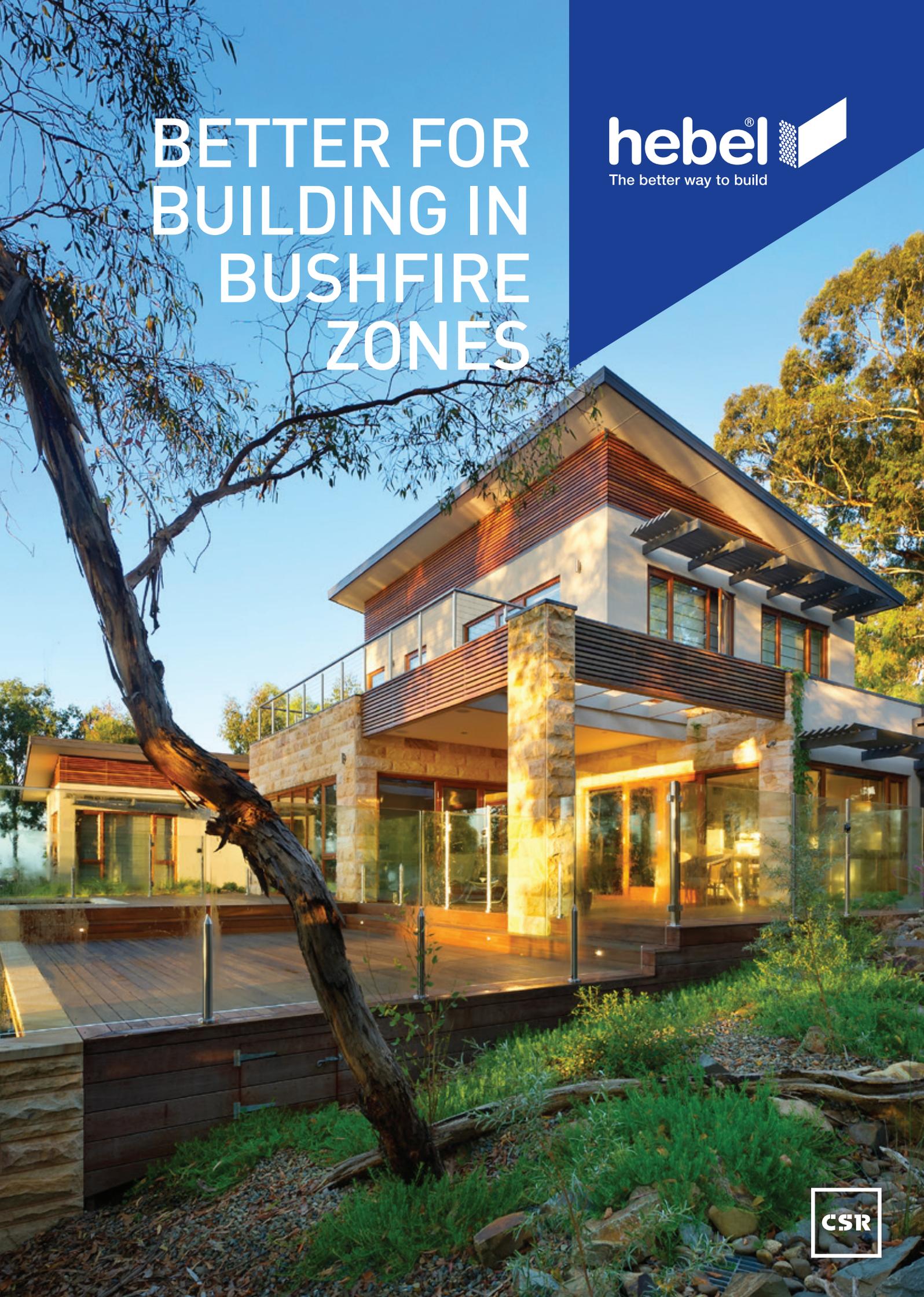


# BETTER FOR BUILDING IN BUSHFIRE ZONES

hebel<sup>®</sup>   
The better way to build



CSR

## BUILDING WITH HEBEL® IN BUSHFIRE ZONES

Bushfires are a fact of Australian life. When building in a bushfire zone, the most important consideration is the choice of building materials. Hebel is the top choice when building your home in a bushfire zone. All Hebel products have exceptional fire properties and meet or exceed the requirements for all six Bushfire Attack Level (BAL) categories, making it the better choice for building in a bushfire prone area.



Ecologie Group

### HEBEL AAC (AUTOCLAVED CONCRETE)

Hebel AAC is a solid building product that is versatile enough to be used for external and internal walls, floors, decks and fencing. All products are non-combustible and won't explode, even under extreme heat. Providing solid construction, Hebel delivers the right balance between thermal insulation and mass-making it a better choice for building in a bushfire prone area.

