



CIRTEX®
GAIN MORE GROUND

MAGNUMSTONE™

UNIQUELY DESIGNED TO PROVIDE AN
EFFECTIVE RETAINING SOLUTION



0800 247 839 | WWW.CIRTEX.CO.NZ



MAGNUMSTONE™

The retaining wall system that ticks all the boxes.

- ✓ Quick and easy installation
- ✓ Engineered system with up to 100 year design life
- ✓ Easy to transport
- ✓ Versatile hollow core design allowing drainage at the face
- ✓ Minimises manual labour
- ✓ Less concrete than solid block systems
- ✓ Cost effective
- ✓ Flexible design options
- ✓ Custom faces available



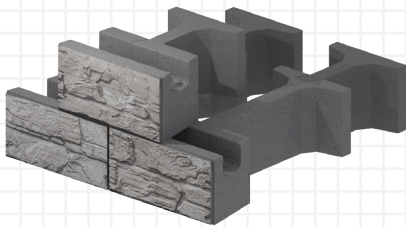
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MagnumStone™ is a registered trademark of Cornerstone® registered in Canada.
More information can be found at WWW.CIRTEX.CO.NZ

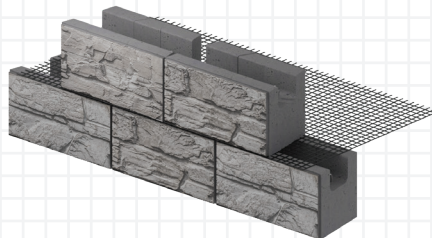


DESIGN OPTIONS



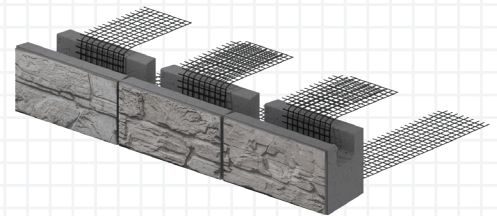
GRAVITY WALL

Gravity walls are built with the large MagnumStone blocks, using a tongue-and-groove system to lock the gravity extenders in place. They rely on their own and extended weight to hold the earth behind them.



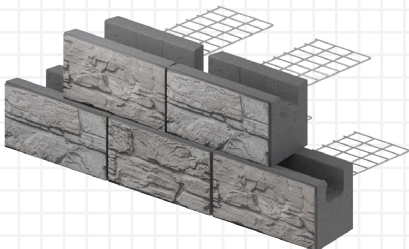
GEOGRID WALL

Geogrids used with the appropriate lengths, layers and compacted backfill materials will resist the active forces above and behind the wall. The use of geogrid reinforcement with the MagnumStone system is typically very cost-effective.



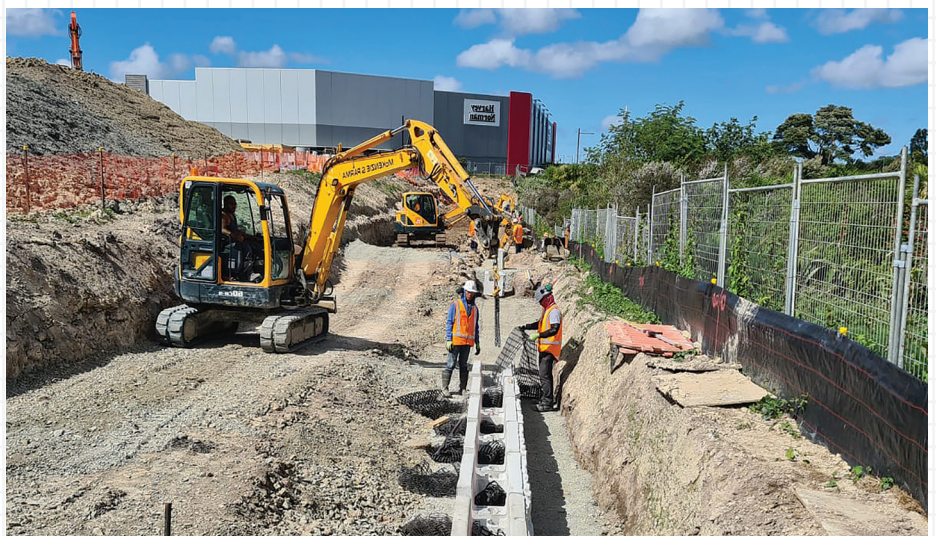
POSITIVE CONNECTION

MagnumStone allows for the ultimate geogrid positive connection. This unique positive or mechanical connection provides the system with a greater safety factor for connection when designing for heavy loads, bridges and railways.

