targets termites - safeguards you
termguard
reticulation system

Flick™
AN ANTICIMEX COMPANY

Termguard Perimeter Reticulation System

Technical Training Manual 2025

CodeMark Australia
CMI CERTIFICATION
Certificate CM40275

Termguard Technical Training Manual – September 2025

The diagrams & photographs contained in this manual are used to illustrate installation procedures of Termguard Systems.

To ensure that the requirement is easily understood, adjacent construction elements that are not related to the installation of the System are not always shown.

Contents

1. Training Program

Termguard has the following training regimen:

i. Identification of streams of discipline (installers and inspectors), so that training courses and certification are appropriately adapted.

ii. The training is to be provided by Flick Anticimex at the Licensee's cost as part of the initial training, and for subsequent training at scheduled times as required.

iii. For new installers and/or inspectors, employed after scheduled training and prior to next scheduled training, they will be trained by **Flick Anticimex** or by **Termguard authorised trainers** at the Licensee's cost.

a. Authorised Trainers

i. This person will be responsible for assessing the trainees and training them in accordance with the **Termguard** Technical Manual.

ii. This person will be required to have a recognised Workplace Training / Accessor Accreditation (approved by Flick Anticimex), have undertaken the **Termguard** Training Program, and been deemed competent.

b. Installers

i. **Installers** of **Termguard** Systems are not able to carry out installations of **Termguard** Systems until they have met all specific State or Territory licensing requirements to carry out such work.

ii. At completion of the **Termguard** Training Program and the final on-site installation competency assessment, the installer will be certified to install **Termguard Perimeter** System only.

iii. This does not qualify the installer to handle termiticides or to inject chemical emulsion to a **Termguard** system

c. Inspectors (to carry out warranty Inspection)

i. **Inspectors** of **Termguard** Systems are required to have successfully completed the **Termguard** training to ensure an understanding of the systems requirements and have completed the State or Territory's training requirements to carry out **Termguard** System injections and/or (Termite) Timber Pest Inspections.

ii. This differs from state to state and written conformation is required prior to carrying out **Termguard** System injections and/or Termite (Timber Pest) Inspections in relation to **Termguard** Systems.

d. Field Supervisors

i. **Licensees** will be required to apply to have their own authorised field supervisor appointed.

ii. Field Supervisors must meet all State or Territory legislative requirements in relation to **authorised field supervisors**.

iii. This person will be responsible for assessing the trainees at completion of the training course through on-site assessments, ensuring the trainees competence with installation is maintained, inclusive of System injections and inspections of **Termguard** Systems.

iv. This person will need to have completed successfully the **Termguard** training, be fully qualified as a termite technician in their State or Territory and be competent in all State or Territory requirements for carrying out Termite Timber Pest Inspections and handling/ application of termiticides.

2. Approvals

i. The **Termguard Perimeter Reticulation** Systems has undergone stringent testing in Australia carried out by independent evaluators.

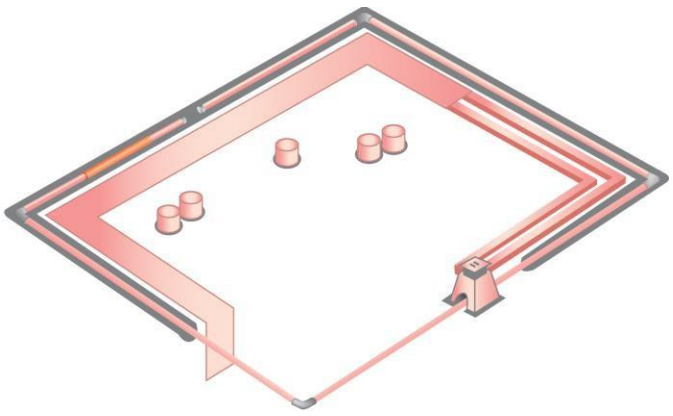
ii. The following unique Australian credentials apply to the individual systems listed below.

a. Perimeter Retreatment & Armoured Shield System

- CodeMark, Certificate of Conformity #CM40275
- National Construction Code and Building Code Australia compliance
- Australian Standards AS3660 series compliance

3. Systems Overview

Perimeter Retreatment & Armoured Shield System



i. **Termguard** Perimeter Retreatment and Armoured Shield System is the most cost-efficient method of protection for new homes.

ii. The system utilises the concrete slab conforming to AS2870 or AS3600 to form part of the Termite Management System in conjunction with Armoured shields and the perimeter of the structure is protected with the **Termguard** Perimeter System.

iii. The Armoured Shields Collars are made of heavy duty UPVC that is chemical and UV resistant and sufficiently flexible to absorb the mechanical stresses resulted from ground and building movements.

iv. The Armoured Shields are installed once the moisture membrane and steel works are placed into position.

v. The concrete slab is then poured, and the shield is keyed into the concrete through the raised ribs on the shield.

vi. The Perimeter of the structure is protected by the Perimeter Retreatment System, which encircles the external perimeter slab edge of the home or building and has injection points in central locations within childproof path traps.

vii. The Termguard perimeter pipe is installed as close as possible from the outer edge of the slab edge and is covered with a Permecover sleeve. The pipe cannot exceed 100mm separation from the outer edge of the slab to the furthest part of the pipe diameter.

viii. The perimeter pipe continues around the home or building, and each section is ended with a 20mm UPVC end cap with a distribution hole in its centre.

ix. The Permecover assists with the even and concentrated distribution of the termiticide and acts as a filter to prevent contaminants from entering the system

4. Understanding Construction Methods

a. Site Classifications

i. Prior to any installation it is important to liaise with the client to establish the soil type that the slab will be constructed on.

ii. On reactive soil sites (H, or E) the importing of soil is required to a minimum thickness of 80 mm and width of 150 mm sandy loam type soil is required around the perimeter of the slab edge as part of the Perimeter Retreatment System.

b. General Definitions of Site Classes

CLASS	FOUNDATION
A	Most sand and rock sites with little or no ground movement from moisture changes.
S	Slightly reactive clay sites with only slight ground movement from moisture changes.
M	Moderately reactive clay or silt sites that can experience moderate ground movement from moisture changes.