Over the past 20 years, Hebel has developed a full range of solid and lightweight framed building systems with high resistance, offering assurance and added security for homeowners of bushfire prone properties.



Cover: Solar Solutions Design

Solar Solutions Design



## HEBEL POWERPANEL<sup>XL</sup>

Hebel PowerPanel<sup>XL</sup> external wall system has been specifically developed to provide a secure solid masonry facade that goes up fast.

The system consists of 75mm thick, steel-reinforced PowerPanel<sup>XL</sup> panels, fixed vertically to steel horizontal top hats attached to the load-bearing timber or steel frame.

Hebel PowerPanel<sup>XL</sup> combined with the perforated steel top hat and hex head fixing system, speeds up the installation process.

It is ideal for houses and low-rise multi-residential applications, including extensions and re-cladding of existing homes. Hebel PowerPanel<sup>XL</sup> is easy to install on two-storey dwellings.

You'll love the rendered finish, clean architectural lines and design flexibility of Hebel. With Hebel you'll achieve the comfort of a home that's better to live in and a sustainable choice.

PowerPanel<sup>XL</sup> is non-combustible system with an FRL of 180/180/180 and is termite resistant.

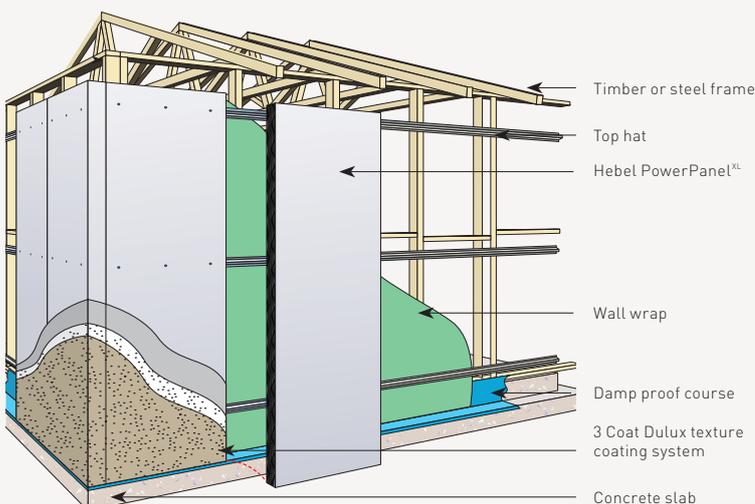
## HEBEL POWERBLOCK<sup>+</sup>

Solid masonry construction has long been regarded as the 'ultimate' home building method. Hebel PowerBlock<sup>+</sup> is the ideal alternative to double brick, providing an extremely solid construction with an amazing Fire Resistance Level (FRL) of 240/240/240 as well as exceptional acoustic and thermal insulation properties.

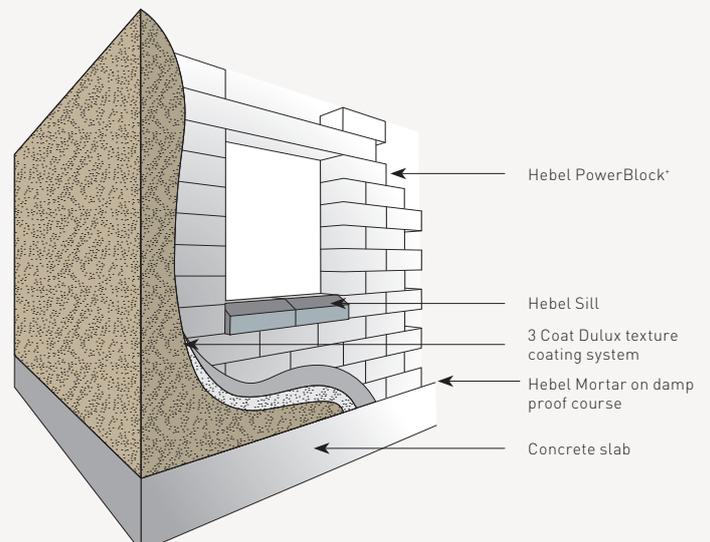
The face size of a PowerBlock<sup>+</sup> is 600mm x 200mm. External walls are typically constructed using 250mm thick Hebel PowerBlock<sup>+</sup> whilst internal non-loadbearing walls generally use the 100mm PowerBlock<sup>+</sup>. The large format blocks are lightweight and, forming a single wall, are rapidly installed. A Hebel PowerBlock<sup>+</sup> home is an incredibly comfortable living environment.

