- **Stainless Steel Mesh ("TermiMesh")**

This proprietary product consists of a fine woven marine grade stainless steel mesh used as a physical barrier. The mesh is too small for termites to pass through and too tough for them to chew through. The full system involves mesh being laid under a concrete slab and incorporated with the brickwork skin or ant capping at slab edge. Sleaves and clamps are used to seal around service penetrations.

A more common option is a partial system which involves construction of a perimeter barrier only. This partial system is intended to seal the exterior brickwork to the footing and can be used in conjunction with other under-slab protection systems — Refer Tables 3 and 4.

The mesh can also be formed into "socks" for stump/post applications.

Installations must comply with manufacturers specification.

- **Crushed Granite ("GranitGard")**

This is a proprietary physical barrier system that can be used under slabs and/or around posts and footings. The barrier is comprised of finely crushed and accurately graded (screened) rock of particle size and voids designed to prevent termite passage i.e. voids too small to pass through, and particles too large for termites to move.

"GranitGard" is not recommended for protecting buildings against Mastotermes termite species and should therefore only be used south of the Tropic of Capricorn.

Installation must comply with the manufacturers specification.

"GranitGard" – Being installed under a slab

"TermiMesh" – Can provide perimeter and underslab protection

Chemical Barriers

- **General**

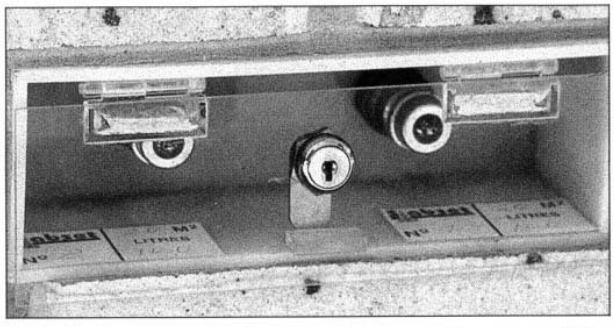
Chemical barrier systems provide a zone of treated soil, poisonous to termites, either under or around footings and slabs. Organochlorine barriers are very persistent and are known to last for 20 years or more.

NOTE: Organochlorine chemicals will not be available for use, other than in the Northern Territory after 1st July 1995.

Other chemical systems such as organophosphates are less persistent and require replenishing every 5 — 10 years depending upon exposure to weather, soil conditions etc. These less persistent chemicals may require a reticulation system to allow for retreatment in inacccessible areas i.e. under slabs.

- **Reticulated Chemicals ("Slabset", "Termguard", "Altis" etc.)**

These proprietary systems use a grid of pre-installed piping and distributors that enable chemicals to be applied to the underside of concrete slabs and around perimeters of buildings. The chemicals are applied under pressure at the completion of construction by licensed pest controllers and on a scheduled basis thereafter.



"Slab-Set" – Reticulation valves easily accessible for post-construction treatment to underslab area

PROTECTION OPTIONS — Slab on Ground

Tables 3 and 4 provide a summary of the protection options available for slab on ground buildings.

TABLE 3 PROTECTION OPTIONS – SLAB ON GROUND: NON CHEMICAL

Options	Under Slab Protection			Protection at Perimeter Footings (Only one perimeter protection system is required)			Refer Figure
	Monolithic Slab to AS 2870*	Crushed Granite	Stainless Steel Mesh	Exposed Slab Edge	Crushed Granite	Stainless Steel Mesh	
1	✓	–	–	✓	✓	✓	4
2	–	✓	–	✓	✓	✓	4
3	–	–	✓	✓	✓	✓	4

* Service penetrations through the slab must be protected by other physical methods.

TABLE 4 PROTECTION OPTIONS – SLAB ON GROUND: CHEMICAL OR COMBINED CHEMICAL/PHYSICAL

Options	Under Slab Protection			Perimeter Protection (Only one perimeter protection is required)					Refer Figure
	Monolithic Slab to AS 2870*	Organo-chlorine Treatment #	Organophosphate Treatment (Reticulated)	Organo-chlorine Treatment #	Organo-phosphate Treatment	Exposed Slab Edge	Crushed Granite	Stainless Steel Mesh	
1	✓	–	–	✓	✓	–	–	–	4
2	–	✓	–	✓	✓	✓	✓	✓	4
3	–	–	✓	✓	✓	✓	✓	✓	4

Organochlorine chemicals will not be available for use other than in the Northern Territory after 1st July 1995.
* Service penetrations through the slab must be protected by other physical or chemical methods.

