CPC30211 - Certificate III in Carpentry

CPCCCA3003A - Install flooring systems

RESOURCES

Introduction

This unit of competency specifies the outcomes required to plan, prepare, set out and install timber flooring systems to support imposed loads. It includes application in brick veneer, full masonry and timber frame construction.

To understand the requirements of this unit, you can visit the following Unit of Competency on Training.gov.au as follows:

https://training.gov.au/Training/Details/CPCCCA3003A

There are three main topics to consider when looking at timber flooring.

1) Foundations
2) The bearers and joist systems (sub-floor system)
3) Flooring systems

The best resource for this is AS 1684.2—2010 Australian Standards for Residential timber-framed construction – Part 2: Non-cyclonic areas
https://www.renovateforum.com/attachments/3/1/8/7/4/85884.attach

Note that the Australian Standards document is approximately 280 pages therefore you should focus your reading on the relevant sections for this unit.

SECTION 3 (Substructure), SECTION 4, (Floor Framing) and SECTION 5, Flooring and Decking will provide most of the information required for this unit.

For quick reference, the following links have useful information and will cover all elements of the flooring systems

https://renew.org.au/renew-magazine/building-materials/the-right-floor-for-your-build/

Before you get started on your reading, watch this video:
https://www.youtube.com/watch?v=ZReF4uQm_b0

Foundations

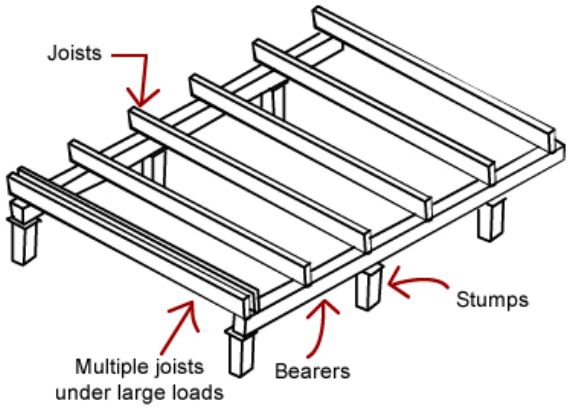
The main purpose of a foundation is to support a building however, its role is far more important than just being a standing stone. When properly constructed or laid, it establishes a good foundation and serves to keep moisture of the property by forming an effect dam against ground water

The following video provides useful pros and cons about most Australian Classic Homes Common Footing Types

https://www.youtube.com/watch?v=1a8ObHoRf9s

Bearers and joists

What Are Bearers and Joists?
Usually timber or steel, bearers attach directly to the stumps in the ground (foundations) and support the deck or flooring structure. Joists then attach across the top of the bearers, providing a structure to attach the timber or particle board floor.



Although it may appear to be a simple structure, it forms the basis of the whole, home or deck. The size of bearer and spans usually needs to be engineered to ensure correct load distribution. If not done correctly, the entire structure can buckle, or worse, collapse.

Probably the best resources other than Australian standards are provided by QBCC and they have provided a technical data sheet on residential timber decks as that discusses bearers and joists

https://www.qbcc.qld.gov.au/sites/default/files/04_ResidentialTimberDecks_final.pdf

In addition, Build.com.au have an easy to read guide as follows:

https://build.com.au/beam-and-joist-subfloor

Flooring systems

Flooring systems is a big industry in Australia with manufacturers competing for this space by providing environmentally friendly, sustainable products. In addition, the purpose of the flooring dictates the type of system to use so there is a lot of information to understand.

The Australian Timber Flooring Association often provide Information Sheets

https://www.pfc.com.au/wp-content/uploads/2020/01/Timber-Flooring-System.pdf

Sustainable and environmentally friendly systems

For those of you have an interest in a sustainable approach to construction, the Australian Government have provided this discussion…

https://www.yourhome.gov.au/materials/construction-systems