PowerBlock<sup>+</sup> together with Hebel PowerFloor<sup>+</sup> for suspended floors comply with the requirements for all six BAL zones when constructed in accordance with Hebel's Design and Installation guides.

### Hebel framed construction



### Hebel solid construction



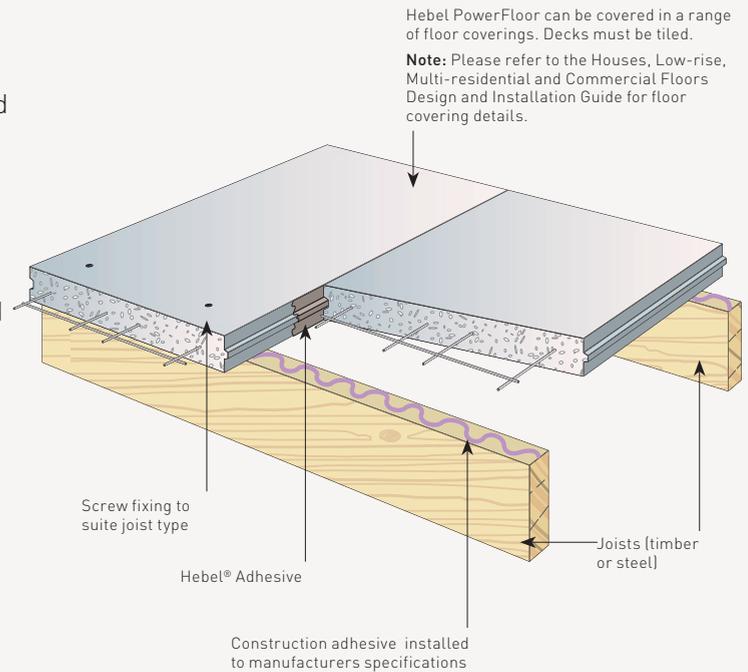
## HEBEL POWERFLOOR

PowerFloor is a highly versatile solid platform flooring system that gives you the feel of a concrete floor at a significantly lower cost. PowerFloor is an ideal choice for first floor and suspended ground floors, as well as decks and balconies. Installed over conventional joists, the system of 75mm thick steel reinforced tongue and groove PowerFloor panels fit snugly together to form a strong, smooth floor.

It is simple and fast to install with less mess than pouring concrete and has a superior solid feel compared to particleboard and timber flooring.

Hebel PowerFloor is the creak free solid alternative to particle board, reducing sound transmission between floors and eliminates the squeaking, bouncing and noise often associated with timber flooring substrates. It is easily installed by on-site trades, such as carpenters, so there are no delays to the building schedule.

The PowerFloor system is non-combustible and has proven fire resistant levels up to 90 minutes from above.



## BUSHFIRE ZONE REQUIREMENTS

The Australian Standards AS3959-2009 'Construction of buildings in bushfire-prone areas' was introduced to improve the resistance of buildings to bushfire attacks resulting from burning embers, radiant heat, flame contact and combinations of the three. The standard includes a method for assessing categories of bushfire attacks called Bushfire Attack Levels (BAL) in areas that have been classified by authorities as being 'bushfire prone'.

A building surveyor will use BAL to check compliance with the construction requirements of the

standard. All building approvals issued within bushfire prone areas are required to build to BAL 12.5 standards as a minimum even if the site specific BAL assessment is low. It is the responsibility of the building designer to ensure compliance to AS 3959 is achieved in accordance with clause F2.4 of NCC 2019 Volume 2.

All Hebel products and systems meet or exceed the requirements for all six Bushfire Attack Level (BAL) categories. When constructing in BAL-FZ a minimum setback distance of 10m from the edge of the classified vegetation is required.

### Definition of BAL Levels

Bushfire Attack Level (BAL)	Description of predicted Bushfire Attack and levels of exposure
BAL- Low	There is not sufficient risk to warrant exposure
BAL-12.5	Ember attack
BAL- 19	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5 and 19kW m <sup>2</sup>
BAL-29	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19 and 29kW m <sup>2</sup>
BAL- 40	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux with the increased likelihood of exposure to flames
BAL-FZ	Direct exposure to flames from fire front in addition to heat flux and ember attack

### Hebel systems for each BAL Level

	Hebel System	BAL-Low	BAL-12.5	BAL-19	BAL-29	BAL-40	BAL-FZ
External Walls	PowerBlock+	✓	✓	✓	✓	✓	✓
	PowerPanel <sup>XL</sup>	✓	✓	✓	✓	✓	✓
Floors	PowerFloor+	✓	✓	✓	✓	✓	✓
	PowerFloor	✓	✓	✓	✓	✓	✓
Subfloor Supports	PowerBlock+	✓	✓	✓	✓	✓	✓
Verandahs, decks	PowerFloor+	✓	✓	✓	✓	✓	✓
	PowerFloor	✓	✓	✓	✓	✓	✓



