



WHO CERTIFIES THE DESIGN?

Where the building regulations allow and the risks are small, structural engineers can certify their own designs. For large projects where the risks are greater, structural engineers have their designs checked by an independent engineer. Costs for independent checking may be additional to the design engineer's fee.

HOW DO I FIND A STRUCTURAL ENGINEER?

Members of Engineers Australia that are Chartered Professional Engineers (CPEng) and registrants on the National Professional Engineers Register (NPER) are appropriately qualified engineers. Verification that the person you are engaging is a current CPEng and/or is currently registered on the NPER can be checked by either viewing their current membership card or certificates.

CPEng or NPER registered structural engineers can be found

- by referral, or
- by contacting the nearest office of Engineers Australia¹, or
- by searching on the registration database *RPSearch* at www.nerb.org.au

¹ Privacy laws preclude Engineers Australia from disclosing individual member's details unless the member has given approval for his/her membership to be confirmed to a third party.

FOR MORE INFORMATION

For more information please refer to the Structural College section on the Engineers Australia web site at www.engineersaustralia.org.au

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STRUCTURAL ENGINEERS

BUILDING OR RENOVATING - STRUCTURAL ENGINEERS
ARE ESSENTIAL TO A SUCCESSFUL PROJECT



ENGINEERS
AUSTRALIA
Structural College

WHAT DO STRUCTURAL ENGINEERS DO?

Structural engineers create quality structures that work well – structures that do their job; that safely withstand all the forces they can reasonably be expected to experience; that are valuable and durable.

Structural engineers are the qualified professionals responsible for making sure that structures such as buildings, bridges and retaining walls are designed to be structurally sound. They not only understand the way structures behave, but they also have valuable knowledge about design standards, building regulations and applied loads. Furthermore, structural engineers are the experts who can identify and resolve problems with existing structures.

WHO ENGAGES STRUCTURAL ENGINEERS?

Anyone who requires professional advice regarding the design, rehabilitation, repair and adequacy of either large or small structures engages structural engineers.

It is prudent to engage structural engineers to check that construction works are undertaken in accordance with the design.

WHEN DO YOU NEED A STRUCTURAL ENGINEER?

A structural engineer is engaged when you need advice about the design, repair or adequacy of a structure, including houses, pergolas, decks and retaining walls.

Structural engineers usually act as independent consultants who are part of a collaborative effort involving the owner, other engineering disciplines, builders and architects.

WHAT CAN A STRUCTURAL ENGINEER DO FOR YOU?

Structural engineers can provide you with advice on the selection and specification of materials such as steel, reinforced concrete, masonry, and timber. Structural engineers determine structural form and document the structural systems required for construction to occur. Such issues impact on the affordability, constructability, durability and aesthetics of the structure.

Structural engineers check the design compliance of a structure with Australian Standards and the Building Code of Australia. Most building approval authorities in Australia require an engineer to certify the structural adequacy of a project.

Structural engineers can report on issues relating to:

- poor construction quality
- inferior or wrong materials
- problems with footings
- cracking of walls
- structural damage caused by construction, or by storms or earthquake.

WHAT CAN I EXPECT WHEN I ENGAGE A STRUCTURAL ENGINEER?

When you engage a structural engineer you can expect a professional service consistent with the scope of work and the fee schedule. You should ensure agreements are in writing and understand the limitations of the engineer's role and responsibilities.

Building approval authorities usually require the certifying engineer to carry professional indemnity insurance. Check whether the structural engineer you engage has current professional indemnity insurance.

WHAT WILL THE STRUCTURAL ENGINEER DO?

When you engage a structural engineer, you should expect to receive a complete set of documents in accordance with the scope of the engagement. Structural engineering documents form part of a building contract. These documents usually include: drawings showing general arrangements and connection details; written specifications defining materials and workmanship; and dependent upon the scope, may include construction methods.

A structural engineer may be engaged to inspect building works for design compliance. Inspections are usually undertaken at critical stages of the construction, such as excavated ground, tied reinforcement for concrete, and exposed framing. If the works are not inspected by the design engineer, the builder and/or the building surveyor take responsibility for construction compliance.

HOW MUCH WILL IT COST TO ENGAGE A STRUCTURAL ENGINEER?

Professional fees for the engineer's services will depend on the terms of engagement, the scope and complexity of the work and the perceived risks of the project. Fees are market driven in accordance with current trade practices and reflect the skills, training and responsibilities of the engineer.