

## Redi-Rock modular wall system

- retaining walls
- freestanding walls
- flood protection
- water applications
- landscaping
- hostile vehicle protection



## The CPM Group

CPM is a precast concrete business with a difference. Innovation and diversification is the key to our success.

We are a market-leading manufacturer of concrete products with extensive production facilities in Somerset, Staffordshire, Yorkshire and Scotland. This, combined with a network of specialist distributors, enables us to provide our customers with complete UK coverage.

Our business is built on a solid reputation for delivering quality products and providing a first class service. We supply a vast range of sustainable precast products to every sector of the construction industry, fully supported by our experienced technical and engineering teams.

## The Redi-Rock™ modular wall system

The Redi-Rock™ modular wall system is an ingenious, space saving solution for the retention of earth, and for a wide range of retaining, force protection, landscaping and flood protection applications. This 'big block system' has the appearance of stone and is versatile enough to achieve height without compromising strength. Each one tonne block interlocks with the next and is dry laid, resulting in extremely fast installation times and cost savings. Redi-Rock™ is partially manufactured from recycled materials to provide a sustainable solution for a wide range of landscaping applications. We offer a full design and installation service if required.

## Off-site solutions

In line with our continuing process of innovation and product development, CPM can now offer a diverse range of off-site solutions. The construction industry's demand for fast, efficient, modular systems has been met with a range of services to provide products which are designed, engineered and manufactured off-site under factory conditions. This results in minimal site installation costs as products are pre-fabricated and assembled to meet construction schedules.

## Concrete for life

Concrete is a highly durable and versatile material which can be used to manufacture a wide range of precast products. All CPM products are designed to last for a minimum of 120 years and provide trouble - free operation in any conditions.

## Sustaining the environment

As a leading manufacturer of precast concrete products, we recognise that our activities inevitably impact on the environment. Our aim is to minimise any adverse effects as a result of our manufacturing.

The importance of safe, effective and efficient precast concrete solutions have been recognised for over 100 years. However we are seeking not only to maintain these standards but also to embody environmental principles of sustainability. In using concrete as our core material we are confident that the most environmentally sound material is being used.

In producing this policy, the CPM Group wishes to demonstrate its commitment towards safeguarding the environment.

## Commitments and objectives

- To comply with all existing environmental legislation as a minimum level of performance.
- To develop and maintain an effective environmental management system.
- To continually strive to improve the environmental impact of the company's activities and prevent pollution.
- To use the most environmentally sound materials.
- To develop products to improve the environment.
- To educate and train employees in environmental issues and the environmental effects of their activities.
- To encourage recycling wherever practical.
- To make waste reduction part of the management process.
- To regularly review the overall environmental performance of the company.