“HEBEL IS OUR GO TO PRODUCT FOR BUSHFIRE ZONES. IT ALLOWS US TO DESIGN WITH FREEDOM KNOWING IT HAS ALL THE PROPERTIES WE NEED TO KEEP THE HOME AND OUR CLIENTS SAFE AND PROTECTED”

Darren Evans, Director, Solar Solutions Design



## OTHER BUILDING ELEMENTS

Non-combustible Hebel blocks and panels are ideal for a range of other building applications on bushfire prone properties.

### Subfloor supports

Hebel Blocks and PowerPanel<sup>XL</sup> panels also satisfy the requirements for the enclosure of subfloor areas for all BAL levels. This will protect raised flooring from a bushfire threat below.

### Verandahs, decks and external stairs

Both Hebel PowerFloor and PowerFloor+ provide a solid alternative for external decks and verandahs. If stairs are required, Hebel Blocks are an ideal choice. While both materials satisfy all BAL requirements, careful consideration should be given to the complete construction design.

### Fencing

Hebel PowerFence is an extremely attractive and versatile modular fence system that provides an efficient and effective privacy and noise barrier for residential applications. Featuring non-combustible panels and steel posts PowerFence is perfect for boundary fencing and low front walls in bushfire prone areas. Hebel PowerFence can be finished in either Exposed or Monolithic and can also be adapted to include a range of different decorative treatments such as ironwork.

## HEBEL FINISHING SYSTEMS

Hebel has worked closely with leading coatings manufacturers to develop a range of finishing options for all Hebel systems. From simple acrylic coatings to high build renders and textures, Hebel has a system that will meet the aesthetic requirements for your project.

## DESIGNED FOR A BETTER ENVIRONMENT

Environmentally friendly, Hebel products and systems are the sustainable choice, treading lightly on this planet. Manufactured in Australia, Hebel is made using readily available raw materials. Waste generated in the manufacturing process is recycled, even down to the steam that's produced.

Hebel products are non-toxic and don't emit any gases, another reason why they are an increasingly popular choice for people concerned with building a healthy, environmentally responsible home or building.



Solar Solutions Design

An innovative, sustainable and proven building product, Hebel has impressive benefits:



### STRONG AND SOLID

Hebel panels are high-performance products containing steel reinforcement for added strength with an anti-corrosion layer on the steel for maximum durability



### FIRE RESISTANT

Hebel is renowned for its fire resistant properties, and is a non-combustible building material. Hebel systems have been tested by the CSIRO and are proven to achieve Fire Resistance Levels (FRLs) of 60 minutes through to 240 minutes, and meet or exceed the requirements for all six Bushfire Attack Level (BAL) categories. This makes it an ideal choice in bushfire zones.



### QUALITY AND SPEED

Building with Hebel can mean faster construction times, without sacrificing on quality. One standard Hebel panel is the equivalent of 75 traditional bricks, which means a 150m<sup>2</sup> home can go up as quickly as within 3 days when installed by experienced Hebel installers. A high quality building material, Hebel provides a great solution in terms of speed and ease of construction which is why it is increasingly becoming the builder's choice.



### ENERGY EFFICIENT

Hebel panels perform well thermally, helping to keep your house cool from the heat in summer, and keeping it warm and cosy in winter. That means less reliance on heating and cooling, and can lead to savings on energy costs.



### ECO-FRIENDLY

Hebel is an environmentally friendly choice of building material, treading lightly on this planet. Manufactured in Australia, Hebel is made using readily available raw materials. Waste generated in the manufacturing process is recycled, even down to the steam that's produced.



### NOISE REDUCTION

A Hebel home is a quiet one because it reduces noise transmission. Compared to polystyrene and many fibre cement substrates, the use of Hebel for external walls reduces noise from external sources like traffic, meaning more peace and quiet. And when used for upper floors, can reduce sound transference between levels as well.



### PROVEN

CSR Hebel is the only manufacturer of AAC in Australia. With over 25 years of experience in developing, testing and producing AAC you can be assured you're getting high quality products and systems and unmatched technical expertise with Hebel.



For more information on CSR Hebel, please call **1300 443 235** or visit [www.hebel.com.au](http://www.hebel.com.au)

Hebel® is a registered trademark of the Xella group. CSR Building Products Ltd is an exclusive licensee of Xella. CSR Hebel is a business of CSR Building Products Ltd ABN 55 008 631 356.