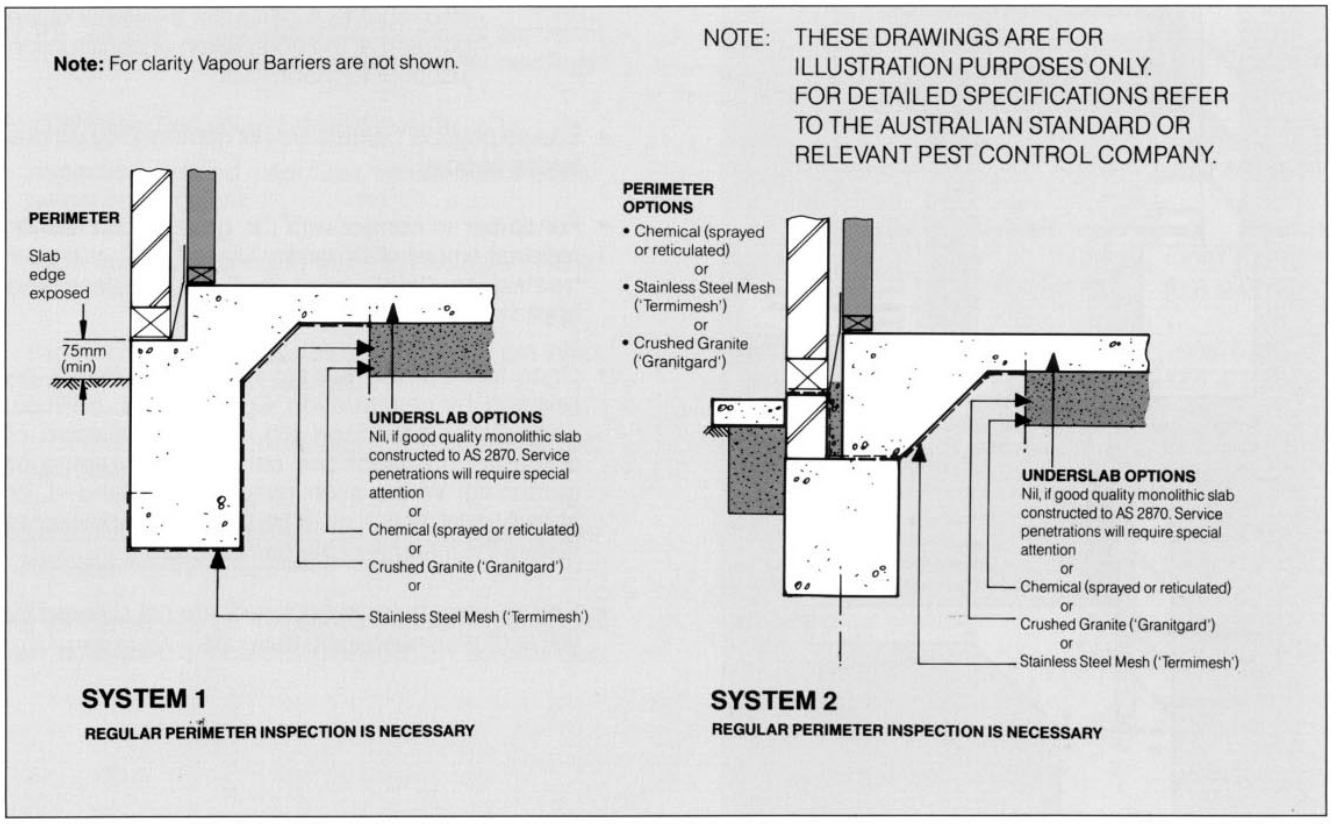


FIGURE 4 PROTECTION SYSTEMS FOR SLAB ON GROUND

Protection Against Termite Damage to Structure

Protection against termite damage to the structure can be achieved by protection against termite infestation of the whole building as described above or by the use of termite resistant structural materials.