# Contents

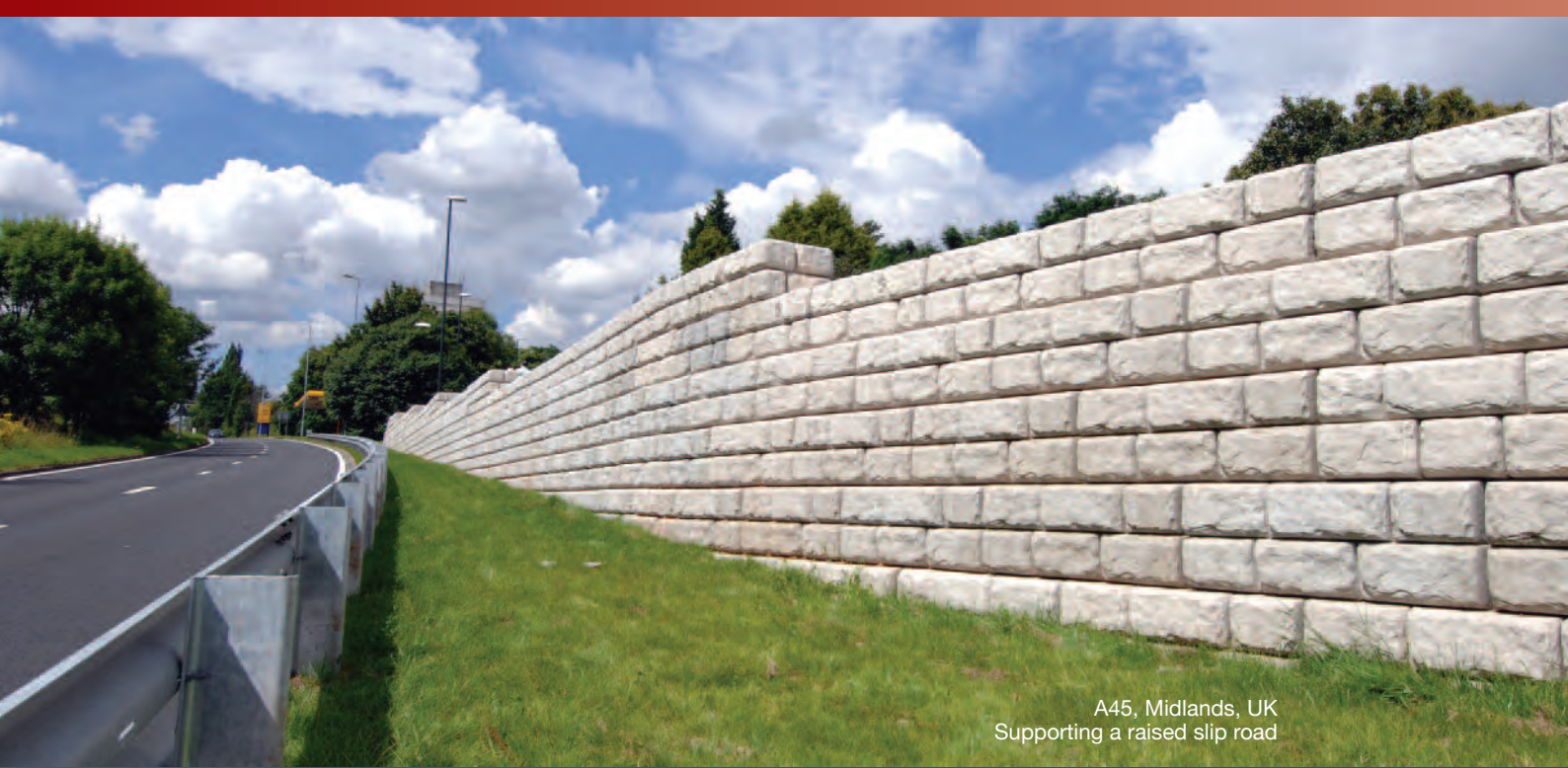
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• The CPM Group	Page 1
• Contents	Page 2
• Retaining walls	Page 3 - 10
• Free standing walls	Page 11 - 18
• Water applications	Page 19 - 20
• Hostile vehicle protection	Page 21 - 22





## Redi-Rock by cpm - retaining wall series



A45, Midlands, UK  
Supporting a raised slip road

### The low project cost - high quality solution

Engineered solutions with the look of natural stone much more than a retaining wall.

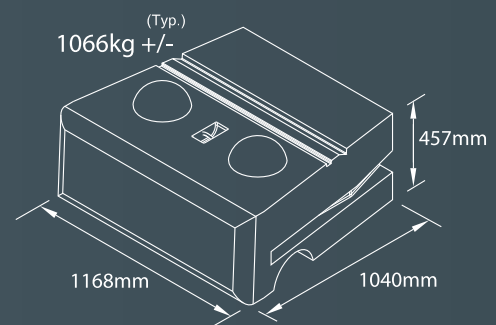
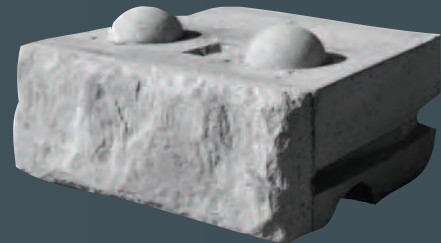
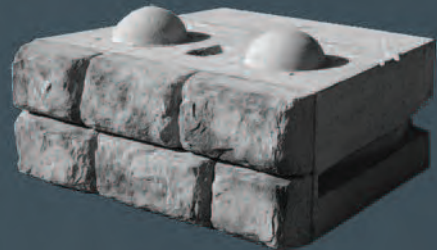
These massive 1 tonne interlocking concrete blocks are moulded from solid concrete and delivered ready to build.

As they are dry laid, it is a quick job building a wall, like giant concrete Lego™.

