



SITE-RELATED SOLUTIONS

**RENOVATION &  
NEW CONSTRUCTION**

*Milliken*

**Milliken  
Cushion Backed Product  
+  
Milliken  
Non-Reactive Standard Adhesive**

**=**

- **Installation after 60 days of newly poured concrete.**
- **No moisture testing required.**
- **Fully Warranted.**

# CONTENTS

Page 3	<b>Benefits of Milliken Cushion Backing</b>
Page 4 - 7	<b>Site Related Solutions for New Construction</b>
Page 8 - 11	<b>Site Related Solutions for Renovation</b>

## Fully Warranted Solution

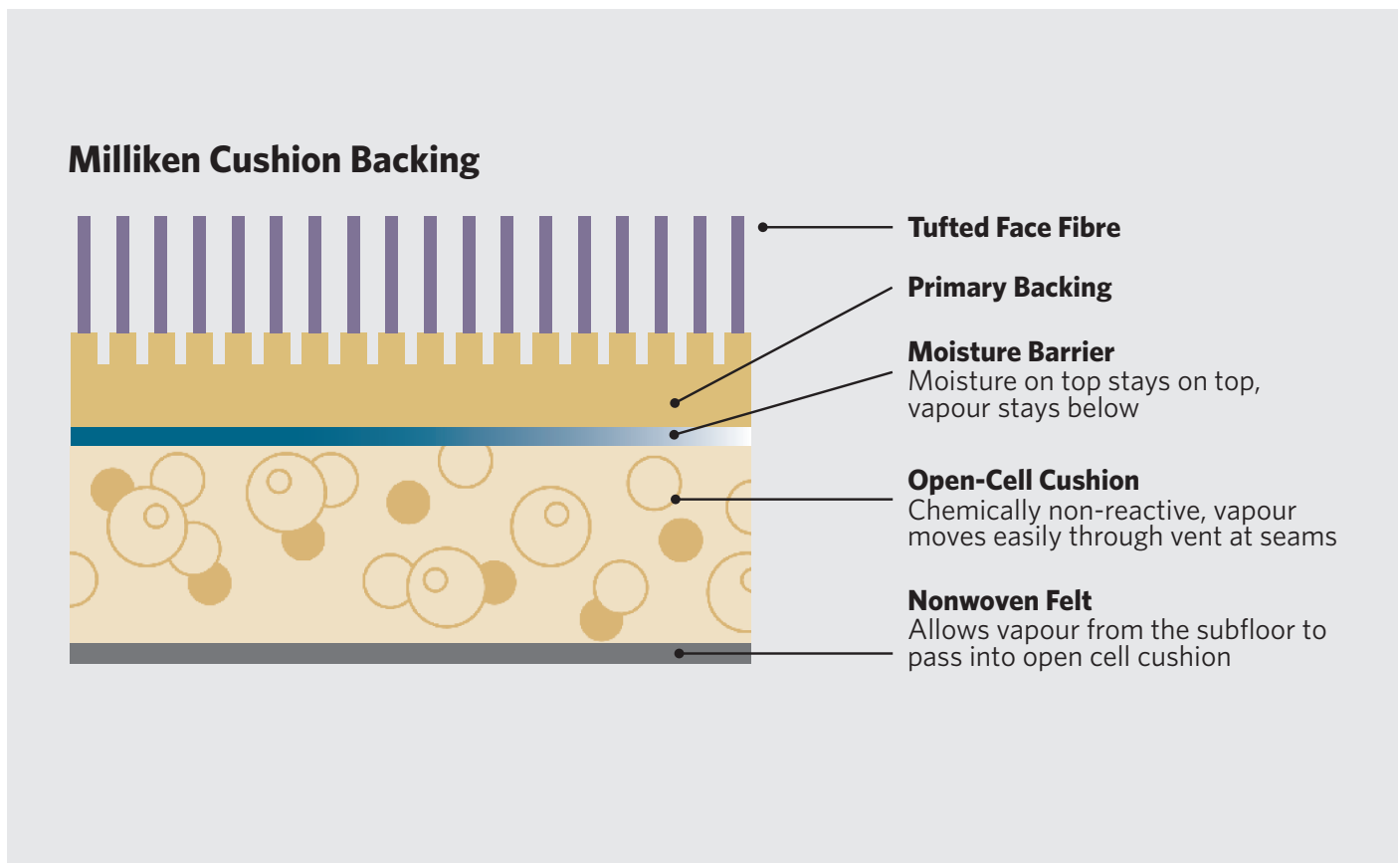
When the installation guidelines are correctly implemented, Milliken's Site Related Solutions system is fully warranted to withstand moisture from slabs for the lifetime of the original carpet installation. For complete warranty terms and conditions visit [www.millikenfloors.com.au](http://www.millikenfloors.com.au)

