	PRACTICE NOTE NO: 6	Version 1	Amended April 2001	Page 1 of 2
	Copyright © ACSE 2011			
	<b>Masonry Cladding and Non-Load Bearing Walls</b>			

## Background

Non-load bearing masonry or masonry cladding may often be seen as non-structural and therefore not requiring input from a consulting structural engineer.

However, such masonry must still comply with the requirements of the BCA which in turn specifies that such masonry shall comply with AS3700 – Masonry Structures.

Many architects and builders recognise that advice from a consulting structural engineer is advisable regarding masonry, particularly in relation to matters such as stiffening, restraint, bracing, tying and the location and detailing of joints.

## Design Requirements

The term 'non-load bearing' for masonry elements nonetheless only relates to the fact that such elements are not required to carry vertical load. Such elements can be subject to lateral (or out-of-plane) loads due to wind, earthquake, accidental or nominal lateral loads.

Masonry elements are still required to be designed for one or all of the following:

1. strength under lateral loads
2. serviceability including movements
3. stability
4. accidental damage
5. construction loading or conditions
6. robustness
7. durability
8. fire resistance


Advice may also need to be provided by the consulting structural engineer on matters such as:

1. location and details of control joints
2. mortar types
3. ties and connectors
4. arch bars and lintels
5. connections to the structure
6. permissible chasing
7. review of masonry specification prepared by architect

The requirements of AS3700 in respect of the above may be amplified using the information in the following documents:

### Disclaimer:

The ACSE is an association formed to provide a forum for the exchange of information between its members and others. Since the information contained herein is intended for general guidance only, and in no way replaces the services of professional consulting engineers on particular projects, no legal liability for negligence or otherwise can be accepted by the Association for the information contained in this Practice Note.

	PRACTICE NOTE NO: 6	Version 1	Amended April 2001	Page 2 of 2
	Copyright © ACSE 2011			
	<b>Masonry Cladding and Non-Load Bearing Walls</b>			

Standards Australia/Concrete Masonry Association of Australia

- “Design of Concrete Masonry Buildings” SA HB 124/MA40
- “Detailing and Construction of Concrete Masonry Buildings” SA HB 237/MA42

Standards Australia

- “Masonry Structures – Commentary” Supplement No. 1 to AS3700
- “Australian Masonry Manual” NSW Department of Public Works & Services/ACSE

### Contractual Arrangements

The involvement of the consulting structural engineer in providing input during the design process needs to be recognised in the contractual arrangements. The following steps should be part of the process:

- a. The extent of involvement by the consulting structural engineer in the review or design of non-structural masonry or cladding elements should ideally be specified in the initial proposal and a fee included for this in this scope of work.
- b. At some early stage the consulting structural engineer should review the architects proposed wall elevations and wall plan layouts to determine the level of consideration of masonry wall support or jointing that is required by the consulting structural engineer.
- c. Upon completion of step b. above, the extent of responsibility and detailing required of the consulting structural engineer should be clearly identified. If not part of the original scope of work of the consulting structural engineer up to this point, this work should be added to the consulting structural engineer’s brief as a percentage of the cost of the brickwork or by charges at hourly rates or by way of an agreed lump sum fee.
- d. The consulting structural engineer should specify the quality of brickwork and quality assurance appropriate for the strength required in any panels required to resist loading from wind or earthquake in a similar manner as for traditional load bearing brickwork carrying vertical loads. The advice should extend to all matters referred to in AS3700.

**Disclaimer:**

The ACSE is an association formed to provide a forum for the exchange of information between its members and others. Since the information contained herein is intended for general guidance only, and in no way replaces the services of professional consulting engineers on particular projects, no legal liability for negligence or otherwise can be accepted by the Association for the information contained in this Practice Note.