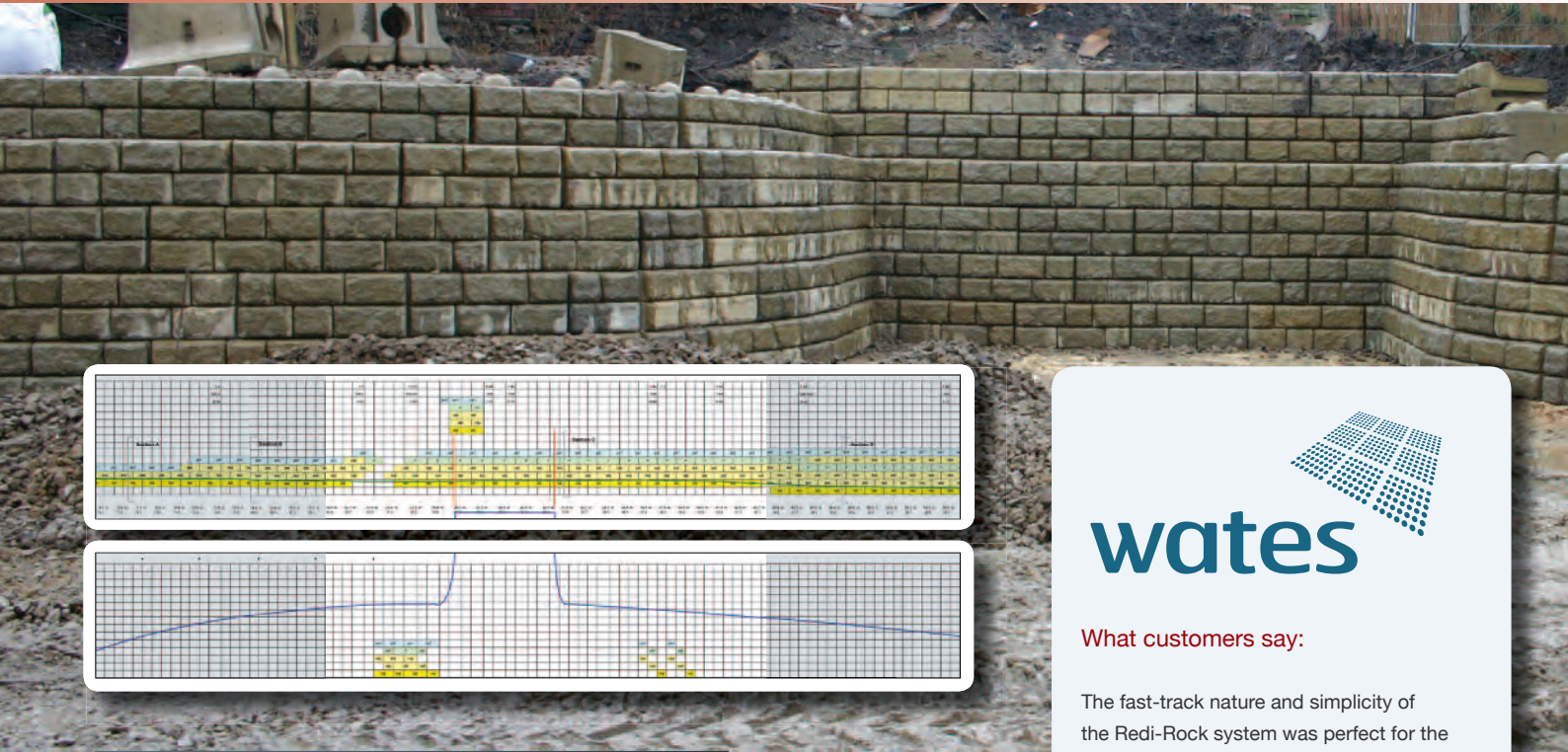
The blocks are versatile enough to achieve height without compromising strength, with fully engineered plans pre-drawn for different heights and ground conditions.

This system has many advantages over alternative retaining wall systems, not least substantial cost savings and faster build times.

CPM can work with you to provide a fully designed and engineered solution to any project requirement, from planning to installation - including provision of modified solutions for security or flood defence requirements.



# A complete solution from planning to installation



## What customers say:

The fast-track nature and simplicity of the Redi-Rock system was perfect for the programme requirements at Primrose Hill, its innovative assembly and design enabled quick and safe installation.

Due to the surrounding Yorkshire Black Stone cladding on neighbouring properties Redi-Rock were tasked with matching the natural colour of the above stone and it was done with surprising ease and effectiveness, also to everyone's satisfaction, including the local planning office.

The Redi-Rock system also benefited the client as it was **a third cheaper** than the proposed traditional design and the programme for the works was **nearly halved** due to its simple installation.

