

# Standards for building and infrastructure

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# The Building Act:

The Building Act 2004 sets out the rules of the game for

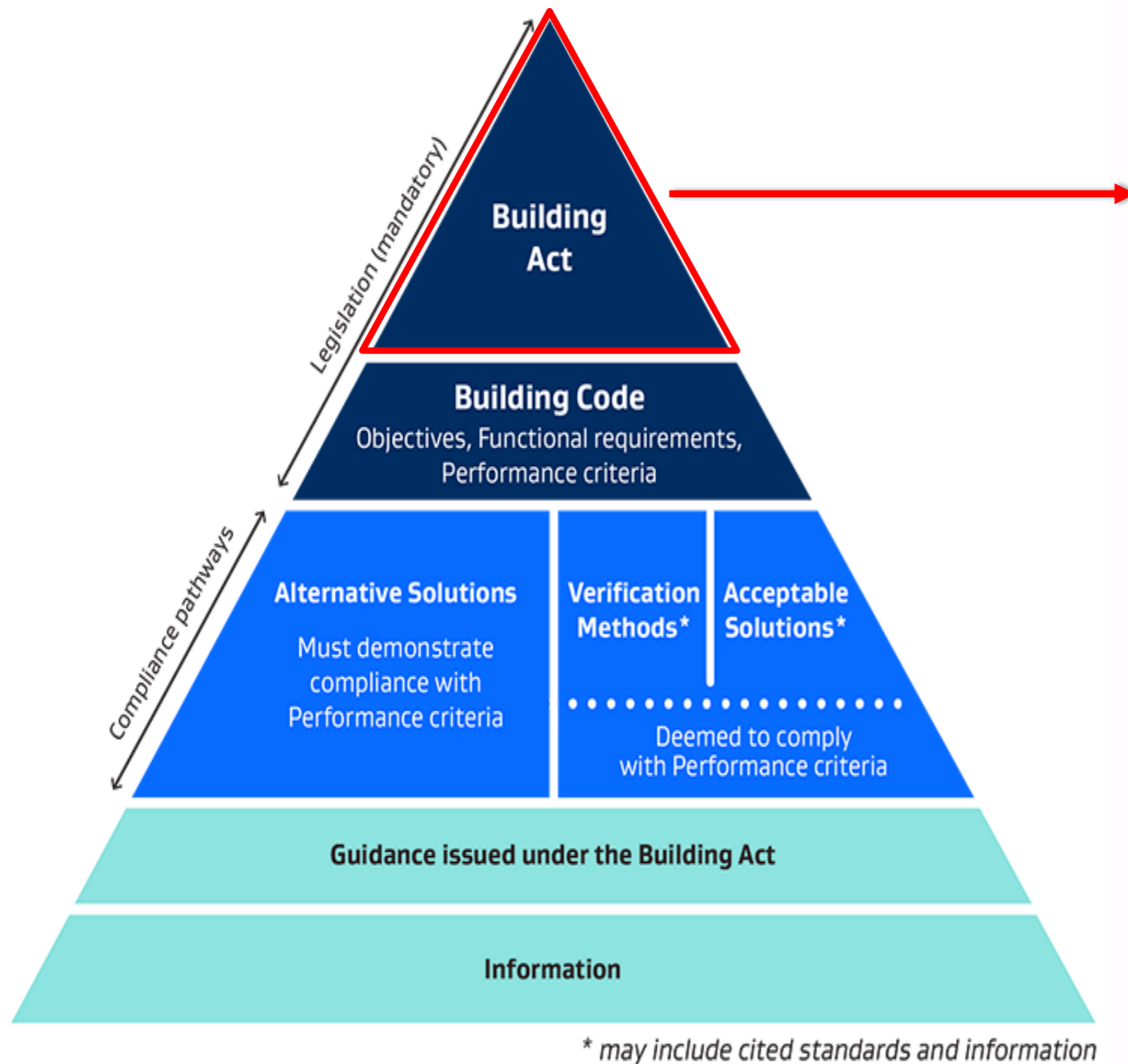
- Design
- Construction
- Alterations
- Maintenance of new and existing buildings in NZ.

The Building Act's purpose is to ensure buildings are, **warm, dry and healthy**. And that they contribute to the **well-being** of the users.