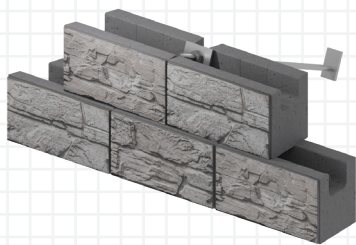


STEEL GRID

The MagnumStone Steel Grid solution provides designers with a great option, similar to traditional panel/steel systems, with significant installation and cost advantages to the end user.

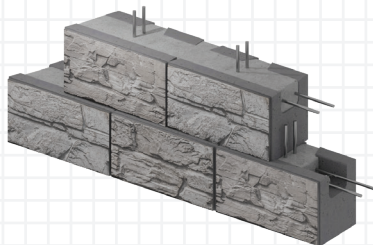


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SOIL NAILED

Soil nailing could be one of the fastest growing solutions for retaining wall structures, as building restrictions increase due to population growth.



CANTILEVERED WALL

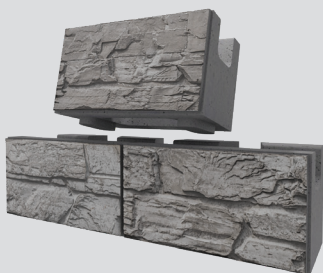
The large vertical and horizontal hollow cores of the MagnumStone units provide the permanent form for reinforcing steel and concrete, making installation easy and cost-effective.



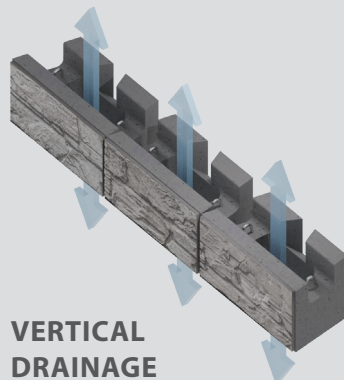
PLANTER WALL

The aesthetically pleasing, plantable terraces maximise green area, significantly reducing the "heat island" effect. Its unique internal drainage system makes it the prime choice for environmentally friendly and sustainable wall solutions.

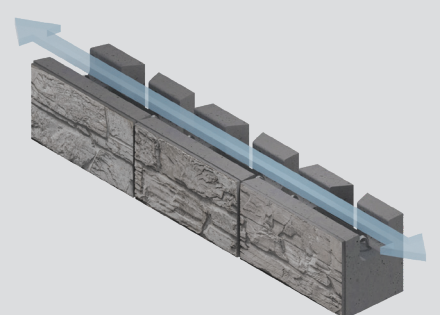
HOLLOW CORE ADVANTAGES



**SUPERIOR
CONNECTION**



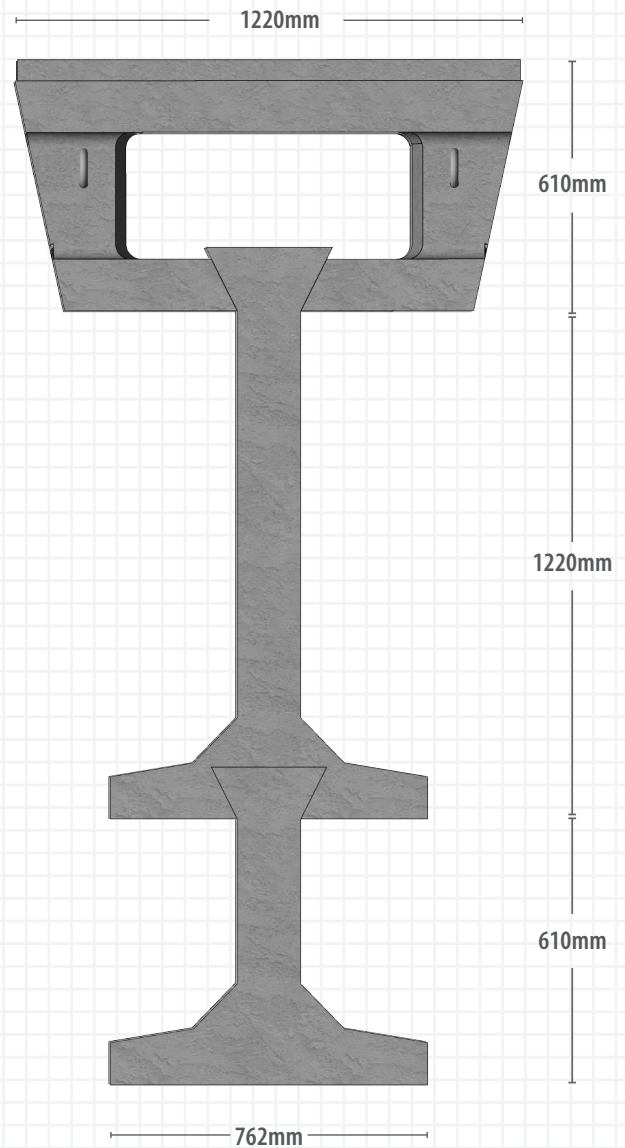
**VERTICAL
DRAINAGE**



**HORIZONTAL
DRAINAGE**

YOUR GRAVITY WALL JUST GOT TALLER

The MagnumStone extender system allows the designer to create taller gravity walls by adding T-shaped extenders. These extenders lock into the infill material to provide greater gravity mass for wall stability.