H	Highly reactive clay sites that can experience high ground movement from moisture changes.
E	Extremely reactive clay sites that can experience extreme ground movement from moisture changes.
A to P	Filled sites
P	Sites which include soft soils, such as soft clay or silt or loose sands; landslip; mine subsidence; collapsing soils; soils subject to erosion; reactive sites subject to abnormal moisture conditions or sites which cannot be classified otherwise.

5. Glossary of Components

KEYWORD	DESCRIPTION
Perforated Pipe	20 mm uPVC perforated pink pipe is the delivery system for the Termiticide creating the termite management system against the slab edge.
Non-perforated pipe	20mm uPVC green pipe, carries Termiticide from the injection point to the perforated pipe
Elbows	90º and 45º elbow fittings in uPVC 20mm, used to re-direct either perforated or non-perforated pipe
Faucet elbows	20 Faucet elbow is the thread connection point which the chemical hose is connected within the child proof path trap
Threaded Plug	20mm threaded plug seals within the faucet elbow
20 mm end caps	20 mm end cap are used to terminate each of the perimeter systems
20 mm Tee piece	20 mm Tee pieces are used to re-direct either perforated or non-perforated pipe
20 mm straight Joiner	20 mm straight joiner, used to join 20 mm pipes when no bell end is available on either of the two pipes
Permecover	GeoFabric non-woven mat acts as a filtering system to prevent contamination within the perforated pipe and assists with the even distribution of chemical laterally along the pipe length.
Child Proof Path Trap	Rigid plastic enclosures with an inset screw- secured lid that is set into the ground or pathway adjacent to the building. It houses the injection connector for the **Termguard** System.

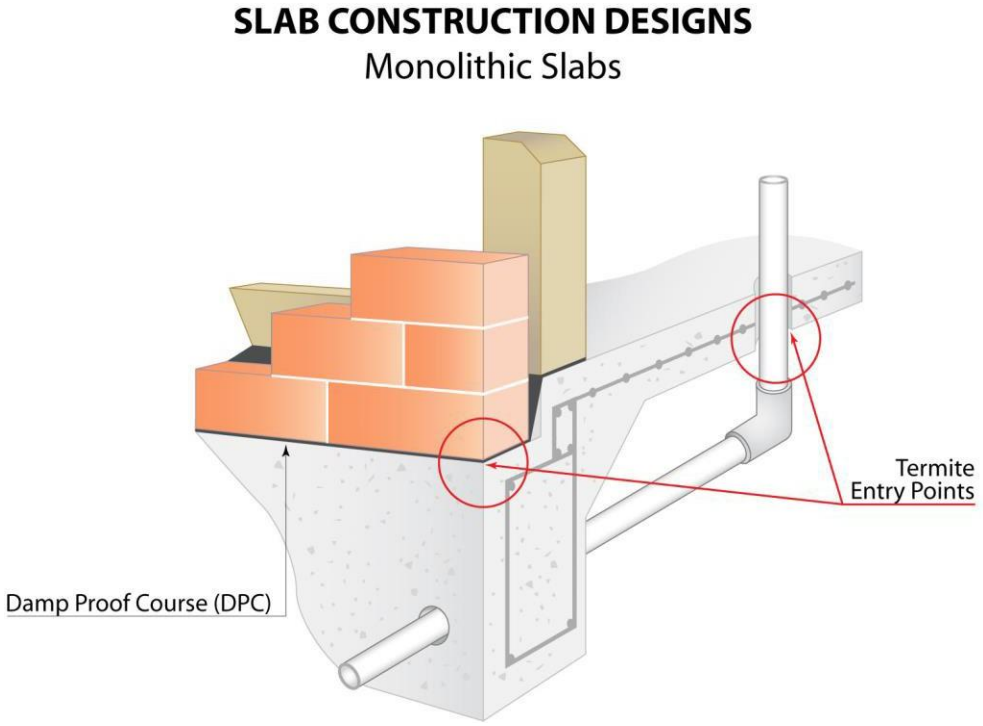
Red Hot Green Glue	High-pressure solvent cement approved by **Flick Anticimex** and complying with - Australian Standard 3879 or equivalent.

6. Slab Construction Types

i. Differing slab construction methods vary from state to state and builder to builder.

ii. Some methods require additional components of the **Termguard** System to create a complete Termite Management System.

a. Monolithic Slabs

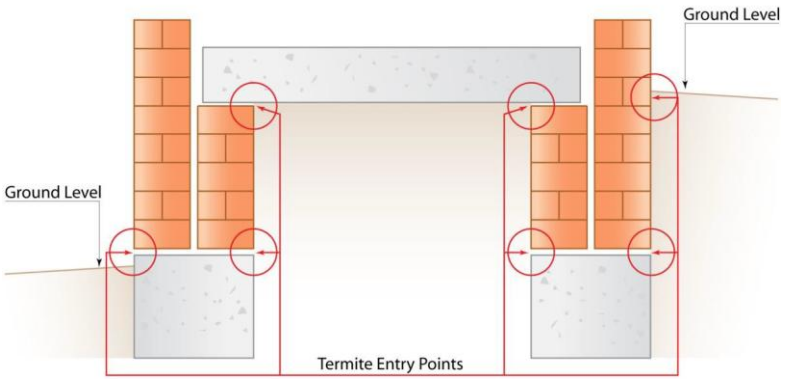


i. A Monolithic Slab is one that has the concrete pour done in one. Footings, thickening beams and the slab are all one or are deemed to be monolithic in construction.