**The Act sets out the minimum standards on how they should function and perform.**

All buildings are controlled by the NZS Building Act 2004. In 2004 the Act went through a major review setting out more accountability for:

- Designers
- Builders
- And Building Consent authorities



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MINISTRY OF BUSINESS,  
INNOVATION & EMPLOYMENT  
HĪKINA WHAKATUTUKI

## New Zealand Building Code Handbook



General provisions



Stability



Protection from fire



Access



Moisture



Safety of users



Services and facilities



Energy efficiency

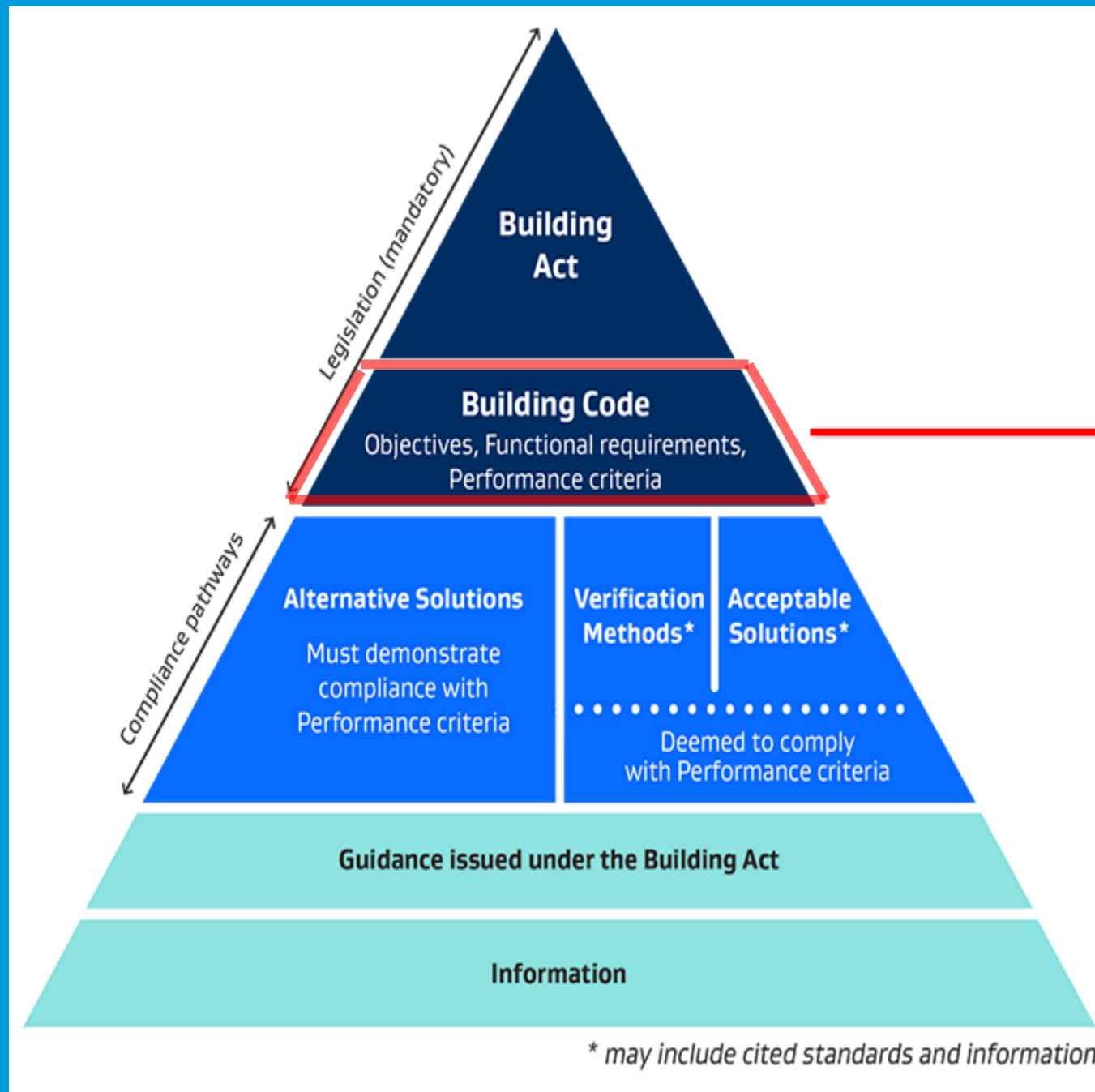


- Part 2 of the Building Act sets out the NZ Building Code which all buildings in NZ must comply with this code.
- The code provides a standard of how a building must perform but does not tell you how to achieve that.