1 MAGNUMSTONE UNIT

Units are made from high strength, wet cast concrete to provide durability and resistance to weathering.

2 HOLLOW CORE

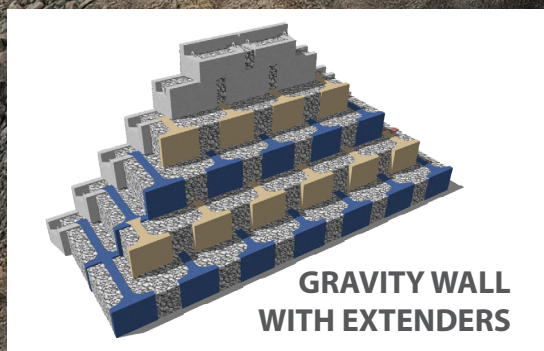
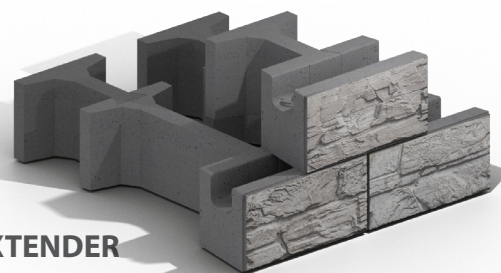
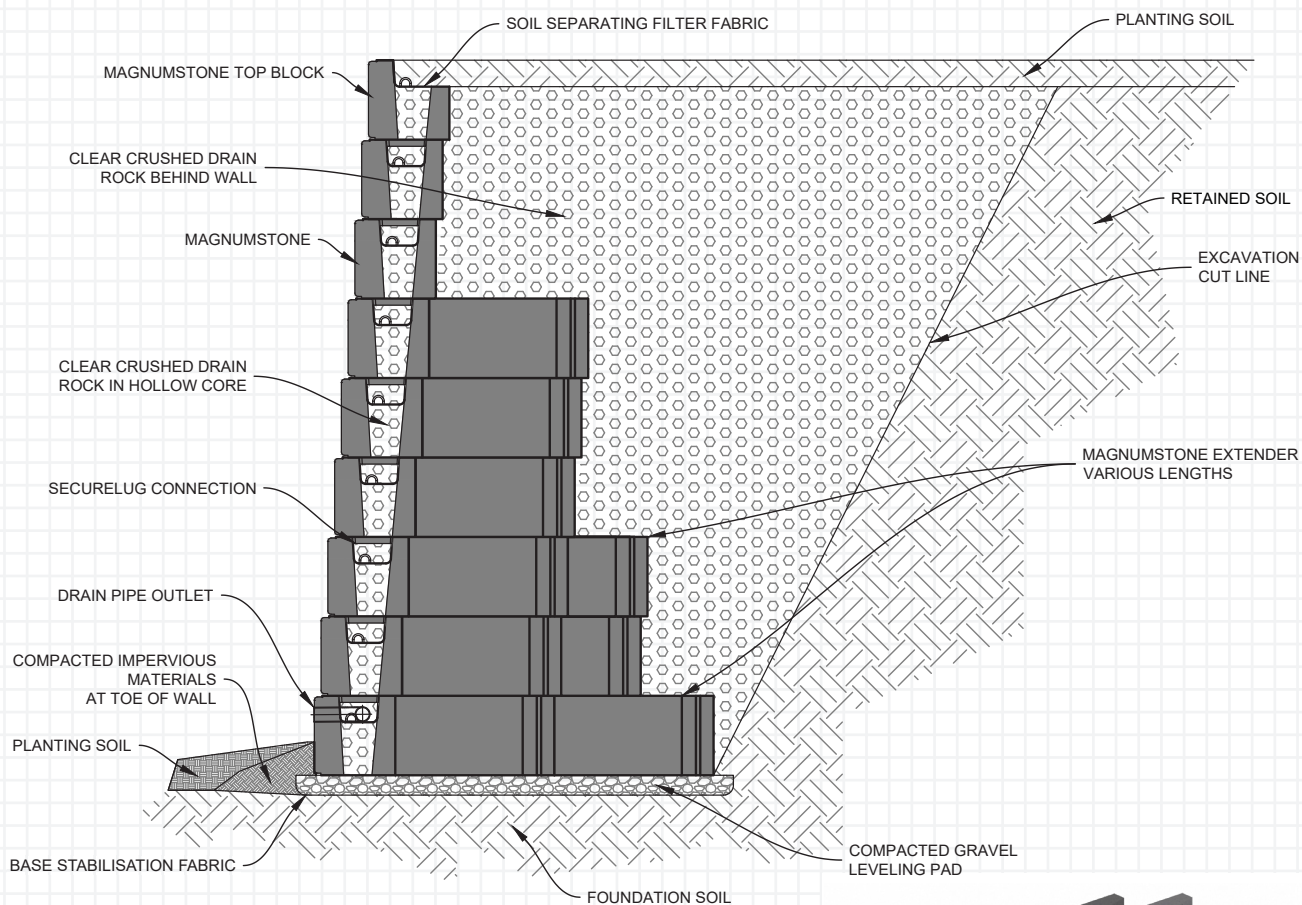
Makes it easy to sawcut, add special lighting, or install fence posts when adding creative details.