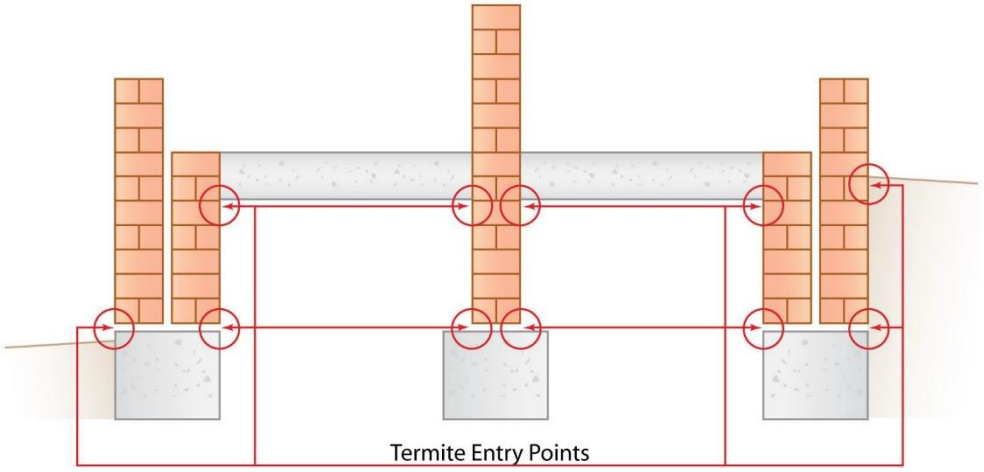
ii. Monolithic slabs are the most common slab construction method used in residential home construction.

b. Infill & Footing Slab Construction

IN-FILL & FOOTING SLAB



STRIP/PAD FOOTINGS



An Infill or Footing Slab construction method is one that has the footings or thickening beams poured separately to the slab.

WARNING NOTE: ***Termguard system should not be installed in conjunction with this types of construction method***

7. Construction Joints

i. All construction and control joints must be protected on all types of construction.

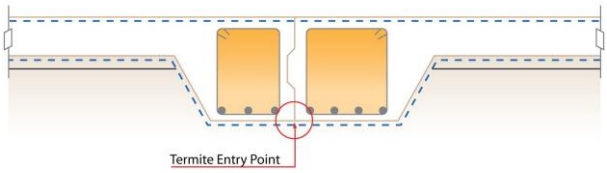
ii. The placement of a construction or control joint allows for the structure to move preventing damaging cracks.

iii. The type of joint does not eliminate the requirement for protection.

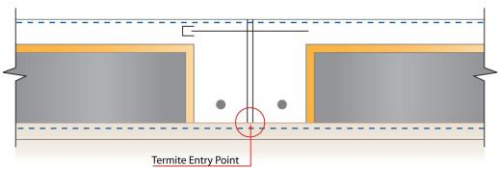
iv. Construction and control joints are to be protected using-

Trithor / Flickguard Termite protection sheet only. Termguard systems are not to be installed to provide termite protection to construction / control joints in slabs

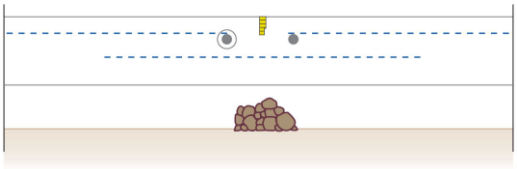
SLAB CONSTRUCTION JOINTS - KEY JOINT



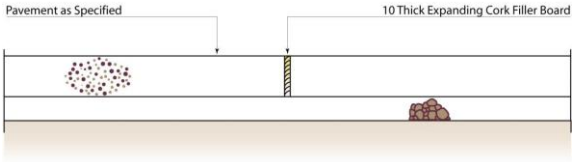
SLAB CONSTRUCTION JOINTS - DOWEL JOINT



SAW JOINT



SLAB CONSTRUCTION JOINTS - EXPANSION JOINT



8. Placement of Termguard Pipe

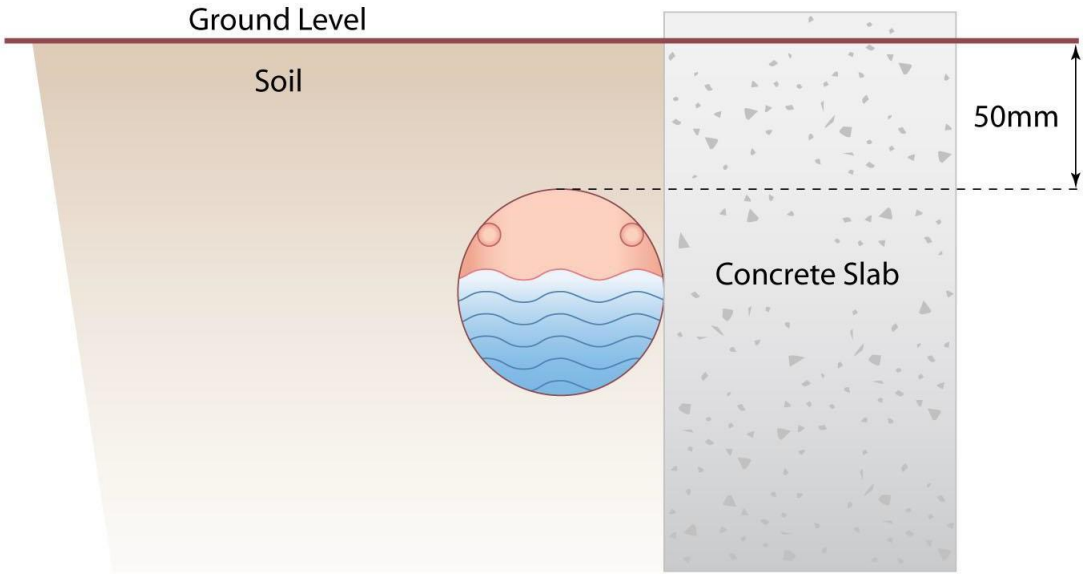
a. Placement of 20mm Drilled Perimeter Pipes