- **THERE ARE VERY FEW CONDITIONS** — For Milliken site related solutions, we ask that a few conditions be met. They are:
  - a) There is no visible water
  - b) All new pours require the use of a vapor barrier in accordance with AS/NZS 2904 or AS 3660.1 vapour retarder placed in accordance with AS 2870 and directly in contact with the concrete placement.
  - c) Floor prep must be performed in accordance with the latest version of AS 2455 standards except where explicitly allowed by this document and/or installation instructions.
  - d) All topical curing compounds must be removed prior to application of adhesive.
  - e) Bond test required
  
- **HYDROSTATIC PRESSURE (on-ground only)** — We should note that Milliken does not warrant against hydrostatic pressure, instances where water is forcibly pushed into the slab and/or moisture events caused by broken pipes. In such cases the warranty will be voided. If you'd call that fine print, we won't argue — but we think you'll agree that's a pretty fair stipulation.

# The Benefits of Milliken Cushion Backing

**Milliken Cushion Backed modular carpet products have been designed to manage moisture simply and effectively. We let natural processes happen naturally.**

With our cushion backed tiles, water vapour has a way to escape. It travels freely through our open-cell cushion structure until evaporating naturally through seams at the edges of each carpet tile.



## SITE-RELATED SOLUTIONS FOR NEW CONSTRUCTION

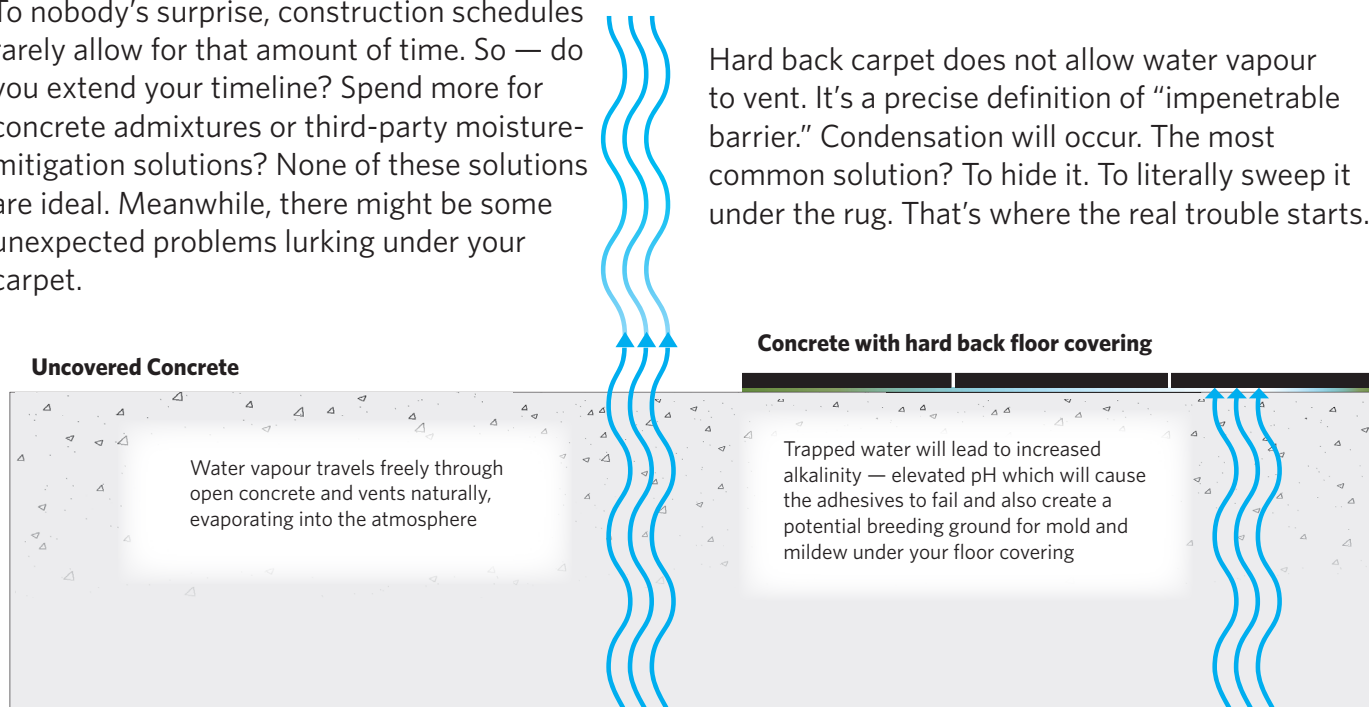
### With new construction, installing carpet tile can feel like a no-win situation.

