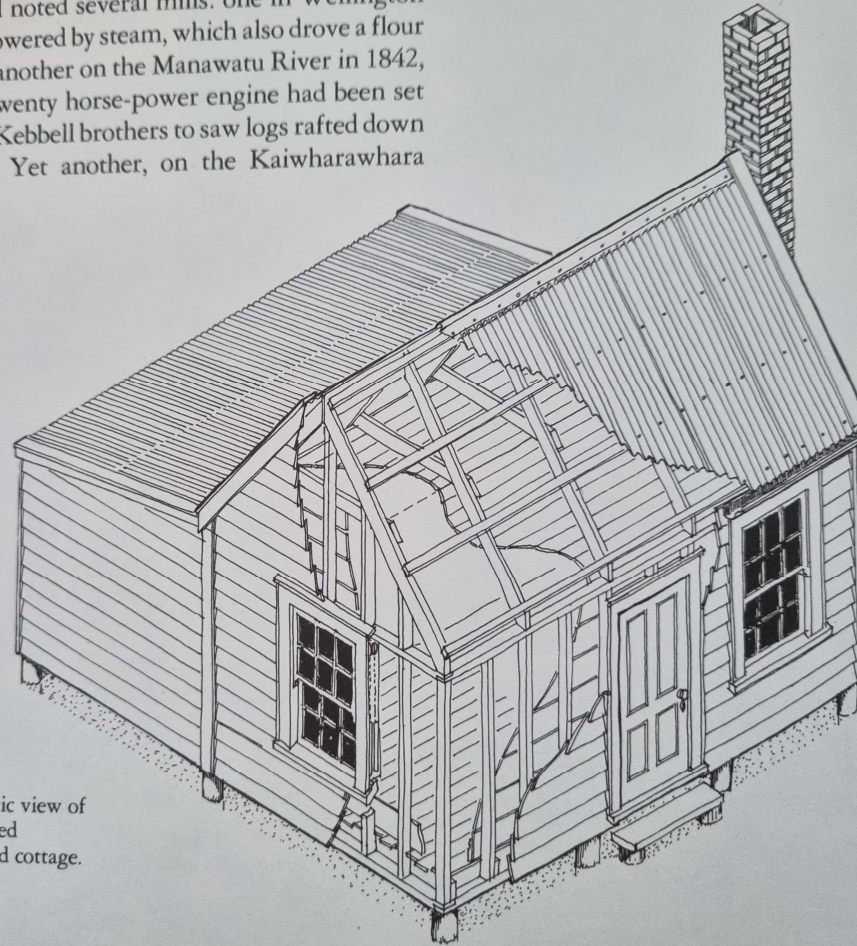


... distinctive local style. No

▶ BAREFOOT IN WINTER?
DOES FASHION INFLUENCE HOW WE
BEHAVE WITH BUILDINGS?



Wakefield noted several mills: one in Wellington in 1840 powered by steam, which also drove a flour mill; and another on the Manawatu River in 1842, where a twenty horse-power engine had been set up by the Kebbell brothers to saw logs rafted down the river. Yet another, on the Kaiwharawhara



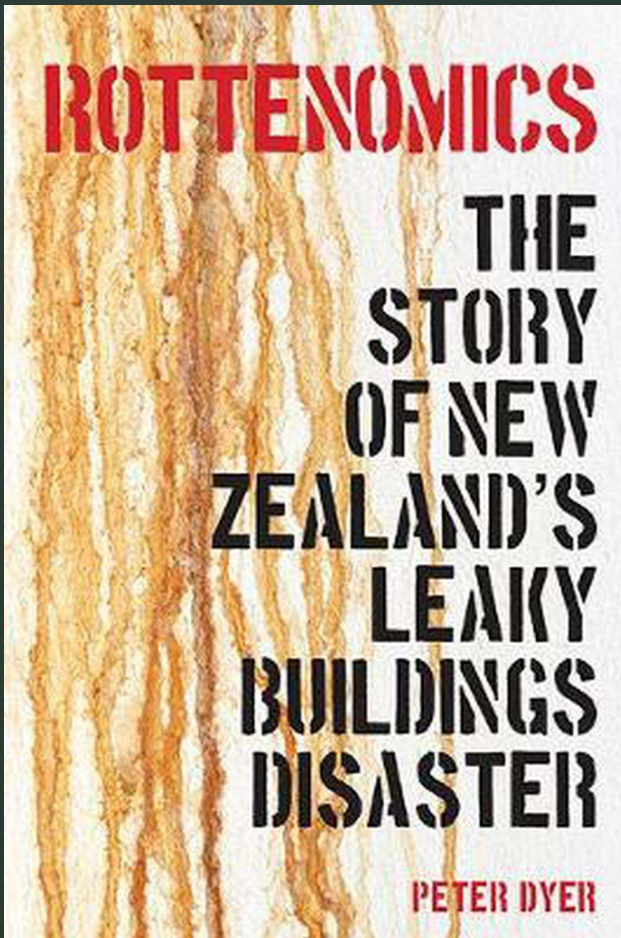
49. Schematic view of timber-framed weatherboard cottage.