All in all an excellent product that ticks all the boxes and we as a company would not think twice in procuring this system again as both **a time and cost saving solution to retaining structures**.

Gareth Hill, Project Surveyor, Wates

CPM Group is here to help, at every stage of the process.

The Redi-Rock by CPM modular wall system is a complete solution

We offer extensive engineering, design and installation support which includes:

Extensive range of engineered design charts, calculations and Auto-Cad drawings

Full construction details

- Project scheduling and management
- Full bespoke engineering service for unusual and problem situations
- Manufacturing
- Installation
- Quality control at every stage

Get in touch for a chat with our team to see if Redi-Rock blocks are the solution for your project:

Tel: 01179 812791

Email: [redirock@cpm-group.com](mailto:redirock@cpm-group.com)

Web: [www.redirock.net](http://www.redirock.net)



## Redi-Rock walls - key benefits

### Key Benefits of Redi-Rock Retaining Wall Series

- Fast and easy to install - up to 10 times the speed of traditional walls
- Space saving designs. Geogrid is rarely needed meaning walls take up less space
- Blocks delivered ready to build
- The interlocking blocks do not need cement, so can be laid in any weather
- Aesthetically pleasing, with the look of natural stone
- Can be coloured at source or on-site to match different local environments
- Minimal maintenance required
- Engineered strength, achieving height without geogrid
- Security / force protection / flood protection systems available
- Can be used seamlessly with Redi-Rock freestanding walls
- Full design and installation support offered as part of the package
- Risk reduced, as number of people and time on site reduced
- If plans change, just pick up and build in a new location - the ultimate sustainable solution