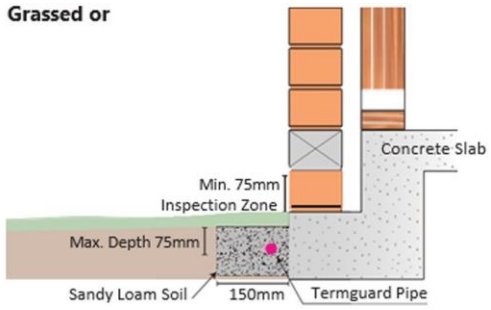
i. The Perimeter System is to be installed below the finished ground level and within a Permecover sleeve.

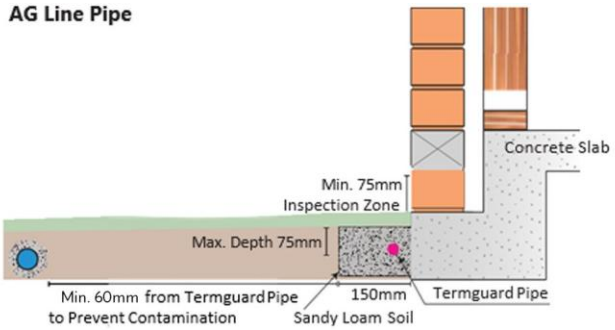
ii. The pipe is to be placed approximately 50mm below the finished ground level, not exceeding 75 mm and must be within 100 mm from the slab edge.

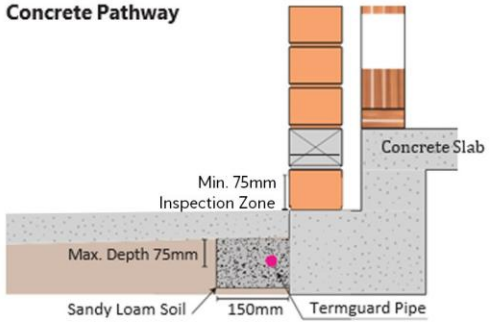
iii. The holes in the 20mm drilled pipe must be facing upwards in a 10 & 2 o'clock position for the System to deliver an equal dispersion of termiticide.

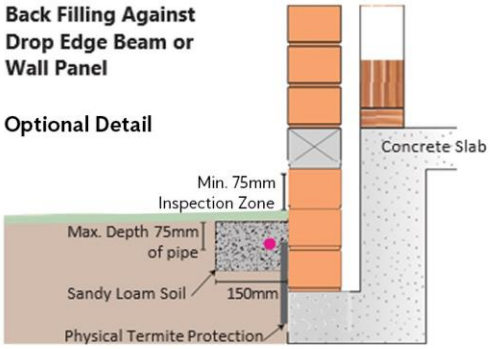
iv. The soil placed over the System must be re-compacted after installation.

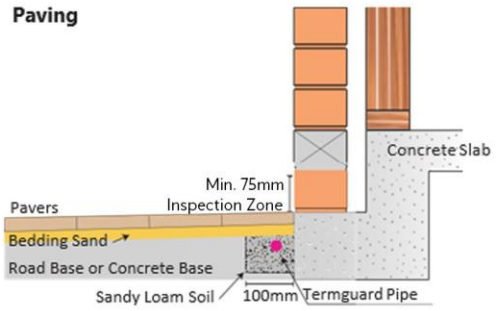




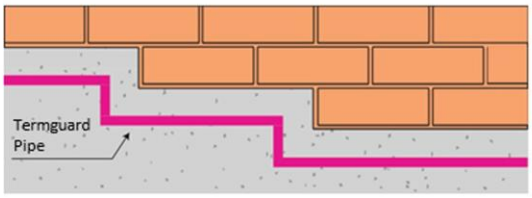








Termguard pipe has been installed, following the slab edge detail. Termguard recommends the finished landscape levels follow this detail. Also, remember the Termguard pipe must not be covered by more than 75mm of soil. However if it is required, the landscape is to follow natural contours; this requires the Termguard pipe to be adjusted and additional treatment applied as noted in above illustration. Please contact your authorised Termguard installer for further assistance.



b. Placement of 20mm Green Undrilled Pipe

i. It is preferrable that 20 mm green non-perforated pipe be fully recessed into the soil to prevent UV damage of the pipe. There is no specific depth that is required for the 20mm non-perforated green pipe to be covered by soil other than they must be installed below finished ground level.

9. Glueing

i. Red Hot Green Glue solvent cement used by **Termguard** is a specially formulated adhesive that eliminates the requirements of priming the UPVC components.

ii. It is important that that all joints are cleaned from foreign matter, dust, or grease prior to being glued.

iii. Apply the green glue to the outside surface of the pipe and the inside of the component being joined.

iv. Immediately push and rotate the components together.

v. Hold the joint for 5 seconds to ensure the correct positioning of the joint.

vi. Maintain alignment of the holes in the 20 mm perforated pipe to the top of the pipe – each time a joint is made.

vii. After the components have been brought together the solvent cement welds the UPVC components together.