A newly poured 100mm concrete slab takes four to five months to be fully ready to accept flooring — and that's under ideal conditions. To nobody's surprise, construction schedules rarely allow for that amount of time. So — do you extend your timeline? Spend more for concrete admixtures or third-party moisture-mitigation solutions? None of these solutions are ideal. Meanwhile, there might be some unexpected problems lurking under your carpet.

**Rising moisture vapour is trying to escape. The worst thing to do is try and stop it.**

Obstructing a natural process simply gives rise to another natural process. If an impenetrable barrier gets in the way of escaping water vapour, condensation is what you get. That isn't good when it happens under your carpet. Water droplets begin to form along the bottom of the backing, eventually creating liquid water between the concrete and the floor covering.

Hard back carpet does not allow water vapour to vent. It's a precise definition of "impenetrable barrier." Condensation will occur. The most common solution? To hide it. To literally sweep it under the rug. That's where the real trouble starts.



**Water can cause all kinds of problems.** Moisture seeks equilibrium. It essentially just wants to evaporate. Water vapour will naturally rise until something gets in its way. Concrete is filled with vertical capillaries and does not hinder the process.

Reactions between water and concrete can lead to increased alkalinity, as well as possible staining from efflorescence. Water can also cause adhesives to re-emulsify and become viscous — your glue basically turns to jelly. That's not an effective adhesive.

Worst of all, dark, wet spaces lead to mold and mildew. In some cases this can create health concerns, migrate to other building systems like HVAC, and affect indoor air quality. The formation of water is how unseen problems can become worst-case scenarios — very, very expensive to mitigate.



# Milliken's cushion backed modular carpet products have been designed to manage moisture simply and effectively. We let natural processes happen naturally.

With our cushion backed products, water vapour has a way to escape. It travels freely through our open-cell cushion, until evaporating naturally through seams at the edges of each carpet tile.