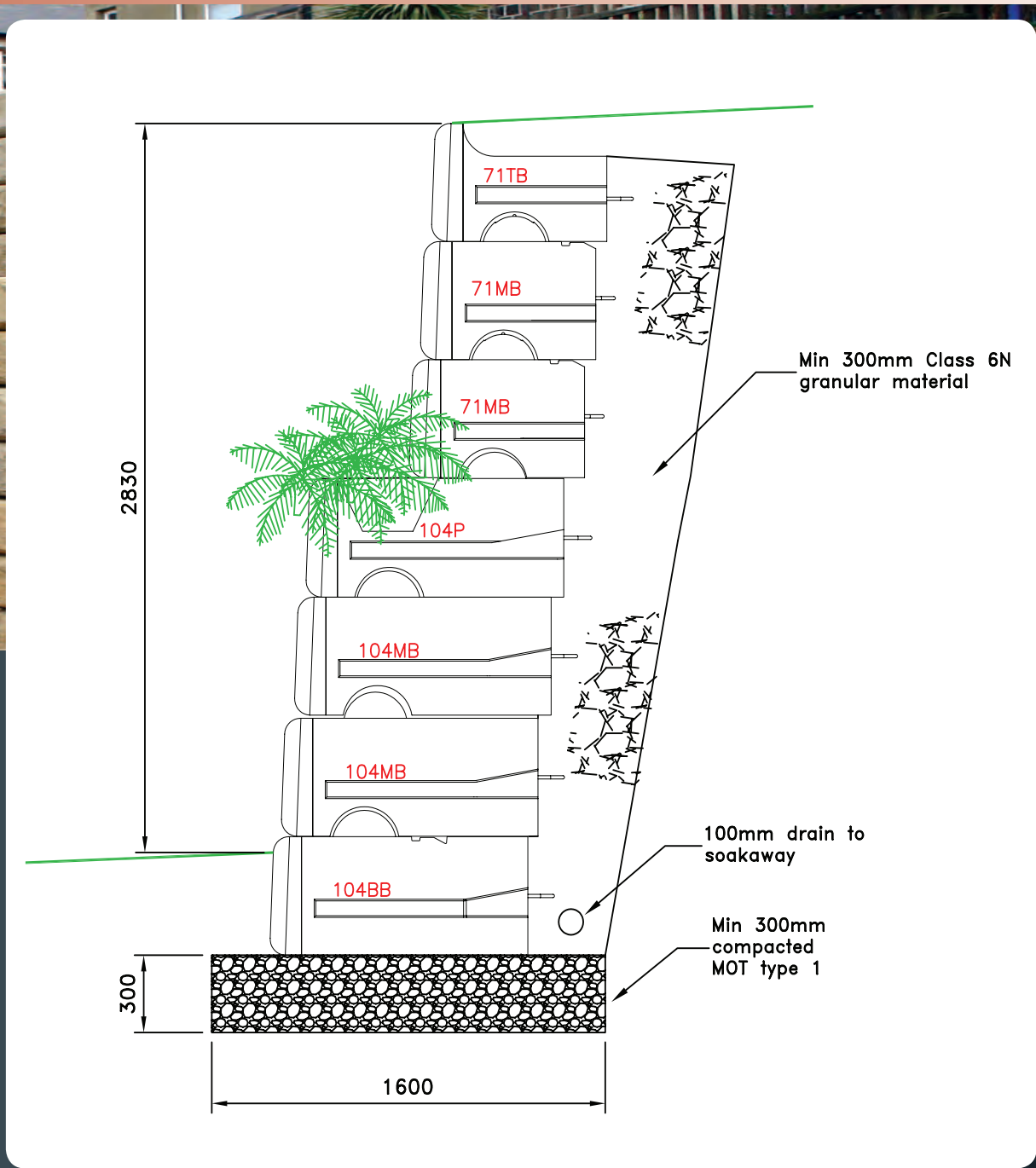



Huddersfield, UK  
Wall just 6m from protected houses



Redi-Rock dome and groove joint

# A typical section



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Approved by		Drawing file: typicalsection.dwg	Revision 1
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# Cpm Redi-Rock retaining walls - applications

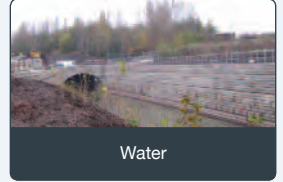


Redi-Rock provides space saving, with a light and airy feel



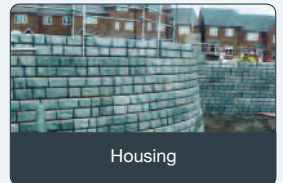
9mt tall wall protecting against rock fall - coloured to match local stone

## Applications



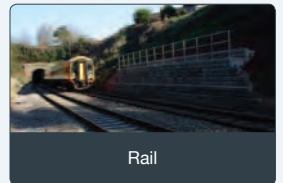
Water

Dry laid 100 per cent concrete with no steel reinforcement, ideal in a wide range of water, shoreline and flood zone applications.



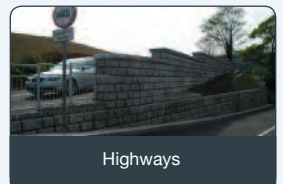
Housing

Save money and utilize more land, whilst the blocks provide an attractive finish.



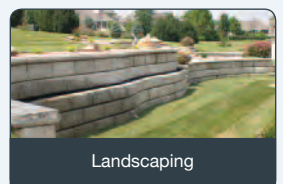
Rail

Less disruption to services through quick and economical installation, in any weather, makes this solution perfect.



Highways

Large cost savings are possible due to the quick installation and less land take required.

