

ANOTHER MITEK ADVANTAGE

TIMBER SERVICE LIFE

There are many examples of timber structures that have survived for centuries. Their longevity has been due to good design and deliberate specification for durability.

Competent timber design demands a good understanding of service life performance of the material.

With this in mind, the Forest & Wood Products Australia (FWPA) published a useful book called "Timber Service Life Design Guide" at the beginning of this year to assist the timber designer.

This guide helps architects, builders and specifiers determine the expected life of timber structures and their connector components so that they can make better informed choices about the selection, treatment and maintenance of timber in specific projects.

The guide is supplemented by an easy-to-use "Service Life Prediction" software to make calculations even easier.

It is also complimented by a detailed draft proposal for calculation methods that is more suited to engineers and architects to use.

Eventually, it is planned for this draft to be finalised and referenced in the Building Code of Australia.

The contents were well researched and prepared for the FWPA by two reputable Australian research organizations: Timber Queensland and the CSIRO.

The information was based on the most currently available data and derived from historical performance, field and laboratory research and experience.

The procedures contained in the guide provide service life prediction models for using timber in various situations, such as:

- Decay of timber in ground contact;
- Decay of timber above ground and exposed to weather;
- Insect attack;
- Corrosion of fasteners;
- Marine borers.

In addition, it provides useful information and advice on:

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- Standards and codes requirements;
- Selection and specification of durability;
- Weathering, finishing, good practice, maintenance and other considerations.

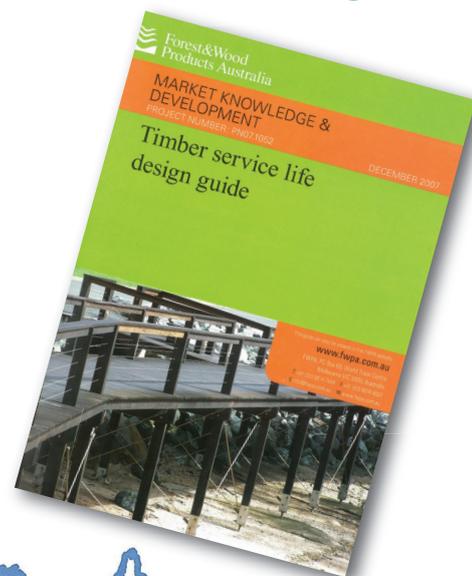


Figure 8.4 COASTAL ZONES RELATED TO CORROSION DUE TO AIRBORNE SALT
(Zone E has the greatest hazard)

The durability classifications for a large number of timber species are clearly tabled and hazard maps are provided to estimate the severity of climate on timber construction in different parts of Australia.

As an example, to estimate the typical service life for atmospheric corrosion of a metal fastener in timber, the user first ascertains the coastal zone from a map which ranks the risk of corrosion due to airborne salt with a hazard score.

Then in conjunction with other hazard scores for coastal exposure, site classification, microclimate and proximity to industrial pollution, a hazard rating is derived from the sum of all the hazard scores.

Using this hazard rating, the expected service life for the metal fasteners in this environment can be obtained from a table.

In summary, there are several simple key factors that affect the durability performance of timber and if they are adequately considered, timber buildings can achieve service lives that meet or exceed the designer's expectations, as demonstrated by a multitude of century old timber buildings.

Readers are encouraged to obtain a copy of the guide and software from the FWPA, or download the information from www.fwpa.com.au. **TTN**