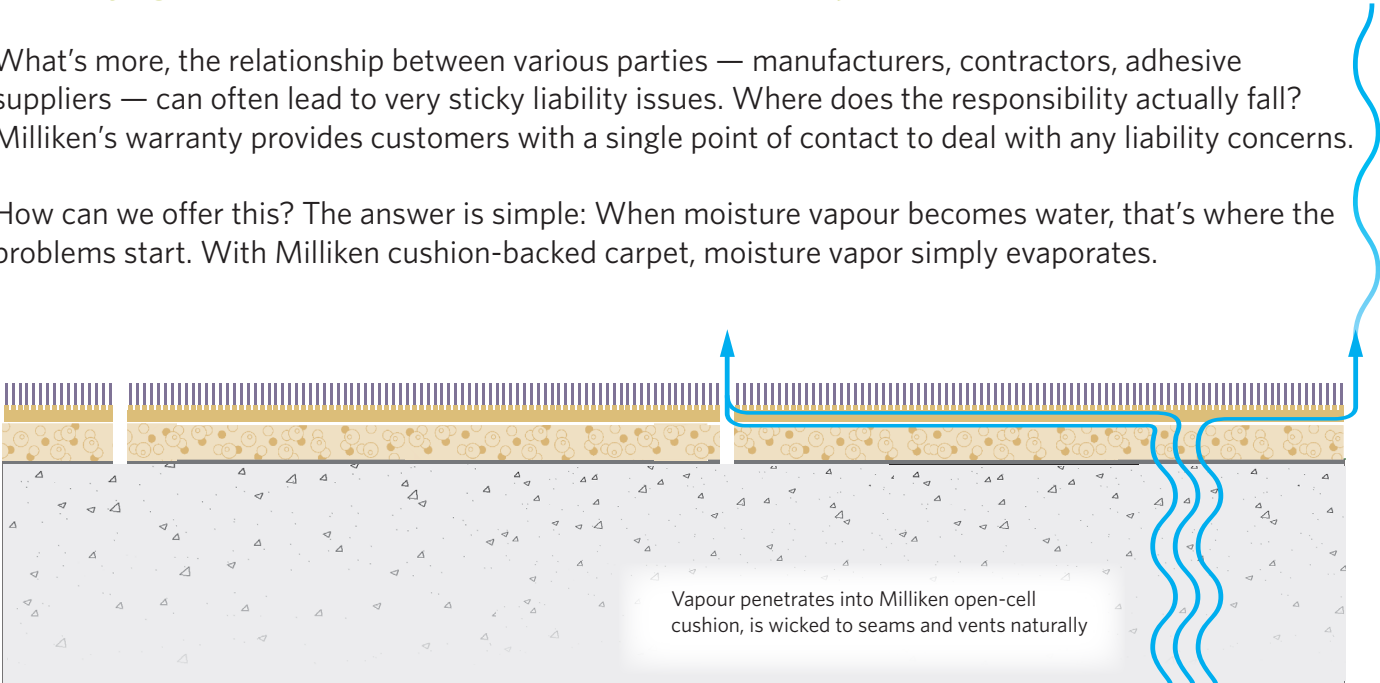
**Milliken installation solutions do not require moisture testing.** Our unique cushion backing and its moisture vapour-wicking properties allow Milliken modular carpet to handle concrete with higher relative humidities than other products. Provided our timing guidelines are followed, our products have very high pH or RH limits. Nor does Milliken require moisture testing prior to installation.

**Condensation will not occur with Milliken Cushion tiles.** In combination with our Non-Reactive Standard adhesive, Milliken cushion-backed modular carpet allows moisture vapour to evaporate at a very high rate, so the formation of liquid water is almost impossible. Expensive and time-consuming moisture-based failures are therefore virtually eliminated.

**Milliken stands behind all of our cushion-backed modular carpet products with a lifetime warranty against adhesive breakdown due to moisture vapour emissions.**

What's more, the relationship between various parties — manufacturers, contractors, adhesive suppliers — can often lead to very sticky liability issues. Where does the responsibility actually fall? Milliken's warranty provides customers with a single point of contact to deal with any liability concerns.

How can we offer this? The answer is simple: When moisture vapour becomes water, that's where the problems start. With Milliken cushion-backed carpet, moisture vapor simply evaporates.



## SITE-RELATED SOLUTIONS FOR NEW CONSTRUCTION

### It doesn't matter whether you're on-ground or above-ground.

Remember, in ideal conditions, it takes a 100mm concrete slab four to five months to be fully ready to accept flooring. So, what's the best way to assure that retained moisture doesn't create any future headaches?

#### Milliken's MOISTURE MITIGATION SOLUTION

##### **The use of Milliken cushion-backed modular carpet, together with our Non-Reactive Standard adhesive:**

- Prevents the possibility of moisture-related issues from occurring — under virtually every circumstance.
- Moisture mitigation is built directly into every Milliken cushion backed carpet tile — it is an inherent property of the cushion backing itself. Installation of Milliken cushion backed modular carpet can begin as
- quickly as 60 days after the new pour is complete.

\* Milliken requires that all new concrete pours comply with AS 2870

### **No moisture testing. Fully warranted.**

On ground or above ground, Milliken cushion-backed modular carpet, in combination with our Non-Reactive Standard adhesive can be installed as soon as 60 days after a new pour with no moisture testing.\* There are no RH or pH limits. Both carpet and adhesive are fully warranted under virtually every circumstance.

