



Update on some extreme Coletanche BGM projects in Australia: October 2021

KEY TECHNICAL ASPECTS OF BGMs

BGMs continue to be used in large quantities in Australia due to the technical benefits they offer on site.

These benefits include:

- **Extreme puncture resistance due to the BGM's internal reinforcement. Usually there is no need to waste time and money on protective geotextiles.**
- **The ability to be installed in harsh conditions (rough subgrades and high winds up to 40km/h)**
- **The ability to be used on very steep slopes (currently a 1V: 1.3H project in Australia) where other geomembranes can't be used, and this results in some very large cost savings for the projects on earthworks and time.**
- **The thermal stability of a Coletanche BGM means no heat induced wrinkles in the hot Australian sun. Heat wrinkles can be a major cause of stress induced cracking in other geomembranes.**
- **A BGM generally offers a far superior technical solution for most applications (e.g. capping) where a natural clay or geosynthetic clay liner may be considered. BGMs have a far lower permeability co-efficient (i.e. better performance) and they do not suffer from clay desiccation and cationic exchange.**



Mine water
management
NSW



Gold tailings storage facility QLD

KEY ASPECTS OF THE BGM MARKET IN AUSTRALIA

Coletanche continues to be the leading BGM in Australia with:

- **By far the most number of BGM projects completed around Australia.**
- **By far the largest surface area projects in Australia**
- **Coletanche has the widest roll width of any BGM in the world (at 5.1m wide versus the nearest competitor at 4m wide) and this results in less seams on the slopes, which means the project is completed faster.**
- **Coletanche is the only BGM with specialised hydraulic installation equipment for safe and high speed deployment on large areas and steep slopes**
- **Coletanche is the only BGM in Australia to be installed on project sites with electric hot air welding machinery. This flameless method is used where there is potential for flammable gases to be present e.g. landfill sites.**



Flameless welding of Coletanche BGM for landfill capping. Queensland



Unique hydraulically controlled installation equipment for Coletanche BGMs on extremely steep slopes. Western Australia

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BGM APPLICATION SECTORS IN AUSTRALIA: LANDFILL CAPPING



Before and after

Successful landfill capping project with Coletanche ES2, Queensland

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BGM APPLICATION SECTORS IN AUSTRALIA: TAILINGS STORAGE FACILITIES



Unique Coletanche ES3 HFA (High Friction Angle) grade being used on steep embankment faces (1V: 1.75H) to maximise interface friction angles with the subgrade. Note the ability for light construction vehicles to be used directly on the Coletanche BGM. Queensland

BGM APPLICATION SECTORS IN AUSTRALIA: GROUNDWATER AND ENVIRONMENTAL PROTECTION



Capping of mining waste to prevent rainfall infiltration and therefore protect the local environment and groundwater. Western Australia

FUTURE BGM APPLICATION SECTORS IN AUSTRALIA: RAILWAY AND AIRPORT SUBGRADE WATERPROOFING



Coletanche BGMs now have an extensive record of successful projects around Australia, and design engineers continue to utilise the technical benefits of Coletanche on challenging projects to provide a more resilient final product and in most cases an overall project cost saving. Into the future, we foresee the use of Coletanche BGMs into railway and airport subgrade waterproofing where this has been very successfully used in many other parts of the world.

For more information, please email info@axter.com.au

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