NZBC Covers Several Clauses, from A1-H1.  
Taking a close look at a few only:

# The Building Code:

NZBC Covers Several Clauses, from A1-H1.  
Taking a close look at a few only:



B1 – Structural Adequacy (sounds safe house/Building)

- Gravity Loads
- Lateral Loads - seismic
- And Connections

B2 – Durability of Componentry (withstand elements)

- Timber Treatment
- Materials used in fixings
- Intended life of Building.

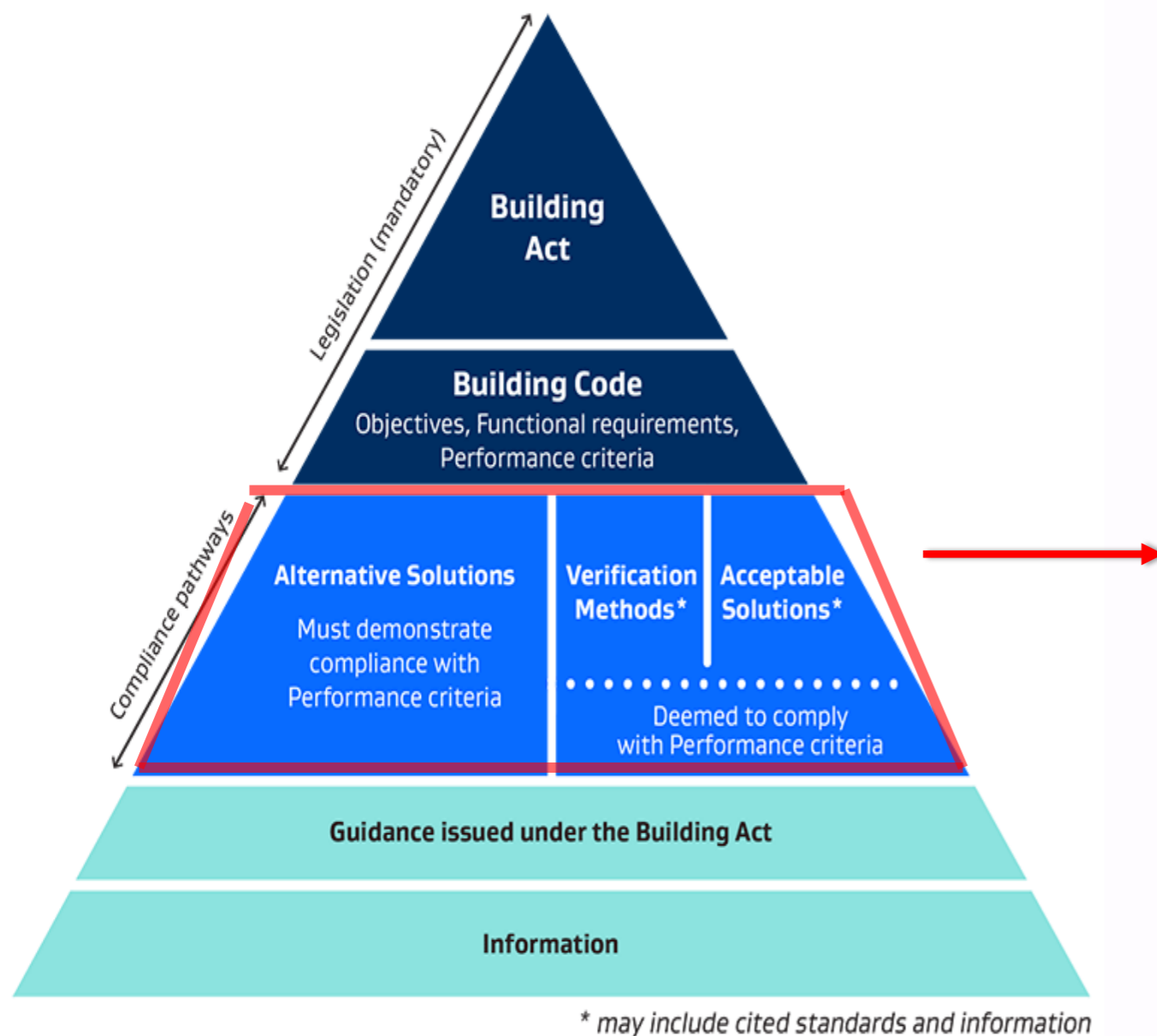
E2 – External Moisture (Build a dry house)

- E2 Gives a Risk Matrix which direct you to cladding types, wall cavities etc.
- Prevent water entry, water absorption and transmission
- External roof, wall claddings and external openings.