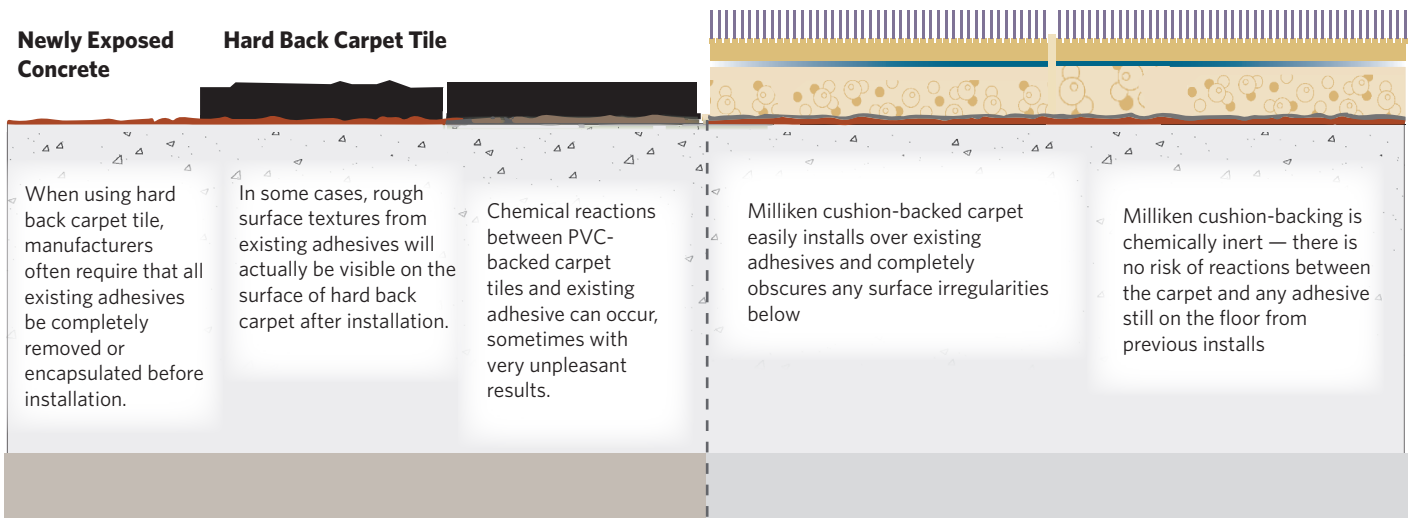
# SITE-RELATED SOLUTIONS FOR RENOVATION



## What's under the old carpet?

**Floor prep can quickly become a major undertaking.** Grinding or mechanically removing existing adhesive can adversely affect indoor air quality — not to mention the time it takes to do the work. Getting the floor ready may turn out to be more expensive and complicated than you think.

**With Milliken, just remove the old carpet.** We try to make it very simple. Simply remove the existing carpet, knock down the high ridges of the existing adhesive, and you can start installing your new Milliken cushion backed carpet right away.



### ISSUE

**PVC-backed products mixed with old adhesive can cause a nasty chemical reaction.**

Many manufacturers require the removal of old adhesives because there's the possibility of plasticizer migration. Which put simply, means your new carpet tile could start to slide around as the adhesives dissolve into an oozing mess and stop holding them in place.

**It's also possible that imperfections on the floor turn out to be visible.** Some hard back carpet tiles, can be so thin that surface imperfections from adhesives left on the subfloor will actually show through the carpet tile.

### SOLUTION

**Milliken cushion-backed modular carpet is chemically inert.**

Plasticizer migration is a non-issue because our cushion backing won't react with anything already on the floor, dramatically reducing floor prep. This is particularly important for renovation projects where timing is an essential consideration, and isn't it always?

**You won't see anything through the carpet.** Milliken's cushion backing provides enough give and take to keep surface irregularities from old adhesives right where they belong - under the carpet.



# For on-ground renovation projects, moisture is the X-factor.

For the last decade or so, building codes have specified the use of a vapour barrier — a plastic membrane placed under new pours to prevent outside moisture from entering an on-ground slab.

## ISSUE

**Moisture problems in renovation projects can usually be attributed to a missing or compromised vapour barrier.** Water vapour naturally rises until it reaches an impenetrable barrier — and that's precisely what hard back carpet is. Escaping vapour is blocked, causing condensation. Water droplets begin to form, eventually creating liquid water between the concrete and the floor covering. That isn't good when it happens under your carpet.

Reactions between water and concrete can cause adhesives to re-emulsify and become viscous — your glue basically turns to jelly. Worst of all, dark, wet spaces lead to mold and mildew. In some cases this can create health concerns, migrate to other building systems like HVAC, and affect indoor air quality.

