



# ***Foamed Bitumen Stabilisation:*** A Greener, Smarter Future for Roads

# Foamed Bitumen Stabilisation: A Greener, Smarter Future for Roads

As Australia looks to build more resilient, cost-effective, and sustainable infrastructure, one innovation making its mark is foamed bitumen stabilisation (FBS). This emerging pavement technology is fast becoming a game-changer in the world of road construction and rehabilitation.



## What is foamed bitumen stabilisation?

FBS is a pavement treatment method that injects hot bitumen, water, and air into existing or recycled road materials, binding them into a flexible, high-performing base layer. Unlike traditional cement-treated bases, foamed bitumen layers offer greater fatigue resistance and moisture resilience and allow for earlier trafficking.

## Who uses it?

Designers, engineers, and contractors working on large-scale infrastructure projects increasingly use foamed bitumen to meet modern performance and sustainability standards. Major users include Stabilised Pavements Australia, government transport departments, and civil contractors.

## Where is it used?

Foamed bitumen is being adopted across Australia, with recent growth particularly noticeable in Queensland, Victoria, and New South Wales. The AGPT (Austroads) testing protocols now allow for standardised testing and design methodology nationwide, opening doors for consistent use across regions.

## When is it used?

FBS is used during both new construction and rehabilitation of road pavements. It is particularly beneficial when fast turnaround and material reuse are priorities, making it ideal for remote or high-traffic areas where time and cost are critical.

## Why use it?

- Cost savings from reduced pavement thickness and reused materials
- Faster construction and immediate post-compaction traffic use
- Reduced carbon footprint and energy use
- Proven performance in Australian conditions

## How does Construction Sciences support foamed bitumen projects?

Construction Sciences plays a critical, independent role in verifying the performance of FBS designs and ensuring they meet project specifications. As one of Australia's most trusted names in construction materials testing, we bring decades of experience, national reach, and a rigorous approach to quality assurance.

Our precision, consistency, and integrity reputation has made us a preferred testing partner on some of the country's largest infrastructure projects. Clients know they can rely on us for transparent, standards-compliant results that stand up to scrutiny.

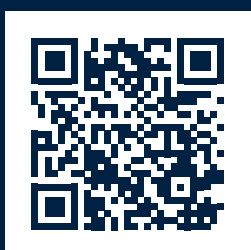
## Working closely with contractors, consultants, and asset owners, we tailor testing programs based on specific road performance requirements. This includes:

- Resilient modulus testing (lab mixed and field mixed)
- Foaming characteristics for bitumen
- Lab mixed trials
- Binder content optimisation
- Strength, stiffness, and blend validation

We receive bulk samples from across Australia and run batch trials in our dedicated foamed bitumen laboratory. Our team consults with clients throughout the process, making data-driven mix adjustments and ensuring optimal performance before field application. We don't just deliver results — we partner with clients to understand their needs, anticipate challenges, and support better decision-making at every stage. Construction Sciences adds value beyond the test report, from design validation to on-site annex labs.

Construction Sciences is proud to be one of the only laboratories NATA accredited for TMR (QT methods) and AGPT (Austroads) methods to perform the specialised modulus testing required for FBS batch trials. From our dedicated foamed bitumen lab, we support clients nationwide, testing mix designs, trial batches, and blend ratios to ensure they meet performance and durability targets.

By offering reliable turnaround times, national coverage, and expert technical guidance, we help clients reduce costs, maximise material reuse, and deliver better-performing pavements.



Contact the Construction Sciences FBS laboratory on  
+61 7 2800 6500 to discuss your testing requirements.

[www.constructionsciences.net](http://www.constructionsciences.net)

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