3 LARGE & SMALL EXTENDERS

MagnumStone extenders can be used in any combination of standard lengths.



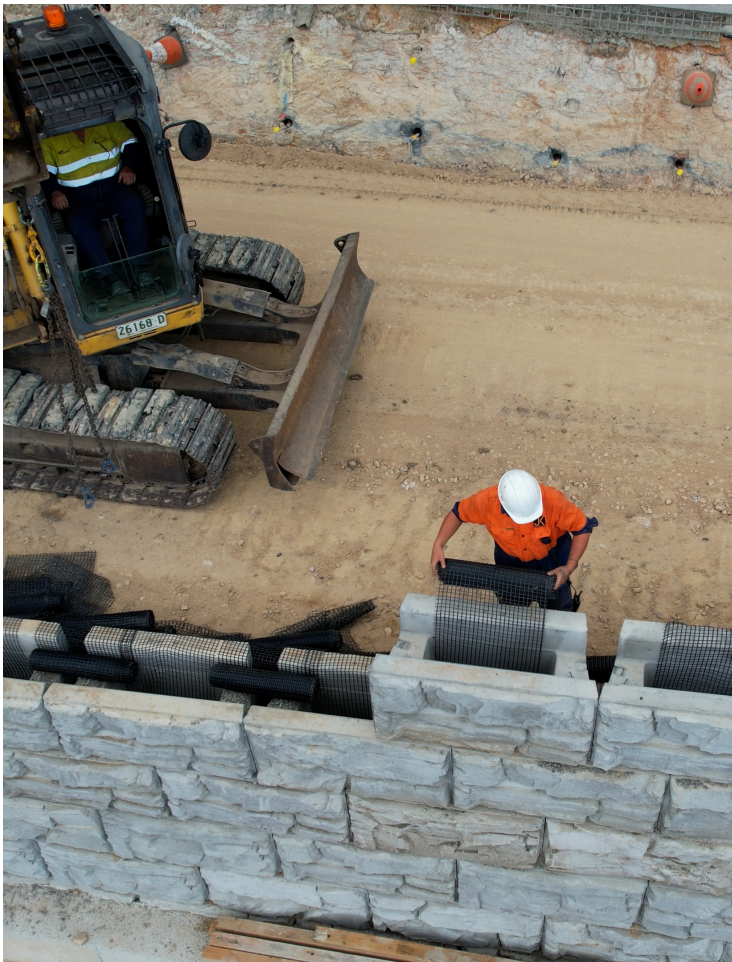
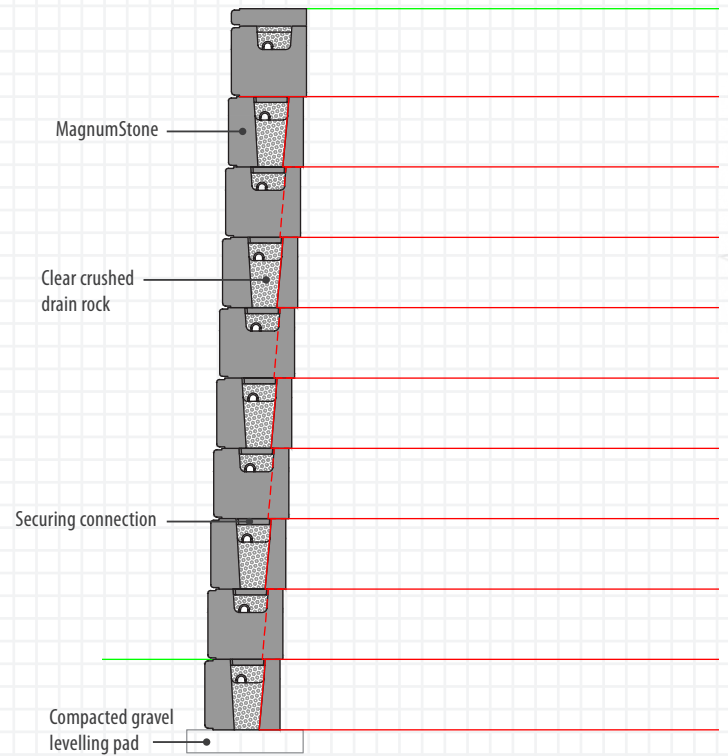