WHERE DOES IT COME FROM?



WHERE DOES IT GO?






“174,000 THE NUMBER OF
NEW ZEALAND HOMES
BUILT BETWEEN 1985 TO
2014 THAT WERE/ARE
DOOMED TO ROT”

“A CONSERVATIVE GUESS
OF THE EVENTUAL TOTAL
COSTS OF LEAKY HOMES:
\$47 BILLION”

sus·tain·abil·ity

[səsteɪnəˈbɪlɪti] 

NOUN

the ability to be maintained at a certain rate or level:

"the sustainability of economic growth" · [\[more\]](#)

- avoidance of the depletion of natural resources in order to maintain an ecological balance:

"the pursuit of global environmental sustainability" · [\[more\]](#)

HOW DOES THIS APPLY TO BUILDINGS? **NEW OR OLD**, IT MEANS:

- ALL MATERIALS THAT CONTRIBUTE TO THE CONSTRUCTION OF A BUILDING COME FROM NATURAL RESOURCES – CLAY, STONE, TIMBER, METALS ETC;
- BUILDINGS NEED TO BE MAINTAINED TO MAKE THE MOST OF THE RESOURCE FOR AS LONG A PERIOD OF TIME AS POSSIBLE TO AVOID DEPLETION OF RESOURCES
- “STAVE OFF DECAY WITH DAILY CARE” – WILLIAM MORRIS, 1877 SPAB MANIFESTO

How is the world responding?

WAS+EBUILDZERO

NO304, AMSTERDAM | 9 & 10 MAY 2023

BOOK NOW ABOUT CONFERENCE EXHIBITION PARTNERS



RETHINK - REUSE - REBUILD

BOOK NOW

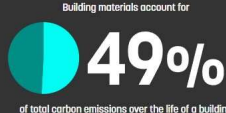
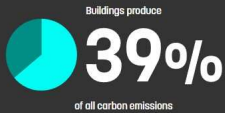
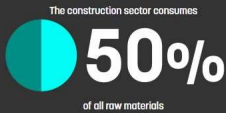
The Event for Zero Carbon Construction

WasteBuild Zero is a 2-day event that unites the built environment to showcase the latest materials, techniques, solutions and innovators that are helping to deliver low carbon and circular construction schemes today. Our aim is to support the transition towards a circular and regenerative built environment and in the process to tackle the climate emergency.

Driven by agenda-setting brands Architects' Journal and Materials Recycling World, we'll be connecting an international community of architects and built environment innovators at the NDSM in the heart of Amsterdam's architectural and circular ecosystem. We'll be offering over 16 hours of conference content and more than 30 circular solutions in our buzzing exhibition space.

So what are you waiting for? Join us on 9 & 10 May 2023 to hear from the leading architects, engineers, designers and developers from across Europe who are pushing the boundaries of what is possible with circular schemes today.

The exhibition is free to attend and conference passes are available for a fee. Early bird tickets are on sale until 2 February 2023.



RESOURCE MANAGEMENT IN THE BUILT ENVIRONMENT

STATS NZ:

GHG emissions from manufacturing industries and construction were up 40.4 percent from 1990, up 31.4 percent from 2005, and down 11.3 percent from 2019.

