



RAMMED EARTH CONSTRUCTIONS

Winner of multiple building awards from Qld Master Builders, Living Smart Noosa/Qld Government & Sunshine Coast Environment Council



From country cottages and suburban homes to art galleries and wineries, stabilised rammed earth creates beautiful and unique buildings, providing a swathe of benefits to meet the varied demands of owners, artists, industry, architects and engineers.



Stabilised Rammed Earth

Rammed earth is a method of building walls in situ by compacting a selected mixture of earth, sand and aggregate in layers between forms. Each layer is approximately 15cm deep. As each form is filled another form is placed above it, and the process begins again. This is continued until the desired wall height is reached. A wider range of soils are suitable when a small amount of cement is added to the mix. The result, known as 'stabilised rammed earth', is an extremely durable and attractive masonry product with numerous benefits.

Benefits

FIRE PROTECTION: Earth doesn't burn. If your home is threatened by fire, you won't have to worry about the rammed earth walls catching fire or collapsing. It's an ideal building material in leafy suburbs and rural areas. CSIRO tests on a 250mm rammed earth block wall achieved a 4 hour fire resistance rating. A 150mm wall achieved a rating of 3 hrs 41 minutes. The walls we build are even stronger, being 300mm thick and of monolithic rather than block construction, so there are no vulnerable mortar joints.

PEST PROOF: Termites, pests and other vermin can't eat rammed earth. There are no hidden wall cavities for them to live in or travel through. There is no framing timber in the walls for them to attack or use to travel up to roof timbers. (NB: rammed earth is not deemed sufficient as a termite barrier for building approvals.)

TEMPERATURE STABILITY: 300mm of external rammed earth wall provide excellent protection from temperature fluctuations. You can be snug in winter, cool in summer.

DURABLE: An earth wall built to CSIRO standards should have "an unlimited life as it would be immune to the destructive action of fire, termites and the weather." All our walls meet the CSIRO standards. We've been building rammed earth walls since 1989, and have developed excellent earth mixes and techniques. Tested in accredited scientific laboratories for erosion and strength, our mixes have had outstanding results. Our extensive experience in soil selection and high level of quality control provide exceptionally strong and durable walls.

LOW MAINTENANCE: The walls need very little maintenance once finished. During the building process we include a water repellent additive especially formulated for rammed earth, and at the end of the process we apply a water repellent to the external faces of the walls. Both these repellents serve as additional protection to the already very water resistant nature of the highly compressed earth. Anti-graffiti products are available and suitable for rammed earth.

COST EFFECTIVE: Unlike other masonry, rammed earth walls don't need core filling or reinforcing. Nor do they need rendering, plastering or painting. They are solid right through. The walls won't get dented and need repainting or touching up over the years ahead.

SOUND BARRIER: CSIRO sound transmission tests rate a 250mm rammed earth wall at 50+ decibels. Our standard walls are 300mm, providing an excellent sound barrier and fantastic acoustic qualities. Particularly useful between sleeping and social areas, and to exclude outdoor noise, it provides a feeling of security and serenity that simply can't be replicated in a lighter framed building.

LOAD BEARING: 300mm rammed earth walls are load bearing and provide substantial bracing.





HEALTHY & ENVIRONMENTALLY FRIENDLY:

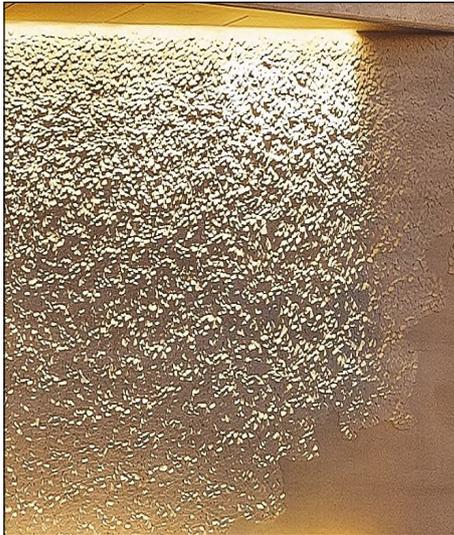
Rammed earth is non-toxic, non-polluting and ‘breathes’, making healthy, more people-friendly buildings. It is very low in embodied energy and extremely comfortable to live in.

ATTRACTIVE: Rammed earth is a natural product which blends with the environment and natural building materials particularly well, but also looks stunning with man-made materials like iron and corten steel. It can also be used as a feature statement wall or thermal bank in a modern building very successfully.

VERSATILE: We can vary texture, colour and finish, incorporate art works and objects, relief details, arches and alcoves. We use different soils within walls to create feature effects. In the award-winning Garangula Art Gallery we incorporated a commissioned art work into the gallery’s entry wall (photos below).

- Fire & pest proof**
- Low maintenance**
- Sound barrier**
- Strong & Durable**
- Thermal mass**
- Load bearing**
- Cost effective**
- Eco-friendly**
- Rock solid**
- Each wall unique**
- Temperature stabilising**

Two photos of the Jonathan Jones artwork in the entry wall at Garangula Art Gallery, Harden, NSW. The first has a light shining from the top. The second is a day time photo.



Scope of work

We subcontract to other builders and owner builders to build rammed earth walls, and occasionally contract for full building projects. Our CEO John Oliver is a fully licenced builder and carpenter.

With more than 30 years of hands-on experience in rammed earth construction in Queensland and northern NSW, John has developed a deep understanding of the process and materials.

Past commercial projects include Blackwater Aquatic Centre, University of Queensland/Spicer’s Wildlife Facility at Gatton, Australia Zoo’s Animal Hospital and the Garangula Art Gallery. Several of these projects have received prestigious building and/or architecture awards.

Past clients are our best salespeople and are usually more than happy to provide references.

We provide a consultancy and repair service for rammed earth/pise buildings, whether historic, modern or in the design stage.



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