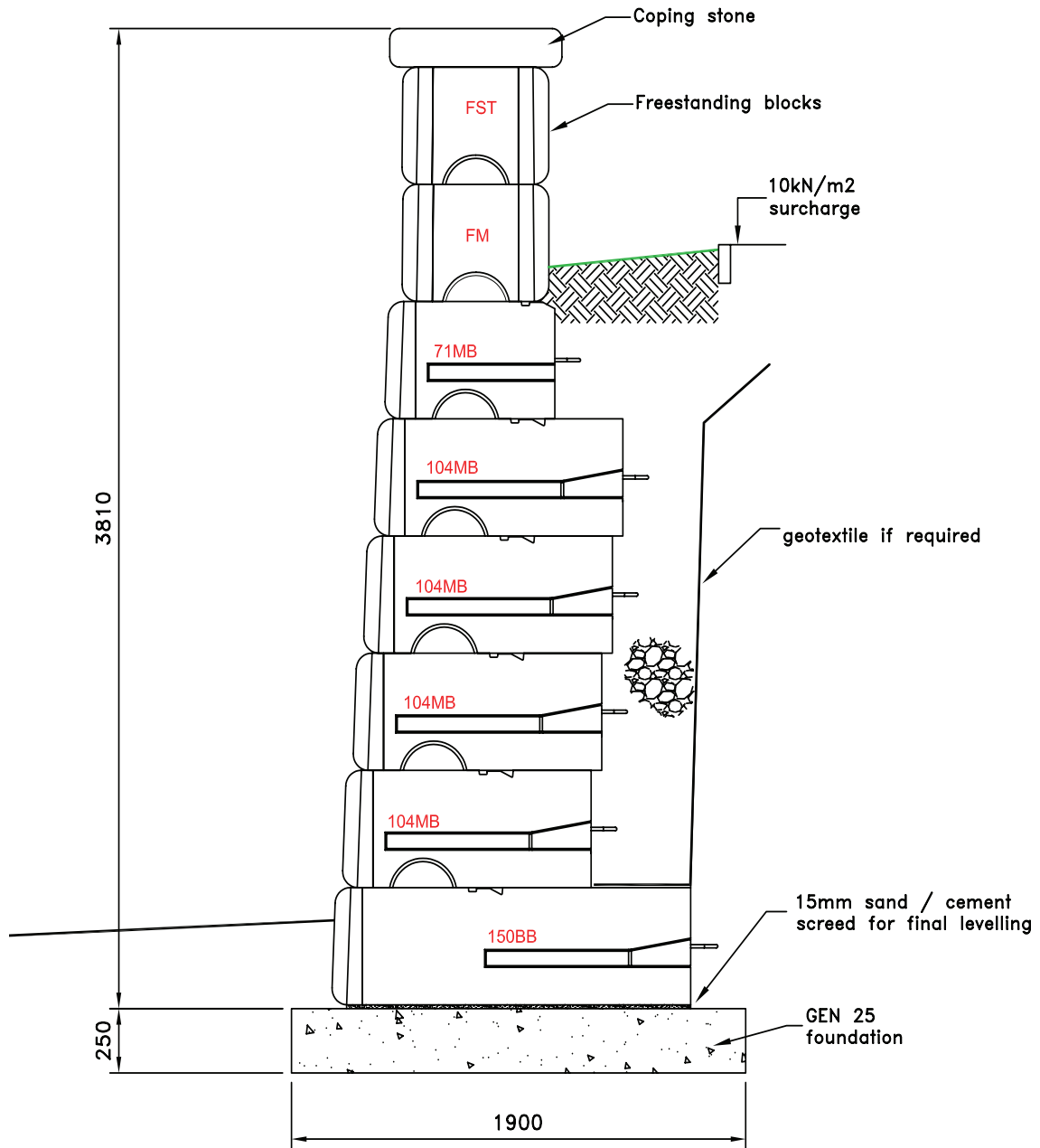


Landscaping

Planters and sophisticated curves make this the most attractive retaining wall system available.



# A typical section incorporating retaining and freestanding blocks



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## Photos - retaining series blocks

