

# STATEMENT OF DURABILITY

## National Construction Code of Australia (NCC)

At Millform Australia®, we manufacture top-grade steel products from high quality materials. Our durable products are ideal for a range of industrial, commercial, and civil applications.



Millform Australia products are manufactured from high-quality galvanised steel, or MAGNA-SHIELD PRO™ which meets the requirements for the **Type ZM Coating Class under AS 1397:2021 Continuous hot-dip metallic coated steel sheet and strip** — Coatings of zinc and zinc alloyed with aluminium and magnesium.

## DESIGN LIFE OF A STEEL STRUCTURE

It is generally recognised that the design life of a steel structure can vary depending on factors such as the type of structure, the quality of materials and construction, environmental conditions, and maintenance.

Well designed, and properly maintained steel structures can have a design life of 50 years or more.

*“Where Strength Matters”*



# DESIGN LIFE OF A STEEL STRUCTURE

Metallic coated steels and appropriately protected hot and cold-rolled steels are, in general, highly durable, long-life materials. Using established manufacturing methods and appropriate connection systems, steel framing made from these steels can be adapted to meet to a wide variety of building design challenges. In most service environments in Australian buildings, steel products with appropriate protection will perform their structural function almost indefinitely.

As noted by NASH et al, the durability performance of Australian building structures and their maintenance to achieve a specific design life is not explicitly regulated by the National Construction Code (NCC) or state legislation.

## DURABLE DESIGNING

The ABCB Guideline on Durability in Buildings notes that:

‘In designing for durability, the following factors should be considered –

- a) Intended use of the structure.
- b) Required performance criteria.
- c) Expected environmental conditions.
- d) Composition, properties, and performance of the materials.
- e) Structural system.
- f) Shape of the members and the structural detailing.
- g) Quality of the workmanship and level of control.
- h) Particular protective measures.
- i) Maintenance during the design life.

**Whilst all these factors are important, in practice, it is items (c), (h) and (i) that will have the most significant impact.**

## LOCATION

Part of the selection process when choosing your steel requirements is that it needs to be geographically calibrated. AS 4312:2019 Atmospheric corrosivity zones in Australia, identifies the proximities, directions and topographies that locate corrosion category boundaries in Australia.

## SUMMARY

Durability design is an important matter for designers in all classes of building. The community has a general expectation that durability has been considered in building design. There is a lack of simple easy-to use durability solutions for residential and low-rise buildings as well as commercial structures. The use of appropriately durable components throughout the structure, having regard to good design principles, can ensure acceptable performance without inefficient overdesign.

In relation to both design and further technical advice, please do not hesitate to contact Millform Australia.

**As manufacturers we need to understand our conformance obligations, and comply with the NCC, BCA as well as Standards Australia and local regulations.**

FOR DETAILED PRODUCT INFORMATION  
GUIDES AND PROJECT CASE STUDIES VISIT:  
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