

CREATING SPACES | *enhancing lives*



**Our essential design and build
dairy barns guide**



"The biggest thing we found out – that it wasn't all about price because the ROI will be evident immediately"

Dehne Vinnicombe

Vinnicombe Dairy Owner, Jarklin VIC

Take from experience

50% heat load reduction

Protecting your cattle from the direct sun is necessary.

Maintaining temperature ensures a relaxed, profitable cow

Care, then receive

25% to 2% feed waste cutback

One of our clients achieved this impressive saving within the first month of operating his new freestall barn –

"...and that just pays for the shed within itself"

Save on waste

Increase milk production

Effective dairy housing design makes for comfortable cows, which ultimately means higher volume milk production. That's why our custom designed dairy barn solutions are second-to-none.

It's no secret that improvements in farm profitability over the past few years has resulted in a significant increase in production, making on-farm capital investments. *"Milk is the absence of stress,"* from the words of renowned dairy performance consultant Dr Gordie Jones.

Loafing barns

A loafing barn covers essentials to support a dairy. This loose-housed system provides adequate long-term shelter to protect livestock from all weather conditions creating shade and shelter from the elements, whilst offering a comfortable space for them to lie down.

They can complement outdoor areas and allow cows the option of roaming. As the name suggests, cows use the communal area to loaf on the soft, non-pack floor. This results in healthier, more content cows and ultimately increased milk production.

Considered a modest barn, the animals undoubtedly benefit from enhanced welfare and cleanliness. The herd's wellbeing improvements are evident from overall health, to improved hoof and other issues and reduced infections – which ultimately leads to improved milk production. They can be employed for other uses off season too.

Composting barns

Composting barns have a deep bed of wood chips or similar where the bacterial breakdown of the cow's effluent creates a warmth in the bedding. Correct maintenance will encourage the cow to spend more time resting which increases milk output. The compost bed must be regularly tilled, and the surface kept dry with the help of good ventilation and airflow.

The barn can be built with the option of feedlanes and/or flushlanes depending on other facilities available. With a correctly maintained bed mastitis, hoof problems etc are considerably diminished.

The compost bi-product is typically used for pasture improvement as an environmentally friendly fertiliser.

Freestall barns

A freestall barn is fixed housing exclusively for dairy cows. Essentially a barn provides shelter but a freestall also offers comfort, cleanliness and the opportunity to improve diet management. Engineered to accommodate herds for extended periods during feed and resting times, the space can be fully or partially enclosed. The freestall is considered a premium barn.

Generally, they consist of two areas. The feeding bay or 'cow alley' is where the daily dietary requirements and watering are carried out. The bedding area consists of individual stalls/cubicles which allow the animals to ruminate and lie down when they please. It is important for cows to fulfill their lying time requirements to sustain optimal health and milk yields.





Why do you need a dairy barn?

Engineered to take client's own fans

Increased roof pitch to assist with optimal airflow and temperature

Fully hot dipped galvanised truss

Change the way you farm

Our dairy barns are custom designed and constructed to accommodate: specific clearance heights

feed and flush lanes, appropriate ventilation and fans for improved animal welfare and to optimise herd access.

Dairy barns that reward

Learn how

Our extensive dairy barn solutions play a vital part in any long-term agribusiness planning for a more profitable future. Benefits adding a barn to your dairy, surpass current practices.



Lift farm production

Protecting your animals from the elements promotes happier, healthier, more comfortable cows. Also, well ventilated barns and shortened walking distances to milking parlour, equate to a more consistent milk supply. And we all know what more milk means.



Long term investment

Both long and short-term ROI qualify. Some see the return immediately due to the benefits maximising feed-to-milk conversion while minimising waste. In the long-term a well-designed, quality, engineered (hot dipped galvanised) barn is purpose built for longevity. Resulting in a shed for the generations.



Cost savings

Limit damage to farm assets and maximise efficiency for feed/water distribution – feed alleys can help cut feed wastage. You can also eliminate the need to acquire extra property when needing to increase herd size. What would 23% saving on feed wastage look like to you?



Future proofing

Considering seasonal (and market) fluctuations – future feed can be grown on paddocks where cows were traditionally run, resulting with significant growth to your farming enterprise. Previously grazed paddocks can rejuvenate, allowing for more flexible pasture rotation.



Herd longevity

Positively impact cow comfort and herd longevity and reduce involuntary culling associated with health, lameness, fertility issues and heat stress.