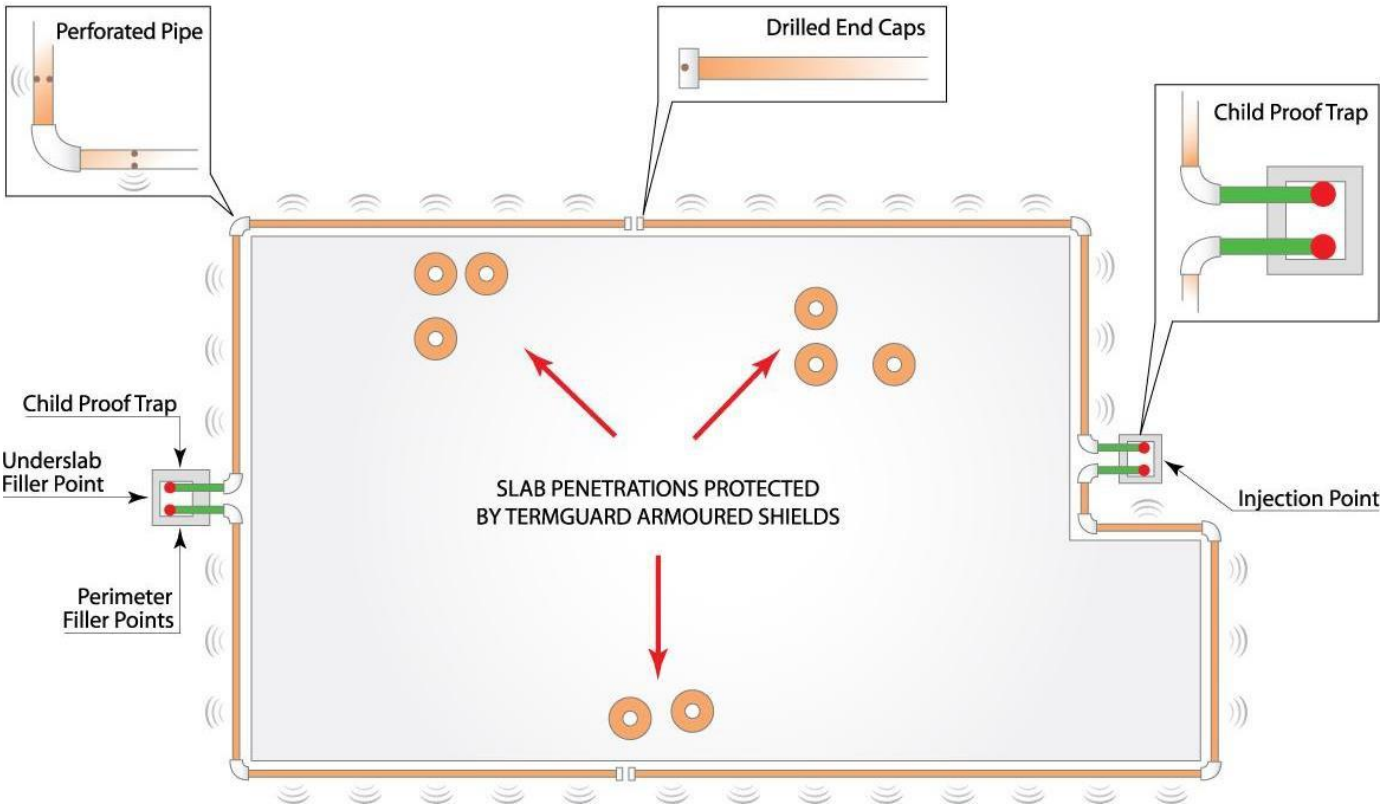
viii. Always follow the manufacturer directions and SDS for the use and safe handling of the solvent cement.

ix. Only Red Hot Green Glue supplied by HR Products is authorized for use.

x. Read label and SDS before handling and or use

xi. Close container after each use and store in a well ventilated, cool dry location.

10. Perimeter Retreatment and Armoured Shields Systems



a. Installation of Armoured shields to slab penetrations

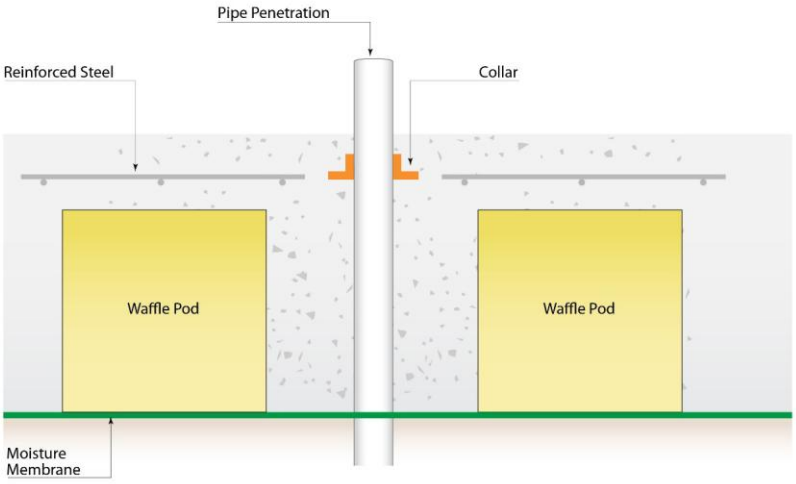
i. **Termguard** have combined the merits of their Perimeter Retreatment System with the UPVC Armoured Shield for penetration protection.

ii. The Armoured Shields are designed to fit snugly over the PVC plumbing penetrations, requiring no solvent-cement welded bond between the slab penetration and the shield. The Armoured shield is to be positioned around the PVC penetration pipe at a height that ensure a minimum 40 mm concrete coverage is achieved above, below and around the shield.

iii. The Armoured Shields meets the deemed to satisfy conditions of the National Construction Code and complies with AS3660 series.