BRANZ:

The construction and demolition industry is one of the largest waste-producing industries in New Zealand. Construction and demolition waste may represent up to 50% of all waste generated in New Zealand, with 20% of the waste going to landfill and 80% going to cleanfill sites.

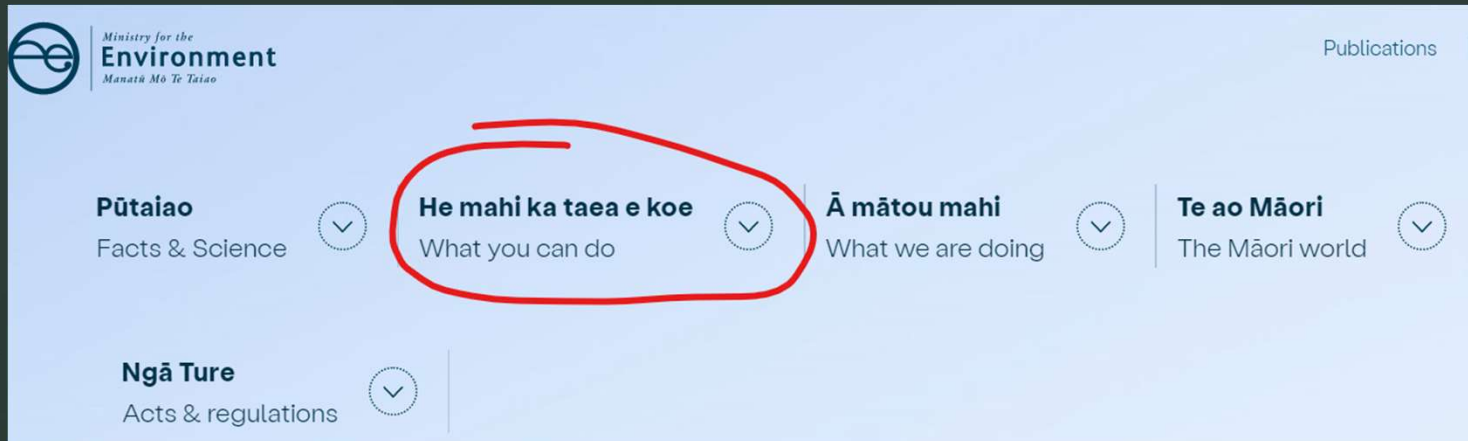
Disposing of these materials to landfill means that, as well as not being recovered for further use, they are contributing to adverse environmental effects. These include harmful chemicals leaching into soil and waterways, plus methane emissions into the air, as the waste breaks down and rots.

MfE:

Types of waste going to Class 1 landfills

Surveys show that construction and demolition waste is the largest source of waste to Class 1 landfills at 33 per cent followed by potentially hazardous waste at 24 per cent and then organic waste at 15 per cent.

RESOURCE MANAGEMENT IN THE BUILT ENVIRONMENT



Take action

**There's a lot you can do
wherever you are to
support the environment**

→ **What you can do**

21 ACTIONS – ONLY FIVE THAT RELATE DIRECTLY TO BUILDINGS:

- REDUCE YOUR ELECTRICITY USE
- PLANT TREES
- REDUCE TRANSPORT EMISSIONS
- REDUCE, REUSE, RECYCLE
- PREVENT WASTE AT HOME

Trees

provide shade and have a cooling effect in towns and cities.