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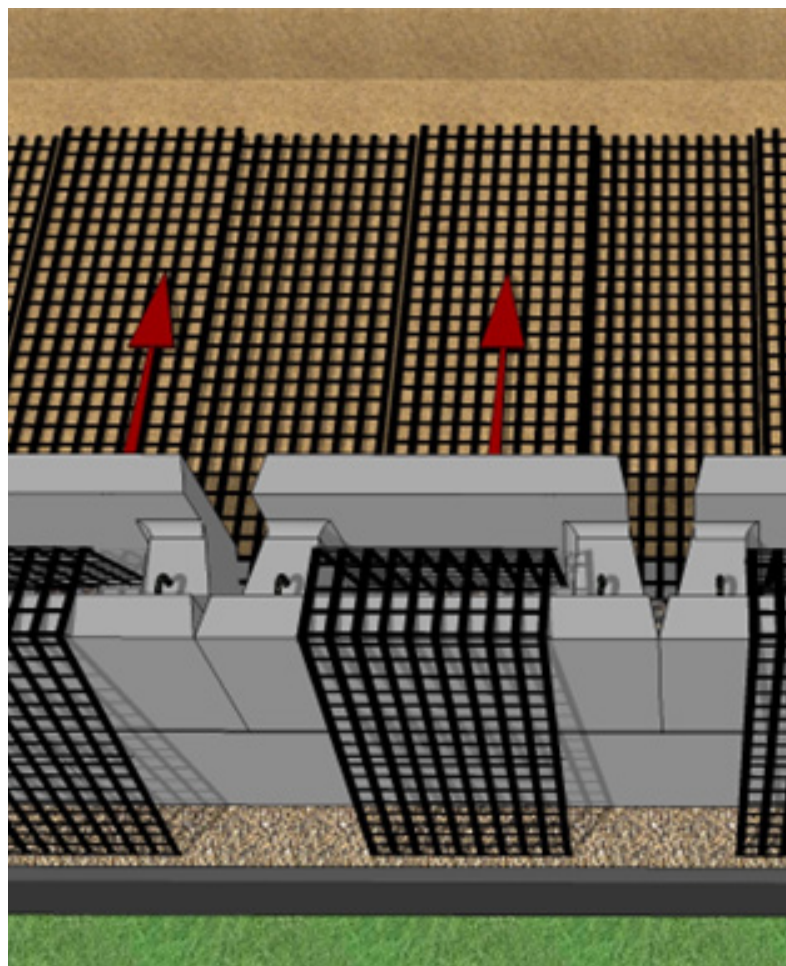
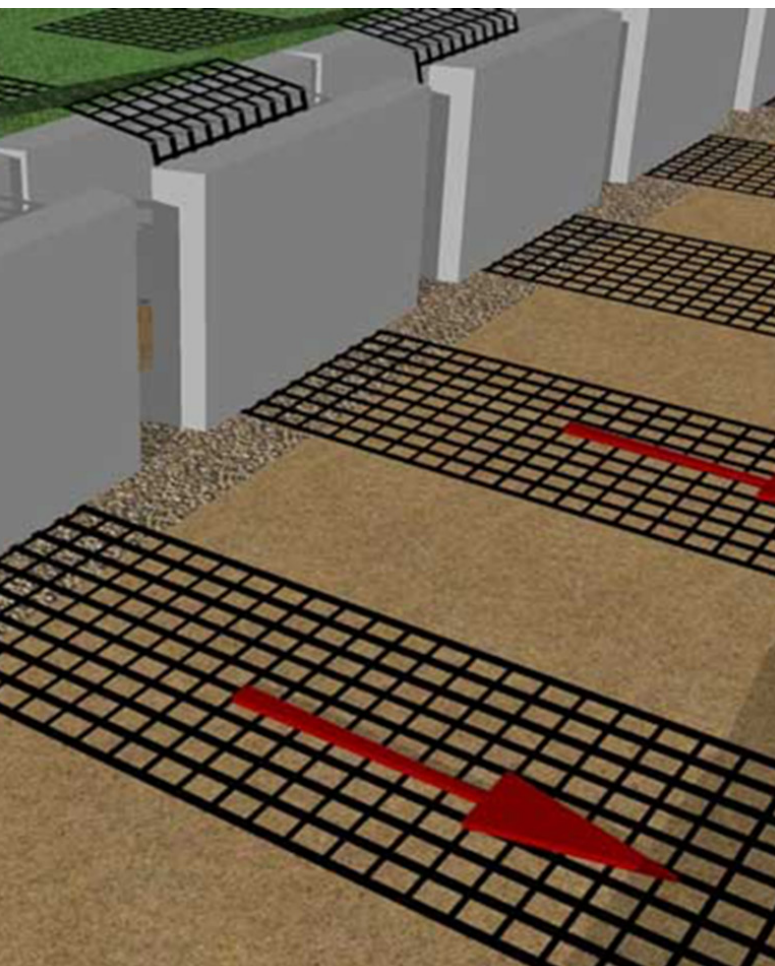
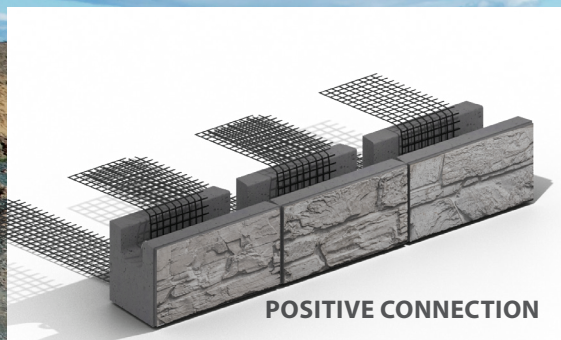
GEOGRID WALLS