**Rising moisture vapour is trying to escape. The worst thing to do is try and stop it.**

Hard back carpet tile can trap moisture vapour — which can lead to condensation, formation of liquid water, and some potentially serious consequences

## SOLUTION

**Our unique cushion backing and its moisture vapour-wicking properties** allow Milliken modular carpet to handle concrete with higher relative humidities than other products.

### VAPOUR BARRIER INTACT

**No moisture testing is required** on any on-ground slab when using Milliken's Non-Reactive Standard adhesive. You can even install Milliken cushion backed modular carpet on moisture-stained concrete.

### UNKNOWN VAPOUR BARRIER

**Above ground slabs** - No moisture testing is required with non reactive standard adhesive.

**On or below ground slabs** - testing is required but non-reactive standard adhesive is fully warranted up to 95% RH, with no pH limit.

**How can we offer this?** When moisture vapour becomes water - problems start. With Milliken cushion-backed carpet, moisture vapour simply evaporates..

Vapour penetrates into Milliken open-cell cushion, is wicked to seams and vents naturally

A compromised vapour barrier allows moisture to permeate the existing slab

## SITE-RELATED SOLUTIONS FOR RENOVATION

### IS YOUR INSTALLATION ABOVE GROUND?

#### **Milliken Cushion backed carpet virtually eliminates floor prep.**

The benefits of Milliken cushion-backed modular carpet, together with our Non-Reactive Standard adhesive:

- Backing is chemically inert — Milliken modular carpet can be installed without removing old adhesives with no risk of plasticizer migration. Flaws and irregularities on the subfloor surface are sometimes visible
- right through hard back products — with Milliken, they won't be.

### ARE YOU INSTALLING ON-GROUND?

#### **Milliken cushion backed modular carpet is a moisture mitigation solution all by itself.**

- Moisture mitigation is an inherent property of Milliken's cushion backing, virtually eliminating moisture concerns — even for most on-ground slabs

**No need to remove old adhesives.  
No moisture testing. Fully warranted.**

For any above-ground installation, Milliken cushion-backed modular carpet, in combination with our Non-Reactive Standard adhesive, can be installed without the need to remove old adhesives and with no moisture testing. There are no RH or pH limits. Both carpet and adhesive are fully warranted under virtually every circumstance.

**Vapour Barrier Intact**   
**No testing required.**

**Unknown Vapour barrier**

**Use Milliken Non-Reactive Standard Adhesive.**

If there's no vapour barrier or you aren't sure, testing is required, but Milliken Non-Reactive Standard adhesive is fully warranted at up to 95% RH, with no pH limit.

## FAQS SITE-RELATED SOLUTIONS

### 1 Why has moisture in slabs become such an important issue now?

Modular carpet requires a much more stable backing than broadloom carpet - which was the standard carpet used in days gone by. Many carpet manufacturers only provide a hard backed modular tile - which if not managed properly is the perfect way to block water vapour from venting which in turn causes moisture problems.

### 2 What's the big deal about moisture testing?

Moisture testing can be very expensive and there are limits to its accuracy. Moisture levels rise and fall naturally so a moisture test is really only a snapshot in time. If an issue occurs, the tests may vary from the time of installation - which would put your warranty in jeopardy. Milliken's new adhesive and cushion backed system is fully warranted.

### 3 What's this talk about alkalinity and pH levels?

Most carpet adhesives are rated for pH levels around 9. However elevated pH becomes a concern as liquid enters the equation. Flooring failures can occur when the adhesive is exposure to moist and high pH environments. Milliken's cushion backed tiles allows moisture vapour to evaporate. No water - no problem.

### 4 Isn't floor prep standard practice when installing carpet tiles?

Absolutely - you need to assess the floor on which you will be laying the carpet tiles. But Milliken's proposal is "what if we could dramatically save the time and money you have been allocating to floor prep"? Milliken's new adhesive and cushion backed carpet system make this possible.

### 5 What about this bond test?

A bond test confirms that adhesives will maintain their integrity. Adhesives have to stick to the floor and occasionally adhesion problems arise from chemical incompatibilities between adhesives and topical treatments or admixtures present in the concrete. As long as the adhesive will work, you are good to go.

The logo for Milliken, featuring the brand name in a stylized, cursive script font.

171 Briens Rd  
Northmead NSW 2152

+61 2 8838 2500 (Australia)  
0800 668372 (New Zealand)