### Limestone

Top



Middle



Bottom



### Cobblestone

Top



Middle



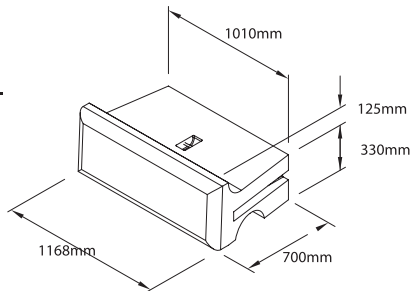
Bottom



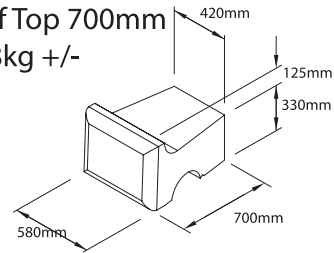


# Dimensions and weights - retaining series blocks

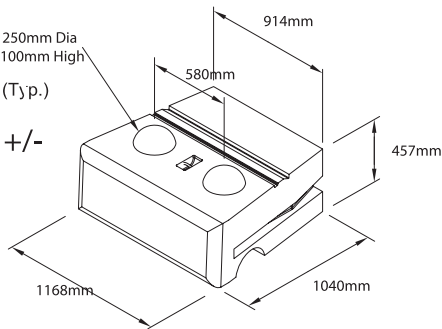
**Top**  
555kg +/-



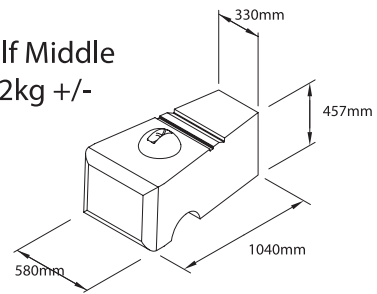
**Half Top 700mm**  
268kg +/-



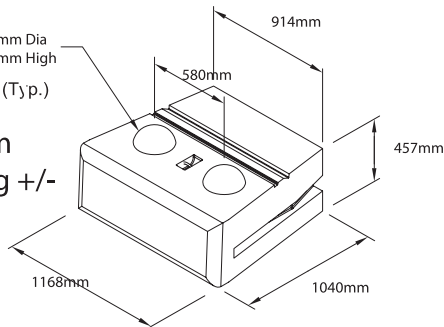
**Middle**  
1066kg +/-



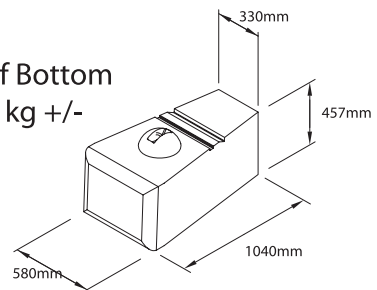
**Half Middle**  
472kg +/-



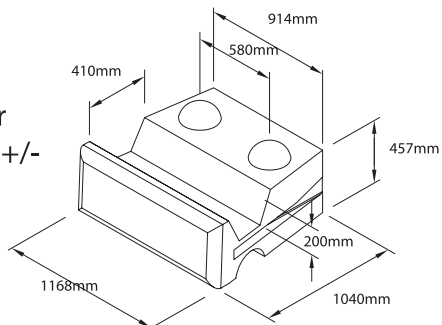
**Bottom**  
1126kg +/-



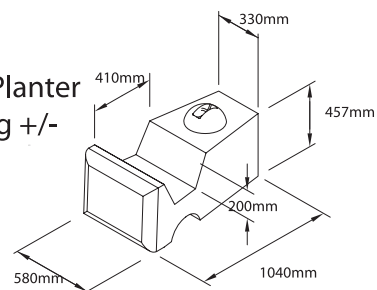
**Half Bottom**  
501kg +/-




**Planter**  
916kg +/-



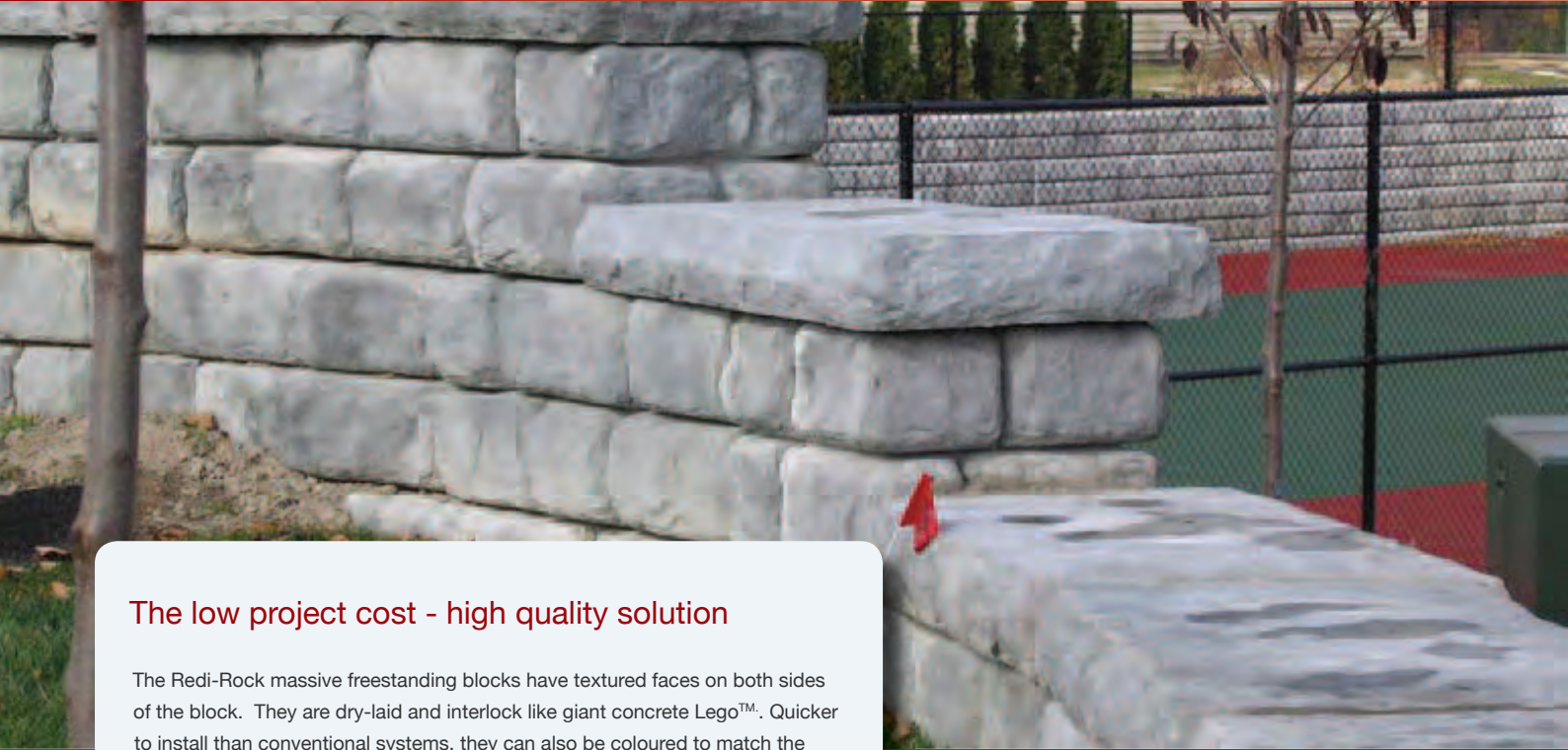
**Half Planter**  
404kg +/-



**Notes:**  
Actual weights and volumes may vary  
710mm deep blocks are also available

Drawn by			Cpm Group Ltd - Technical Offices Tel: 01902 356220 Fax: 01902 356221 www.cpm-group.com
Checked by			Drawing file: 1040 SeriesBlocks.dwg
Approved by		Scale: No Scale	Sheet No. 1 of 1
Issue date			

## Redi-Rock freestanding wall series



### The low project cost - high quality solution

The Redi-Rock massive freestanding blocks have textured faces on both sides of the block. They are dry-laid and interlock like giant concrete Lego™. Quicker to install than conventional systems, they can also be coloured to match the local environment. If project plans change, just dismantle to use again!

Besides looking great, these freestanding walls serve as guardrails or barrier walls to protect areas from errant traffic or other threats, and can be modified with cables or rods for additional force protection as well as with a waterproof membrane for emergency or long term flood protection.