Geogrids are used to reinforce the soil mass behind the MagnumStone units to create tall retaining wall systems. The MagnumStone MSE system can be designed to support loads within parking lots, roadways, buildings, bridge abutments and in water applications.

Geogrid, with the appropriate lengths, layers, and compacted backfill materials, will resist forces above and behind the wall. The use of geogrid reinforcements with the MagnumStone system is extremely cost-effective for tall wall structures.



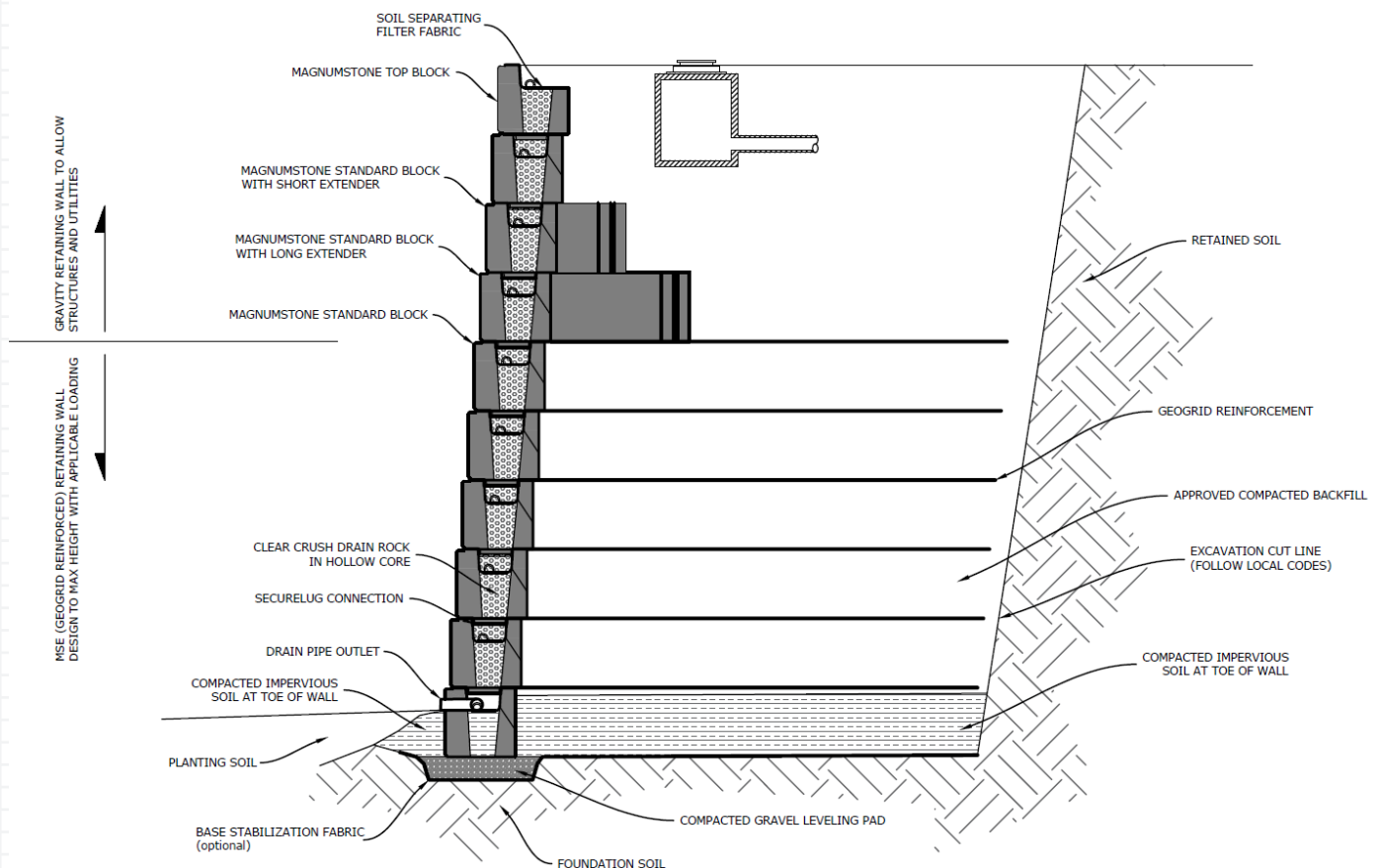
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HYBRID WALLS