NOTE: The use of termite resistant structural materials alone will however not protect against the risk of termite infestation of other building components and contents and is therefore only a partial solution to the hazards associated with termites.

Refer Figure 5 for construction details.

Termite resistant timbers are listed in Table 1 except that, for above ground use, the levels of preservative treatment required for the softwood species denoted * in Table 1 are:-

i) "H2" for timber protected from the weather refer AS 1604.
ii) "H3" for timber exposed to the weather refer AS 1604.

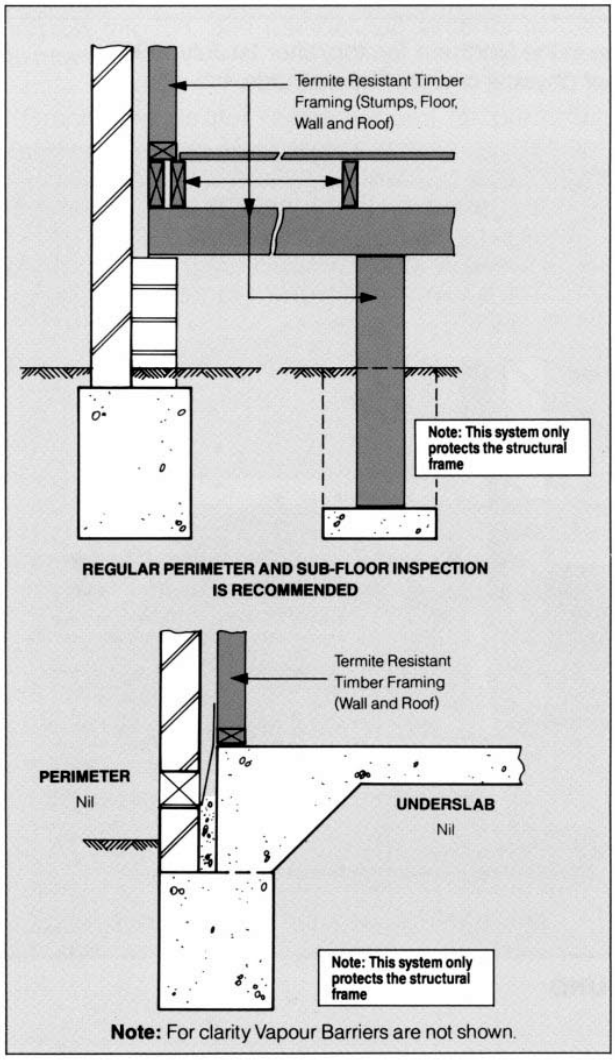


FIGURE 5 TERMITE RESISTANT STRUCTURAL MATERIALS

Construction Considerations

It is important to note that effective termite management strategies begin prior to site disturbance and include construction practices. The following in particular should be considered.

Site Preparation

- Prior to site disturbance, survey the site and determine the presence of termite activity, colonies, etc. If economically damaging species are found, do not disturb, engage a licensed pest controller to take remedial action to treat the nest or colony in accordance with AS 3660.

- Clear the immediate building site of all logs, tree stumps, tree roots, and other vegetation prior to construction.

During Construction

- Remove all formwork, form boards, profiles, pegs, etc. near or under foundations or slabs.

- Install physical or chemical soil barriers in accordance with AS 3660 or manufacturers approved details. Refer Figures 3 and 4.

NOTES: i) Chemical soil barriers must be installed by licensed pest control operators where required by state legislation.
ii) As well as underslab treatment, AS 3660 also requires a perimeter treatment of the building at the completion of construction just prior to "hand-over".

- Ensure physical barriers are not damaged by various trades-people.

- For timber in contact with the ground, use termite resistant timber of Durability Class 1 or 2 or timber treated to "H5" level (H4 for landscaping applications).

- Once formed, the barrier system should not be bridged by construction e.g. carports, trellises, annexes or breached e.g. as in installation of underground telephone cables, landscaping or gardening. Where such projects are intended, or already exist, action must be taken to maintain or to restore the integrity of the barrier system.

- Ensure weep holes in brickwork are not covered by soil or other landscaping materials.

Inspection and Maintenance

Landscaping

- Where landscaping or other site disturbances (new telephone cables,slabs, etc.) adjoining the structure breach the perimeter chemical soil barrier engage a licensed pest control operator to re-treat around the building perimeter in accordance with AS 3660.