iv. The Armoured Shields are available in various sizes including

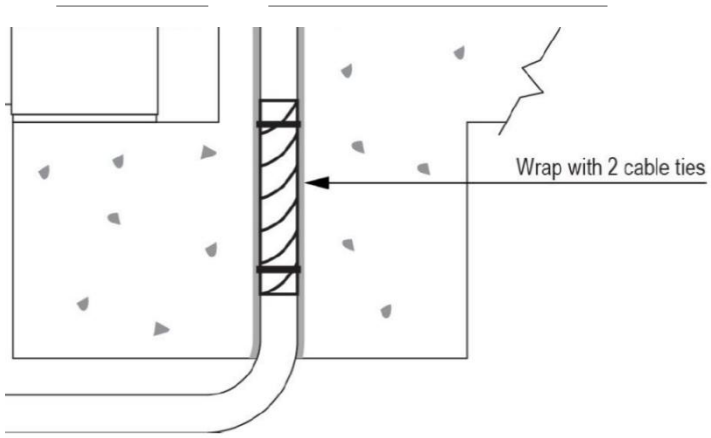
Armoured shield available sizes
100mm, 80mm, 65mm, 50mm and 40mm.



i. The concrete slab is then poured, and the shield and concrete are keyed together via the raised ribs.

ii. The Armoured Shields are designed to provide protection for the service life of the plumbing installations and building, as the Shield is an extension of the plumbing system itself.

iii. Slab Penetrations that differ from standard Drainage Waste Ventilation (DWV) UPVC size pipes and or are not PVC must be protected by Trithor/ Flickguard Termite Protection sheeting. Wrapping of the slab penetration as per the product manufactures specification.



b. Installation of Perimeter Retreatment System

Installation Procedures / Guidelines

i. Assessment of site conditions and ground levels must be made to ensure that no foreign building matter is within the area of the pipe installation. If necessary, trenching and removal of foreign matter will be required to allow for the installation of the pipe. The minimum area to be cleared against the slab edge for the installation of the pipe is 150 mm wide by 80 mm deep which is the minimum requirement as per the Australian Standard 3660

ii. Select adequate stock from vehicle and place the lengths of Termguard pipe and components roughly around the perimeter.

iii. The Termguard pipe must be installed as close as possible to slab edge and follow any level change which has occurred in the slab edge design. The Termguard pipe must be always laid within 100 mm of the slab edge.

iv. Identify if there are any gradients within the site to ensure that all injection points are at a higher level than the end caps.

v. It is desirable to have 2 charge points in each path trap to minimise componentry use.

vi. It is recommended that a starting point be near or adjacent to the electrical meter box. This will ensure that there is no injection point near or in front of the entry of the property.

vii. Under no circumstances is the perimeter system and or isolated pier protection to be laid in a fashion that allows pink, green, pink pipe configuration.

viii. The Termguard system where possible must be placed behind all external service pipes. Where clearance is not available behind the service pipes, the Termguard system must be laid in a fashion that ensures adequate chemical is delivered to this critical area. The chemical emitter points (holes) shall not exceed 100mm from either side of the downpipes or external service penetrations, thus ensuring more than adequate chemical application. This installation will require 2 equal 200 mm lengths of perforated pipes to be cut with the emitter holes to be central. The two pipes are to be joined using 2 x 45* elbows and 1 x 90* elbow

i. The maximum length of a single Termguard system (pink perforated pipe) is 16 linear meters

ii. The maximum length of non-perforated green pipe is 5 linear meters per 16 linear metres of perforated pink pipe system

iii. Hole diameter in the pink pipe is 2 mm with maximum spacing of 200 mm

iv. The holes in the pink pipe must be positioned at 10 and 2 O'clock when installed

v. Termguard Pink perforated pipe must be covered by Permecover, this aids the even distribution of chemical and prevents contamination of the system and blockage of the holes

vi. The Termguard Perforated pipe must not be covered by more than 75 mm of soil

vii. Truck mounted flexible hose lengths must not exceed 45 linear metres, excessive hose lengths can create back pressure reducing the flow rates

viii. Termguard Non-Perforated Green pipe is an extension of the flexible hose, the maximum combined length allowable is 50 linear metres

ix. Injection points must be above or equal to the end cap height.

x. The Termguard Perimeter system must be installed no more than 100 mm from the slab.

xi. When gluing two Termguard components together, a small amount of Termguard Red Hot Green Glue is to be applied to both inner and outer surfaces, the fittings are to be brought together using a pushing and twisting action.

xii. Maximum distance between two end caps is 100 mm

xiii. When gluing the faucet elbow to the pipe, ensure no glue meets the threaded area of the faucet adaptor or threaded plug

xiv. When gluing an elbow to the pipe, ensure the elbow is glued on the leading pipe first, this process if followed will maintain a level laid system.

xv. The path box has two cut out, 50 mm and 75 mm deep, the 50 mm deep cut out is to be used in soft landscape areas and the 75 mm cut out is to be used in concreted areas

xvi. Correct application rate though a Perimeter Termguard system is 5 litre of mixed emulsion per linear metre

xvii. LND- Landscape not done or LD- Landscape done should be noted on the Durable notice sticker and the Certificate of Installation

xviii. Firefighter pumps should be operated between 30% and 50% rev range when pumping a Termguard system

xix. Termguard warranty requires that chemical be applied every three years

c. Gluing the Termguard Pipe

i. When gluing Termguard pipe and or fittings, glue must be applied to the external and internal components.

ii. Applying Red Hot Green Glue to both surfaces must be done without delay due to the quick drying of this glue. Once glue has been applied bring components together with a twisting / pushing action ensuring that full contact is achieved in joint, and alignment of holes is in an upward position and maintained.

