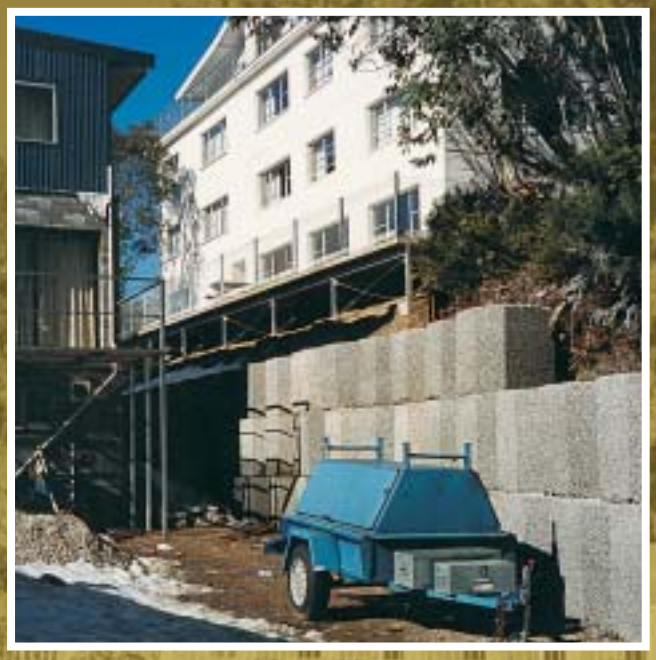
Rocla®

MassBloc®
Retaining Wall

EARTH RETENTION

Permanent retaining structures



- Mass gravity walls
- Reinforced soil structures
- Bridge abutments
- Stream channels
- Coastal protection
- Sea walls
- Erosion prevention
- Tunnel access walls
- Wing walls

Simple Installation

Ease of handling makes the Rocla MassBloc® system ideal for:

- Temporary highways - slip stabilisation
- Embankment stabilisation
- Temporary bin storage

Dry stacked construction

The Rocla MassBloc® retaining wall system comprises large precast permeable concrete blocks manufactured under stringent quality control.
Construction is mortarless and an experienced crew can place up to 70m2 of wall per day. The blocks are interlocked by a nib precast into the base of each standard unit. The rough concrete surface of the blocks aids resistance to shearing by increasing the friction between units.

Design service

Rocla can provide a design service as part of the MassBloc® package, if required. **Note that all Rocla MassBloc® walls must be built in accordance with a design specific to each site prepared by a registered engineer.**

Manufacturing flexibility

Blocks can be manufactured with varying height and width (maximum height 1000mm, maximum width 1190mm). Blocks can also be supplied in a range of colours to improve aesthetic appearance or complement the surrounding environment.

Minimal impact on waterways

For environmentally sensitive areas, construction can proceed by reaching out from waterway banks or off a previously constructed span. No need to build coffer dams or interfere with the waterway.

Transport

The Rocla MassBloc® system is available ex-factory or delivered to site. The base unit weighs 1.7 tonne and the standard block 1.8 tonne. Care must be taken during transport to prevent blocks from coming into contact with each other.

Fast, permanent prevention of land slippage

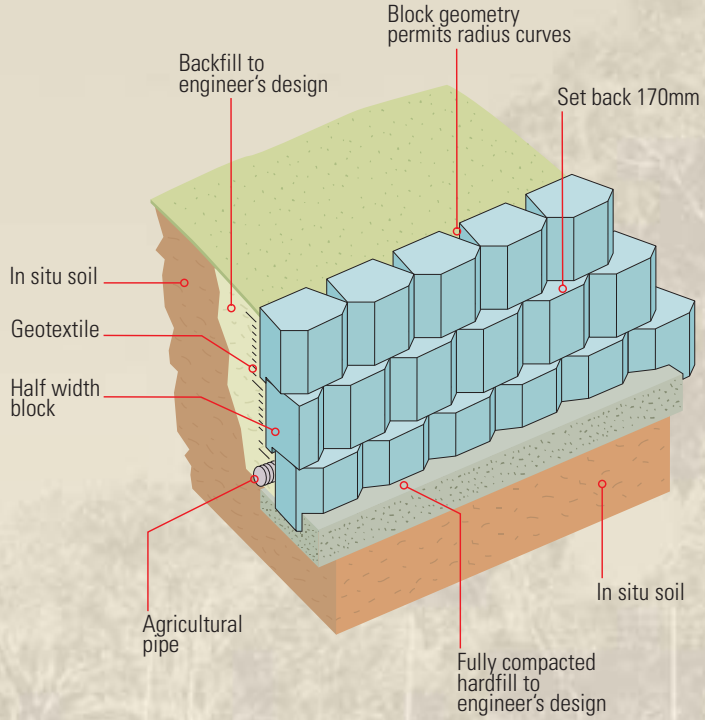
Rocla MassBloc® retaining walls are economical, easy to transport, quick to install and require minimal base preparation.
The precast concrete blocks interlock to create permanent retaining structures that can be rapidly deployed to counter erosion, land slippage and wave energy. The system is ideal for cut and fill installations. Blocks are manufactured at a number of Rocla precast facilities for delivery Australia-wide.