Health safety environment (HSE)

Farm employees attending to cows also benefit from less exposure to the elements, plus more convenience accessing the cows. Research even indicates a greater disposition amongst workers.



Design for effectiveness

Key consideration to maximise the space

Professionally designed dairy barns built for success must consider every possible detail.

Orientation

An essential consideration, typically east to west ridgeline is recommended to offer maximum protection from the prevailing weather and for optimised airflow and shade/sun benefits.

Shade

Protect from sun, rain and wind. By reducing the impact of heat stress (which reduces productivity). Fact, cows require shade. Shading your cattle from the direct sun can reduce the extra heat load they take on, by up to 50%

Size

Consider how many cows will be housed, then how many m² per cow (minimum 8m² per cow). The structure must provide sufficient animal spacing along feedlanes, and promote efficient cow flow, comfort (standing/lying) and wellbeing.

Distance

Allow easy access to key infrastructure such as feed supply, power, milking and calving sheds etc. The impact can be consequential. For example, reducing the distance to milk - reserves energy and increases milk

Operational efficiency

Maximise feed-to-milk conversion and minimise waste to provide cost savings. Save time in herd movements and staff labour. Consider the benefit of better contract milk price due to more

Slope

Clean cows are an indicator of animal comfort and welfare. Incorporating minimum floor level slope within alleyways and feedlanes allows for ease of lane flushing. This warrants simplified effluent management

Feedlanes

Well-designed feedlanes accommodate for easy feedwagon access. This will ensure plenty of room for individual cows along with the benefit of minimising feed waste.

Roof pitch

Recommended at 18 degrees (most common angle) for maximum airflow, but we can custom design to any requirements. The roof pitch monitors the air flow with the angle allowing heat to escape at a faster rate than a shallow pitch.

Ventilation

A critical part of good management for a housed herd, it's essential for reducing herd heat stress. To sustain herd comfort and performance, we offer two types of ventilation: open ridge or ridge vent cap. Fans are a welcome addition too. Industry best practice is 75mm of vent throat per 3m of building span.

Quality

Hot dipped galvanised steel for longevity of building materials and protection against the wet corrosive environment of dairy operations.

*Other infrastructure also needs to be considered such as dairy parlours/maternity barns/calf sheds/feed commodity sheds, plus other features including eaves, gable infills, clearance heights and feed wagon clearance.

Why Central Steel Build?

We are experts

It's not just about the end product, we want you to enjoy (and gain from) the journey - design to handover.

With 45 years of experience building agricultural sheds, we believe in continuous improvement and regularly update our skills and knowledge in advanced dairy builds. We work closely with your dairy consultant and fit out provider/engineer to ensure the interior of your barn integrates effortlessly with our value-engineered, hot dipped galvanised steel framework.

Experience caters for flexibility. Clients often tell us how much they appreciate our added value, along with our honest, collaborative approach. We readily share information to reassure your investment decision, make obligation-free site visits and assist with all the practicalities, like due diligence and council building approvals.

Advanced dairy farm building design can future proof your farm and set you up for generations.

From first consultation to design to project management we:

- **consider** every detail of the brief, design, build and installation.
- **build** self ventilating roof structures specific for dairy barns.
- **take care** of building permits.
- **facilitate** fire service engineering design.
- **design** for conditions and climates on your property.
- **collaborate** with specialist industry partners to refine the build.
- **protect** with hot dipped galvanised steel.
- **source** Australian made steel.
- **manufacture** locally in Kyneton, Victoria and family owned.
- **communicate** throughout the project.*

*This is a game changer when building for your future, good communication can make all the difference.



Engineered to suit
client's fitout



Australian BlueScope cladding



Custom gutter with large
rainhead and downpipes



Grow from our long-term industry relationships

Not only will you benefit from our in-depth dairy expertise, but also our success with rapport building and a true understanding of collaboration.

You will have the advantage of our business relationships with the likes of fire engineers, building surveyors and consultants within the Australian dairy industry.

Our dedicated project consultants look forward to helping you truly customise your specific dairy design with a range of product options for optimal results.

Treating every relationship like a valued partnership, we work together to get the best results possible.

Our specialist CSB dairy consultants hope you have been inspired and look forward to creating a great space to enhance *your life*.

Are you ready to transform your farm?

Let's connect, find us here:

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