iii. Special care needs to be made to ensure that the pipe is maintaining a level elevation after connections of fittings have been made. This can be achieved by gluing the elbow to the leading pipe prior to making the connection between the trailing pipe and fitting.

d. Installation of Permecover

i. The installation of the permecover can be done prior to or after the installation of the perforated pipe.

ii. When installing the permecover after the perforated pipe has been laid, care needs to be taken to ensure that the joints are not fractured or broken during this process. Ensure the Permecover is not bunched over the length of the pipe.

iii. When installing the permecover prior to pipe installation, ensure there is sufficient permecover on the pipe that will allow for adequate overlapping of the permecover at joints and or connections.

iv. If securing of permecover is required at joints, it is recommended that a single cable tie be utilized to secure the lapping of the permecover.

e. Installation of Injection Points

i. All injection points must be equal to or above the elevation of the end cap.

ii. Normal circumstances will see 2 injection points in each path trap. There may be circumstances where 3 injection points are in a single path trap where a single line is directed to an isolated pier including perimeter systems. All injection point should be located central to the path trap.

iii. When gluing components of the injection point ensure no glue meets the internal thread of the faucet adapter and or threaded plug.

iv. It is recommended that the meterage of each system be noted on the Faucet elbow and on the top of the Threaded Plug

f. Soil Matrix and Covering of System

i. Assessment of site is required to determine if the soil matrix is adequate to allow for acceptance of the chemical emulsion.

ii. Where it is deemed that the soil matrix is poor and or contaminated replacement of soil will be required.

iii. The importation of soil matrix is recommended when heavy clay or shale material is present.

iv. The recommended soil matrix for covering Termguard systems is commonly referred to as loamy type soil and or 80/20 mix.

v. When covering the system ensure sufficient soil is covering the Termguard pipe, minimum requirement of 150 mm width by 80 mm depth is necessary. The preferred soil coverage over a Termguard system is 50 mm with a maximum coverage is 75 mm.

g. Child Proof Trap

The lid of the Path Trap must be installed to the finished level of the paths or landscaping to avoid creating a trip hazard.

The Child Proof Trap is set into the soil and compacted so to prevent people from lifting the whole trap from the ground.

The Path Trap is designed to eliminate un-authorized entry.

The correct aperture cut out in the Path Trap must be selected to pass the Termguard pipe through to accommodate the landscape finish type

11. Injecting The System with Termiticide

The Termguard Installer Training does not qualify a person to handle chemicals or inject Termguard Systems.

Such persons must ensure that they meet their relevant State and Territory requirements prior to handling any termiticides.

i. Termiticides are hazardous chemicals**. It is essential that operators treat them as such.**

ii. Safety precautions must be strictly adhered to when mixing and injecting the termiticide. Unprotected & unauthorised persons must be kept well clear of the working and application areas during these procedures.

iii. ALWAYS make sure the hoses on your pump are in good condition prior to starting the pump, and ensure the connector is secure before attempting to pump termiticide into the System.

iv. Ensure that all aspects of the manufacturers label requirements are strictly adhered to.

v. 20 mm truck mounted Hoses must not exceed 45 linear metres in total for injection of 20 mm Termguard Perimeter systems.

12. Approved Chemical List

Maxxthor

Prothor

Ultrathor

Flick Fipronil

13. Pump Requirement

i. **Termguard** Systems require a specific pump and tank set up to be able to deliver the required volume of termiticide at the correct pressure.

ii. High pressure, pulse type pumps are not suitable for use with **Termguard** Systems.

iii. Ensure that your pump and set up has been adequately modified to suit the **Termguard** requirements.

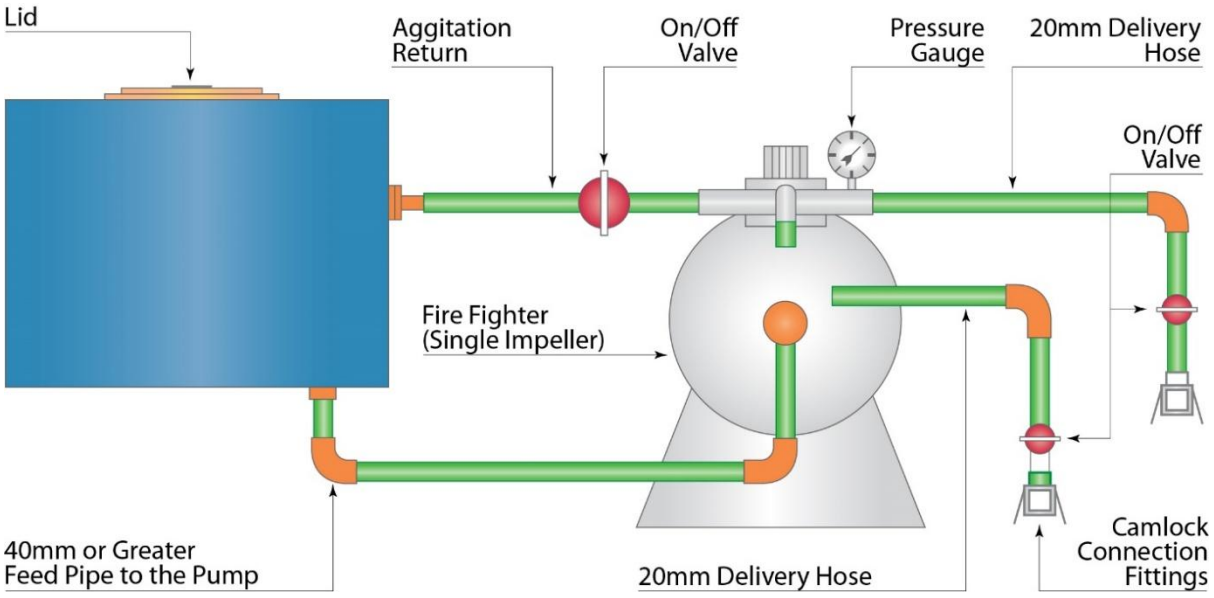
iv. The high volume (Fire Fighter) pumps with a single impeller must have a 40mm minimum feed line from the tank to the pump, this is essential that the feed from the tank is not restricted in any way.

v. Any restriction will cause the pump to starve during treatment and deliver an inconsistent distribution of termiticide to the system.

vi. The type of pump required is a fire fighter pump, either the Onga 350 series or the Davey model 93106 or equivalent, which will deliver high volume at a low pressure.

vii. If you are unsure of your pump requirements contact Flick Anticimex Technical Department for further advice.

viii. Use of non-approved pumps will void the Termguard warranty.