Installation

Rocla's MassBloc® system is simple to install. Blocks are manufactured consistently to specification. The key to successful installation is a perfectly level, well compacted base.

Contact Rocla for a copy of the MassBloc® Design Software on CD.

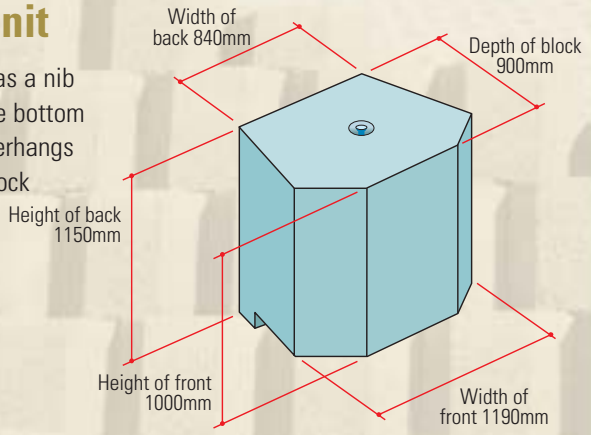
Typical Rocla MassBloc® Retaining Wall



IMPORTANT: This diagram is indicative and for setout reference only. All Rocla MassBloc® walls irrespective of height must be built in accordance with a design prepared by a registered engineer who is to be engaged by the purchaser. The engineer's design drawings and details shall take precedence if there is any conflict or ambiguity with this diagram.

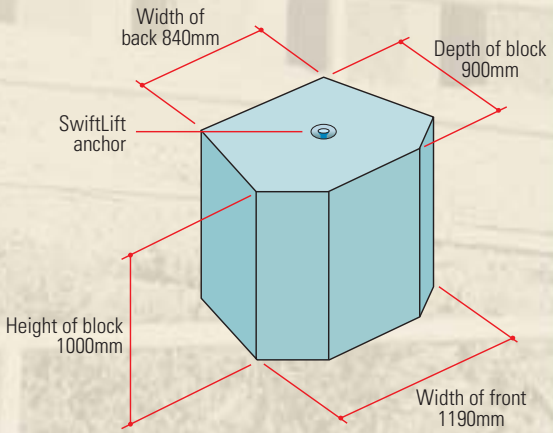
Standard Unit

The standard unit has a nib (170mm wide) at the bottom of the block that overhangs the blocks below Block weight 1.8 tonne



Base Unit

The base unit forms the bottom row of the wall and has no nib Block weight 1.7 tonne



Installation Guide

Note: This information is provided as a **guide only**. The registered engineer's design details take precedence over this information.

Excavation of trench

- Excavate base to the required depth. This will be site dependent - generally 1200mm wide and 200mm deep.

Preparation of base

- Place hardfill or equivalent (particle size 65mm minus) into the trench then compact to the engineer's requirements. Use a laser level for the best result.
- Place a layer of binding material (e.g., 6mm minus basalt or sand) up to 20mm thick over the entire trench. Using a screed, level the binding material to ±5mm across the trench and along the full length of the base.
- Set a string line approximately 10mm from the front face of the proposed wall.

Unloading blocks

- Blocks can be placed on to the base using an excavator with a certified chain and 2.5 tonne SWL swift lift.
- If the work area is within reach of a truck-mounted crane, blocks can be delivered and placed directly from the truck.
- Care must be taken to prevent damage to the blocks when unloading or placing.

Placing base units

- Lower the base unit to approximately 30mm from the prepared base and move the unit slowly into position before lowering fully.
- Each adjacent block is also lowered to 30mm from the base, keeping 20mm away from the previously placed block. When the front face is positioned correctly, slowly move the block until it touches the adjoining block.
- Use a spirit level to check that each block is level.

Placing standard blocks

- Once the base blocks are level, standard blocks can be placed on top. Blocks are staggered in stretcher bond for structural purposes.

Backfilling

- Refer to the design engineer's project specific details for the required method.

Backfilling options include:

- Engineered fill.
- No fines permeable concrete (similar to the mix used in the blocks) where speed of placement is important or backfill compaction is difficult.
- Geogrids between each unit as required by the engineer's design.

The benefits stack up

Performance

Dry stacked, mortarless construction. The system can tolerate movement and settlement without causing visual distress at the face. Rocla MassBloc® walls are relatively flexible structures that are typically based on a compacted aggregate foundation.

Permeability

Rocla MassBloc® walls are permeable structures. Permeability can be supplemented by agricultural pipe to reduce the development of hydrostatic pressure behind the blocks.

Durability

Rocla MassBloc® components are manufactured from wet-cast concrete, resulting in a very durable retaining wall system. The blocks are resistant to cracking and do not splinter or decay like treated timbers or railroad sleepers. The blocks contain no steel reinforcement (apart from a galvanised lifting eye) and have no exposed wires to corrode.

Rapid Deployment

Two experienced workers with an excavator can place up to 70m2 of wall per day. Blocks are easily lifted and placed using the galvanised lifting eye cast into the top of each block.

MASSBLOC®

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For further information on the Rocla MassBloc® Retaining Wall

Call Rocla on
131 004

For an information kit email
solutions@rocla.com.au

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