Around 2.5 million tonnes

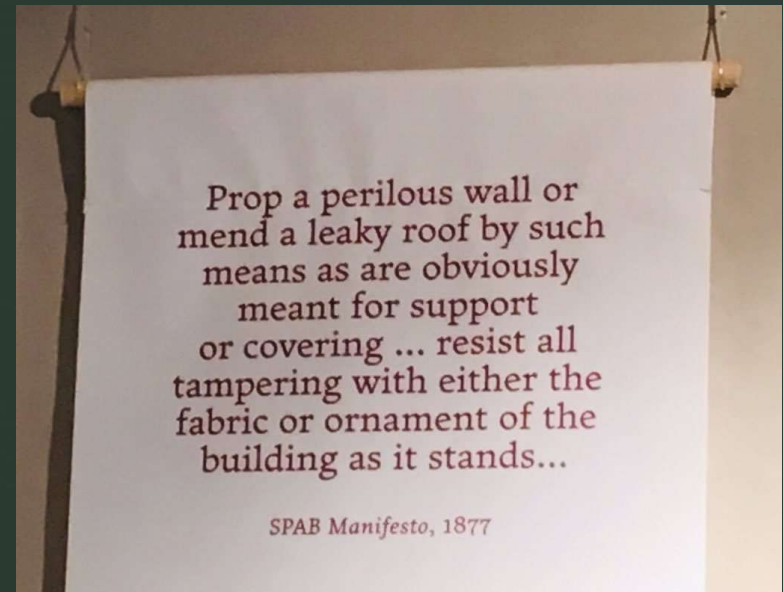
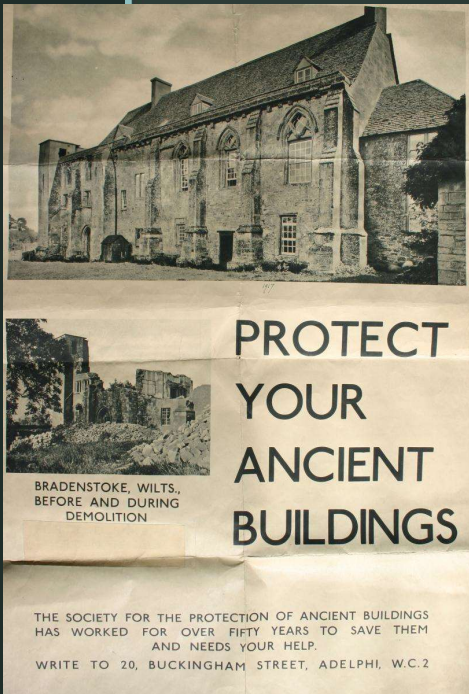
of waste is sent to landfills every year. That's 781kgs per person.

THE SPAB APPROACH THE PHILOSOPHY

“We are only trustees for those that come after us.”

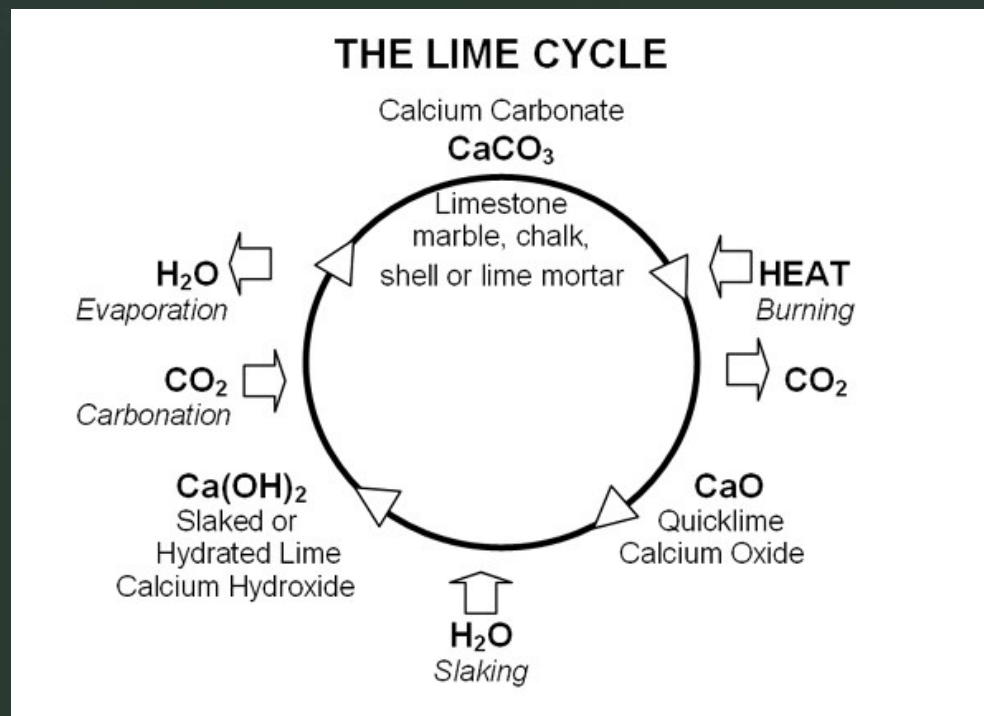
“The past is not dead. It is living in us, and will be alive in the future, which we are now helping to make.”