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# METHODS OF COMPLIANCE



## Compliance Paths:

The regulation framework diagram shows that there is more than one pathway to compliance.

### Acceptable solution:

- NZS3604 Timber Framed buildings
- Covers both design and building a structure

### Verification Method:

- This is used by Engineers when working with designs that are outside the Acceptable solution.
- This pathway uses different NZS standards such as
  - NZS3603 Timber Structures,
  - ASNZS 1170 (deals with specific loads and how they are applied to the design)

### Alternative Solution:

- Outside the scope of Acceptable Solution  
Eg/ NZS3604 covers members for roof construction but NOT trusses. Therefore, Trusses are an Alternative Solution.

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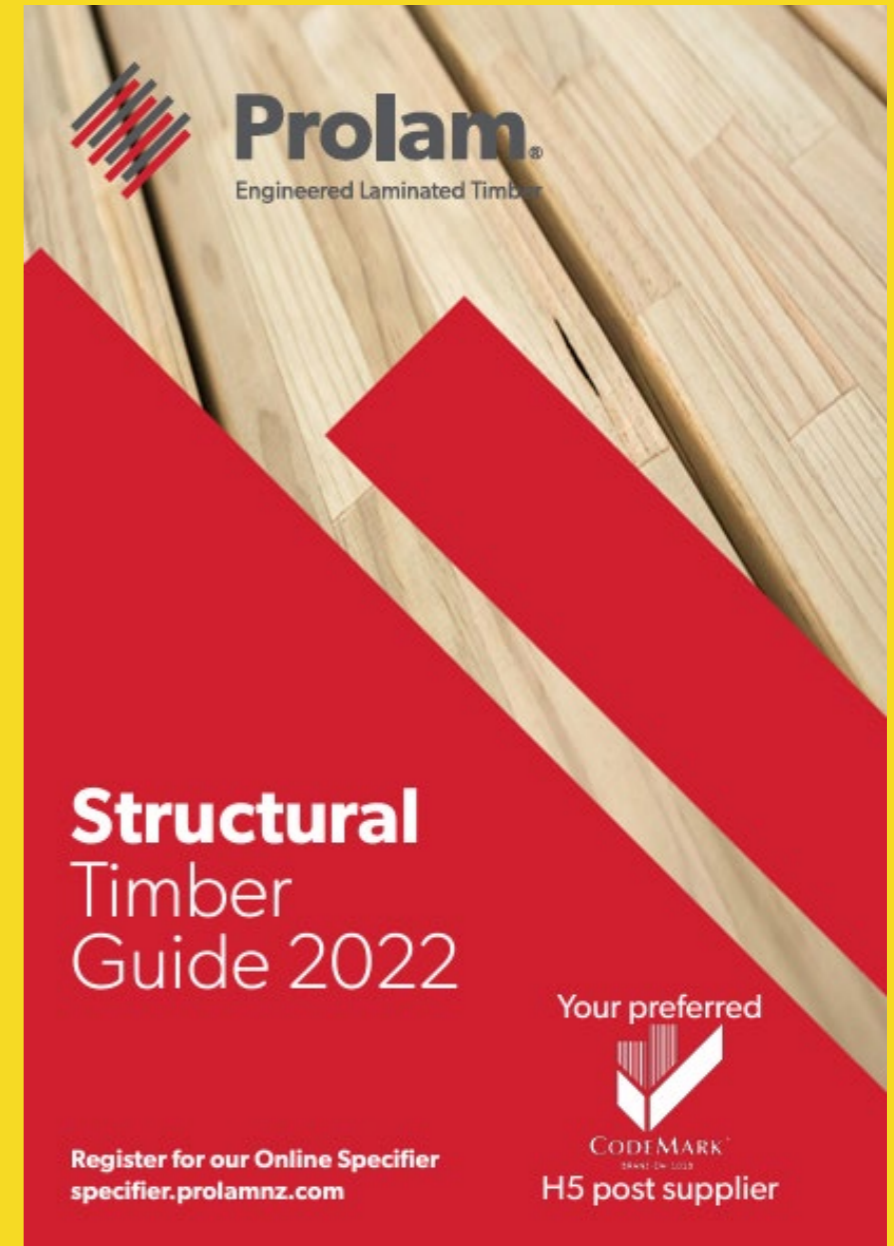
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# METHODS OF COMPLIANCE