Both MagnumStone MSE Walls and MagnumStone Gravity Walls have benefits for the client. Walls built with MSE technology are especially cost-effective and can take significant loads. In some situations, they can utilise site won fill. The geogrid reinforced zone can restrict site development in some applications with typical geogrid lengths extending 0.7 – 1.2 times the wall height. The MagnumStone Gravity Wall system overcomes this issue with a typical base-to-height ratio sitting between 0.4 and 0.6 times the wall height and tapering back to 0.6m in the upper wall sections.

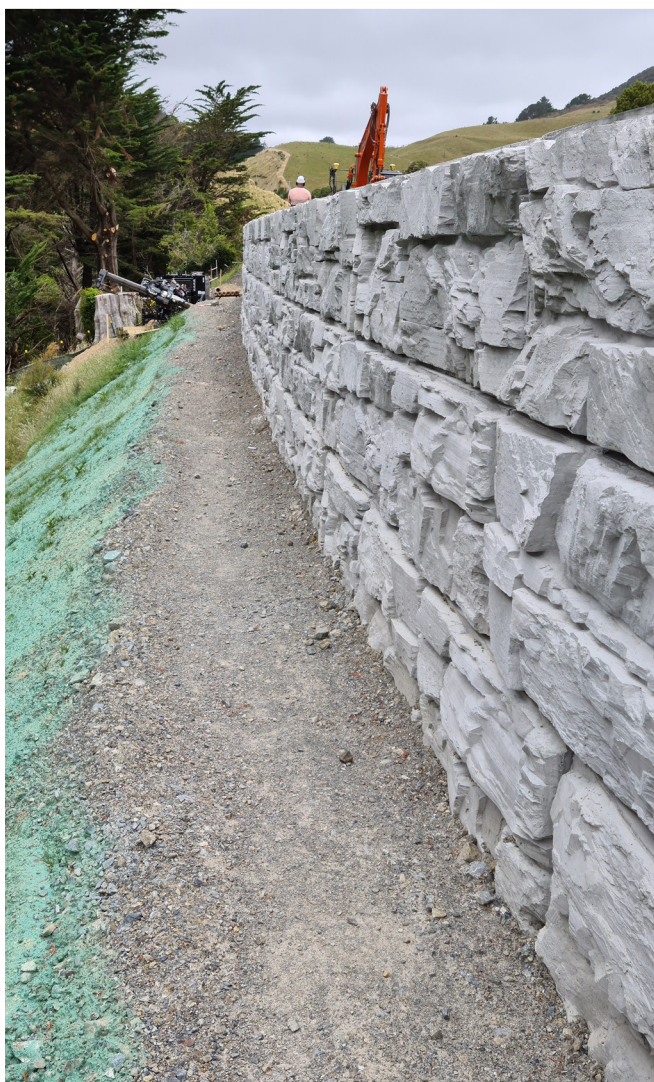
At Cirtex, we can assist with evaluating your site and optimising the wall system. In some cases, this will be a hybrid solution utilising MSE technology for the lower part of the wall, and a gravity structure for the upper layers to keep any geosynthetic reinforcement well below ground level. This solution can give you the best of both options when used as part of an optimised solution, allowing for services etc to be placed close to the back of the wall in the upper zone of the wall. Speak to your Cirtex representative about your site requirements.