- William Morris

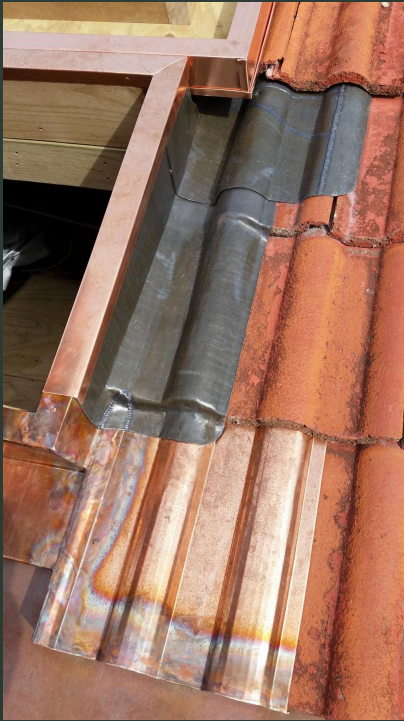




REPAIRS AND MAINTENANCE MATERIAL LIFE-CYCLES AND CARBON










THE SPAB APPROACH MAINTENANCE FIRST PRINCIPLES

- WATER MANAGEMENT
 - MATERIAL CHOICES – INITIAL DESIGN
 - MATERIAL CHOICES – COMPATIBILITY
ISSUES / BUILDING PATHOLOGY
(PERMEABILITY VS. SEALED SYSTEMS)
- 

THE SPAB APPROACH MAINTENANCE CAMPAIGNS

“STAVE OFF DECAY WITH DAILY CARE”

FAITH IN MAINTENANCE
CAMPAIGN

2007-2015

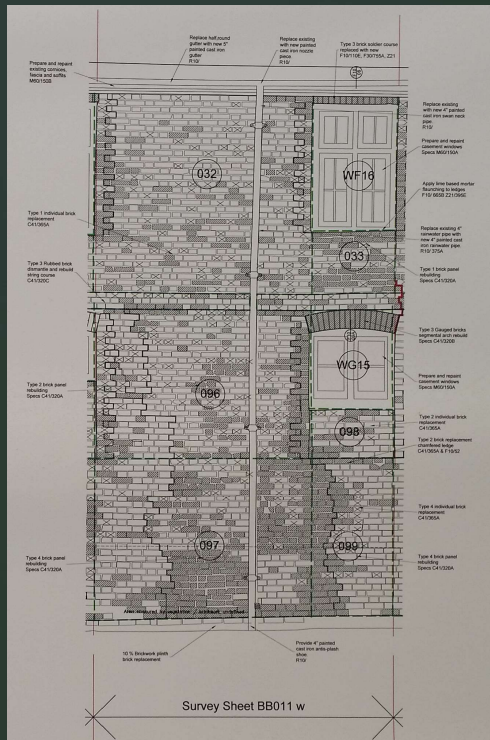
ANNUAL MAINTENANCE
WEEK

A well-maintained building is not only likely to last longer, it is also most likely to be energy efficient. Damp is the most common cause of damage affecting buildings of all ages. Dry walls are better insulators than ones that are wet, and regular maintenance can help you spot a small problem before it becomes a larger, more costly one. Luckily small steps to keep a building dry can make a big difference. Clearing gutters and checking your roof's condition once a year are simple ways to help prevent rainwater damage.





SPECIALIST WORK: FORMALISING DOCUMENTS FROM SURVEYING TO REPAIRS



THE SPAB APPROACH - SUMMARY



- Regular Maintenance
- Understanding
- Context and Continuity
- Respect for Age
- Essential work only
- Repair not restoration
- Conservative Repair
- Materials
- Proven Methods
- Craftsmanship and Practical Knowledge
- New Design to compliment Old
- Emergency work and a long-term view
- Sustainability and the SPAB Approach
- Passing on knowledge



QUESTIONS??

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