NOTE: Perimeter treatments are usually not necessary for elevated timber construction supported on stumps or posts where physical barriers, such as "ant caps" are provided in accordance with AS 3660.

- Do not store wood or other organic material against buildings.
- Keep gardens and landscaping clear of weep holes, physical barriers (ant caps) and damp proof courses.
- Maintain regular inspections to ensure the perimeter of the house is kept clear of organic material and kept neat and tidy.

Annual Inspection

Have annual inspection carried out (preferably by a licensed pest controller) to detect termite activity in the building and immediate surrounds in accordance with AS 3660.

NOTE: Search for and eliminate sources of persistent moisture or dampness within or near buildings.

Annual inspection should at least include:

- inspection around perimeter weepholes in brick veneer construction.
- inspection of landscaping timbers, fencing and other timber structures.
- inspection of termite shields ensuring they are intact and not breached by galleries.
- underfloor inspection of stumps, floor frame and perimeter masonry.
- particular attention should be paid to areas under kitchens, bathrooms and laundries.

For further advice on inspection and remedial action refer to AS 3660 or local pest management associations.

Ant caps provide ground separation for stairs, but regular inspection is required

Proprietary Systems and Pest Controllers

For further information on proprietary systems and licensed pest controllers contact:

Australian Environmental Pest Managers Association	Phone: (008) 252 772 Fax: (02) 488 9717
TermiMesh	Phone: (008) 632 111 Fax: (09) 249 1021
GranitGard Pty Ltd	Phone: (008) 032 549 Fax: (03) 417 6008
Altis Pty Ltd	Phone: (09) 458 4436 Fax: (09) 350 5870
Slabset	Phone: (074) 986 701 Fax: (074) 986 661
Termguard	Phone: (08) 281 7884 Fax: (08) 281 9179

Traditional construction: For over 200 years ground separation has provided effective termite protection

Other References

1. AS 3660 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES – Protection, Detection and Treatment of Infestation.

2. AS 1694 PHYSICAL BARRIERS USED IN THE PROTECTION OF BUILDINGS AGAINST SUBTERRANEAN TERMITES.

3. AS 2057 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES – CHEMICAL TREATMENT OF SOIL FOR BUILDINGS UNDER CONSTRUCTION.

4. BUILDING OUT TERMITES – An Australian Manual for Environmentally Responsible Control
   Robert Verkerk 1990.

5. WOOD DESTROYING INSECTS – Wood Borers and Termites
   J.W. Creffield CSIRO 1991.

FOR FURTHER INFORMATION CONTACT THE FOLLOWING:

Timber Promotion Council (WA)	103 Colin Street, West Perth, WA 6005	PH: (09) 322 2088	FAX: (09) 481 1019
Plywood Association of Australia,	3 Dunlop Street, Newstead, Qld 4006	PH: (07) 854 1228	FAX: (07) 252 4769
Pine Australia,	24 Napier Close, Deakin, ACT 2605	PH: (06) 285 3833	FAX: (06) 285 3969
Timber and Building Materials Association (NSW) Limited,	13-29 Nichols Street, Surry Hills, NSW 2010	PH: (02) 360 3088	FAX: (02) 360 3464
Timber Development Association of (NSW) Ltd,	13-29 Nichols Street, Surry Hills, NSW 2010	PH: (02) 360 3088	FAX: (02) 360 3464
Timber Development Association of SA,	113 Anzac Highway, Ashford, SA 5035	PH: (08) 297 0044	FAX: (08) 297 2772
Timber Merchants Association of Victoria,	180-184 Whitehorse Road, Blackburn, Vic 3130	PH: (03) 877 2000	FAX: (03) 877 6663
Timber Promotion Council of Victoria,	932 Swanston Street, Carlton, Vic 3053	PH: (03) 347 6322	FAX: (03) 347 3132
Timber Research and Development Advisory Council of Queensland (Timber Facts),	5 Dunlop Street, Newstead, Qld 4006	PH: (07) 852 1344	FAX: (07) 252 2607
Australian Furniture Research & Development Institute	PO Box 2042, Launceston, Tas 7250	PH: (003) 26 6155	FAX: (003) 26 3090

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