TOP OF WALL DETAILING

The unique design of the MagnumStone block allows for clean and professional detailing at the top of the wall. Fence posts can either be set into the hollow core and concreted directly into the block or bolted to a concrete filled core. Both options allow for maximum land use by placing the fence close to the crest of the wall. Another option is the MagnumStone top block with the rear lip removed, allowing landscaping to come close to the wall face. Stormwater details such as swale and surface drains can simply be detailed into the top of the wall to ensure water doesn't penetrate the retained zone. Traffic barriers can be designed to sit on top of the wall, or fixed into the wall, depending on the design code requirements. Speak to Cirtex about our comprehensive range of typical details in PDF and CAD formats.





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COMMON APPLICATIONS

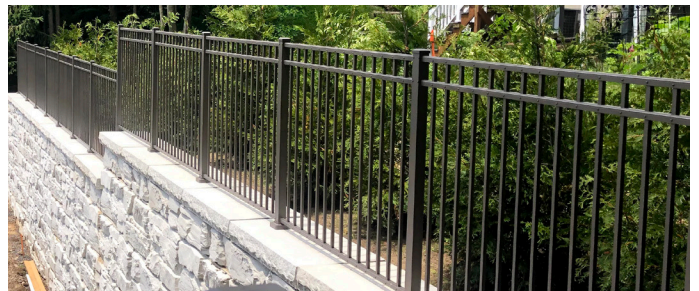
GARDEN STEPS

Use the MagnumStone system to integrate matching steps into your landscaping. With a combination of full blocks, half blocks and cap stones you can make an attractive matching stairway in almost any configuration. Combine with a sweeping curved MagnumStone corner for maximum effect.



FENCES AND BARRIERS

Fences and barriers are often needed to maximise the usable land created from the new retaining wall. The hollow core of the MagnumStone block and the stepped detail of the top block allow for seamless and attractive integration between the fencing and the wall, either with posts fixed directly into the core, or bolted to a capping beam.



TERRACES WITH PLANTERS

The MagnumStone retaining wall provides a large vertical and horizontal hollow core. The large, lightweight units allow wall designers the flexibility of creating many solutions without environmentally costly side-effects. The hollow core provides a plantable pocket within the retaining wall system.



WATER APPLICATIONS

The hollow core of the MagnumStone block provides an effective drainage system to relieve pore water pressure within the retained soil. In addition, the robust concrete facing system is ideally suited for water applications which require extended lifespans.



DESIGN SOFTWARE

The MagnumStone Wall Designer program is designed with the engineer in mind. It includes multiple methodologies, MagnumStone gravity systems, geogrid friction, and positive reinforcement options for the designer to choose from. Select and edit soil information, input loads and slopes above and below the retaining wall.



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UNIT SPECIFICATIONS



STANDARD
630kgs



STANDARD BASE
625kgs

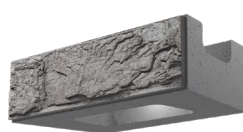


STANDARD TOP
570kgs

HEIGHT	610mm
DEPTH	610mm
FACE WIDTH	1220mm
BACK WIDTH	991mm
FACE AREA	0.745m ²
SETBACK	2.4°



HALF HIGH
320kgs

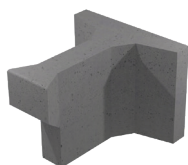


HALF HIGH BASE
310kgs



HALF HIGH TOP
295kgs

HEIGHT	305mm
DEPTH	610mm
FACE WIDTH	1220mm
BACK WIDTH	991mm
FACE AREA	0.37m ²
SETBACK	2.4°



SMALL EXTENDER
290kgs

HEIGHT	610mm
DEPTH	610mm
BACK WIDTH	762mm



LARGE EXTENDER
435kgs

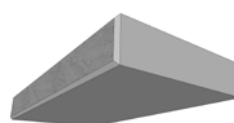
HEIGHT	610mm
DEPTH	1220mm
BACK WIDTH	762mm



CORNER/END
156kgs



HALF HIGH CORNER/END
70kgs



STEP/CAP
290kgs

HEIGHT	610mm
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HEIGHT	305mm
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HEIGHT	152mm
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DEPTH	610mm
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WIDTH	1220mm
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Dimensions and weights may vary

FULL SPECIFICATIONS

A full list of specifications
can be found on:
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DISCLAIMER

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