## Alternative Solution:

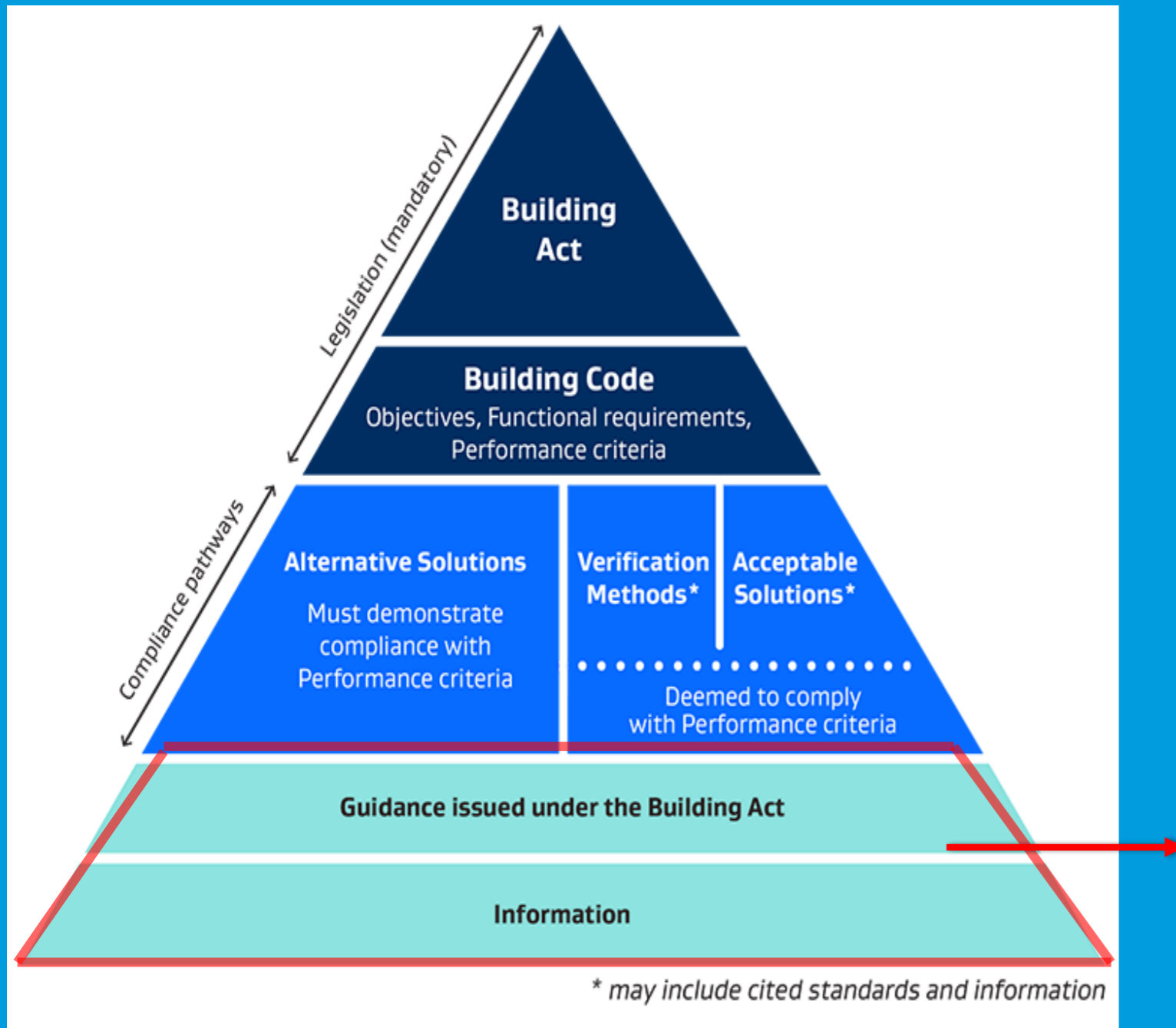
- This is used by Engineers and Designers when working with designs that are outside the Acceptable solution.
- This pathway uses different ways to show compliance with the NZBC such as:
  - NZS standards such as the verification method
  - International standards
  - Inservice history of the components
  - Experts in the field where compliance needs to be shown