14. Mixing Termiticides

The following information must be adhered to when mixing chemicals in all bulk tanks:

The following procedures should be adopted when preparing large volumes of Chemical emulsion. This will ensure optimal results and reducing foaming. These directions should be followed when mixing any suspension concentrate formulation.

i. Fill the main spray tank to 80-90% of target capacity with clean water.

ii. Add about 4-5 litres of water to a bucket, or similar mixing container.

iii. Shake the Chemical bottle to ensure product is fully suspended.

iv. Measure out the required amount of Chemical using a 1 litre measure jug.

v. Add this to the mixing container prepared at Step 2.

vi. Rinse the measure jug with water three times to clean out the contents, adding rinse solution to the main spray tank.

vii. Agitate the mixing container thoroughly and add contents to the main spray tank.

viii. Complete filling of main spray tank.

ix. Agitate main spray tank by means of the return hose and or spraying the sprayer nozzle into the tank.

15. Chemical Injection

When injecting a Termguard System the following steps must be carried out:

i. Ensure that the emulsion has been prepared and agitated adequately to create an even emulsion of the termiticide and water.

ii. Connect male standpipe connect to faucet adaptor within the path trap, connect the male Camlock fitting with female Camlock fitting ensuring over-centre locking device is securely engaged during the injection operation.

iii. 20 mm Termguard pipe requires 20 mm injection fittings-

iv. Start the pump, turn on the valves to allow the mixed emulsion to begin flowing into the System through the pump and hose.

v. Run pump at minimum revs and allow all the mixed termiticide to begin passing into the System.

vi. Once the System has filled dispersing air from within the pipe, backpressure will start to restrict the flow. Increase the revs on the pump to 1/3 to 1/2 RPM range to inject the emulsion through the System under pressure.

vii. For all the Termguard Reticulated Systems to deliver an equal distribution of termiticide it is essential that during the Systems injection a pressure reading above 10psi is maintained at the end of the hose where the System connector fittings are located.

viii. This will ensure that the System will deliver the emulsion evenly to the soil.

ix. Differing site conditions, soil type and moisture content will alter the pressure reading at the pump from site to site. In instances of heavy clay soil pressures registered at the pump may rise to and above 100psi.

x. This does not mean that the emulsion within the System is under the same pressure.

xi. The System design allows the emulsion to escape the System without creating pressures under the soil /slab.

xii. The time required for applying the emulsion differ depending on the type of System the area being protected and the soil type.

xiii. When injecting the Perimeter Systems, you may find that the emulsion begins to come up around the edge of the path abutting the structure.

xiv. Stop the pumping and allow for the liquid to soak into the soil and then begin pumping until the required chemical emulsion volume has been delivered.

xv. Termguard perimeter system are to have 5 litres of chemical emulsion applied per linear metre at intervals of not greater than 3 years to maintain the Termguard warranty regardless of the chemical type used.

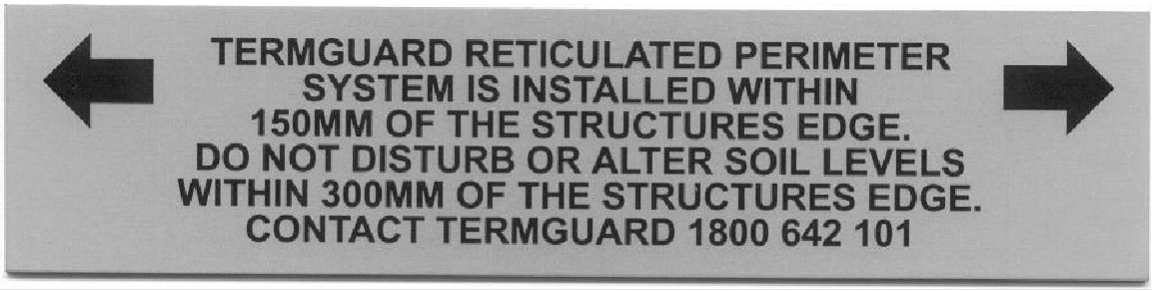
16. Durable Notice

i. All Termite Management Systems are required to have a durable notice affixed within the electrical meter box of the structure to comply with National Construction Code.

ii. The durable notice must include the type of system installed, the name of termiticide applied and the expected life of the termiticide.

iii. Other information including your company name and contact numbers are also required on the notice.

Perimeter Warning Plates (optional)



Sample of Perimeter Warning Plate ONLY

a. Annual Inspection Reports

Termguard systems requires consecutive timber pest Inspections to be carried at interval of not greater than 12 months apart in accordance with AS3660 & Termguard Warranty conditions. A copy of each Annual Inspection report is to be retained.

b. Termguard System Reinjections

It is a requirement that when a system is injected the relevant paperwork is to be completed in accordance with AS3660. This should include an amendment to the original installation Sheet inventory of termiticide applied and a Certificate of Treatment been issued to the client. It is recommended that Job Notes Record Sheet be maintained in the job file.