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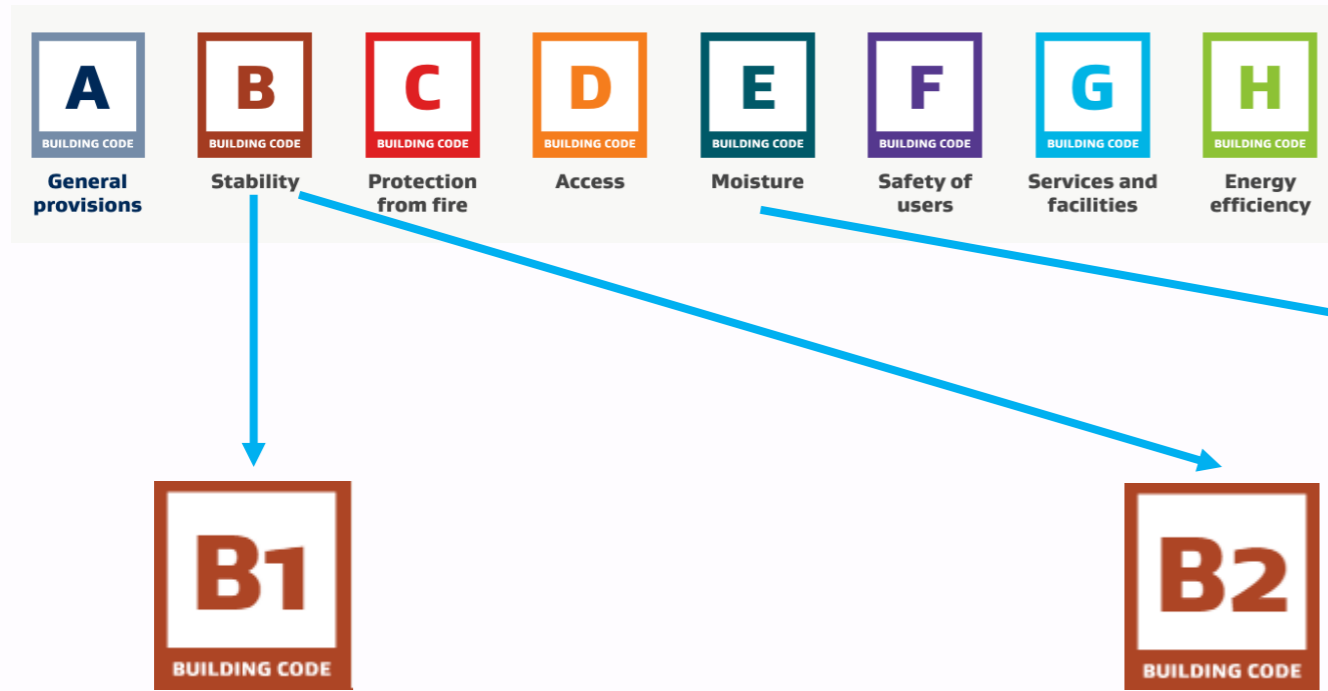


# NZ STANDARDS



- Standards directly help demonstrate compliance with the NZ Building Code.
- BCA's use standards to assess and compare building consent applications to ensure they comply with the NZ Building code.

# BUILDING CODE AND STANDARDS



All sections of the **NZBC** stand on the foundation of **NZ Standards** - Just touching on a few examples, there are hundreds more.

NZS 1170: Structural design actions	NZS 3101:2006 Concrete structures standard	AS/NZS 1734: 1997 Aluminium and aluminium alloys – Flat sheet coiled sheet and plate
AS/NZS 1664: Aluminium structures	NZS 3101:2006 Timber and wood-based products for use in building	AS/NZS 2269.0: 2008 Plywood – Structural
AS/NZS 1748:- Timber – Stress graded for structural purposes	NZS 3604: 2011 Timber framed buildings	NZS 2295: 2006 Pliable, Permeable Building Membranes
NZS 3101:- Concrete structures standard	NZS 3640: 2003 Chemical Preservation of round and sawn timber	AS/NZS 2728: 2007 Prefinished/preprinted sheet metal products for interior/exterior building applications
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