CPM has the resource to make designing your freestanding wall easy. We offer a full design service and installation, or we can supervise / advise when you need us to answer specific questions about your project.

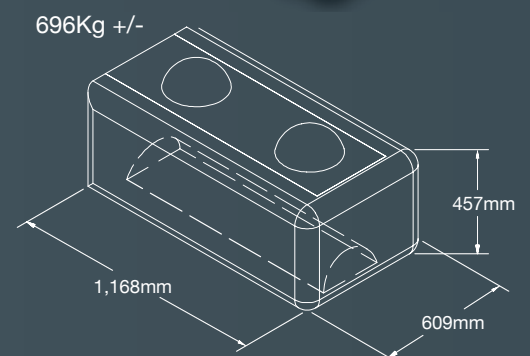
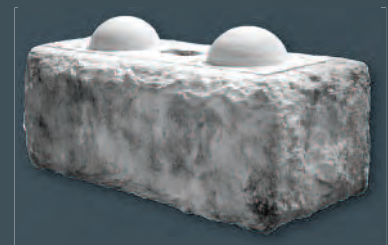
Redi-Rock freestanding walls are ideal to stand alone or integrate with a Redi-Rock retaining wall.

Get in touch for a chat with our team to see if Redi-Rock blocks are the solution for your project:

Tel: 01179 812791

Email: [redirock@cpm-group.com](mailto:redirock@cpm-group.com)

Web: [www.redirock.net](http://www.redirock.net)





## Redi-Rock freestanding walls - key benefits

### Key benefits of Redi-Rock freestanding wall series

- Fast and easy to install - up to 10 times the speed of traditional walls
- Blocks delivered ready to build
- The interlocking blocks need no cement, so can be laid in any weather
- Aesthetically pleasing, with the look of natural stone
- Can be coloured at source or on-site to match different local environments
- Minimal maintenance required
- Engineered strength, allowing walls of up to 2m high without design
- Security / force protection / flood protection systems available
- Can be used seamlessly with Redi-Rock retaining walls
- Full design and installation support offered as part of the package.
- If plans change, just pick up and build in a new location!



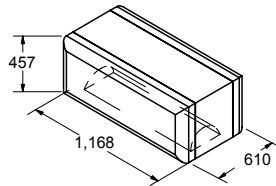
**REDI+ROCK**

MODULAR WALL SYSTEM

# Cpm 2 sided freestanding blocks

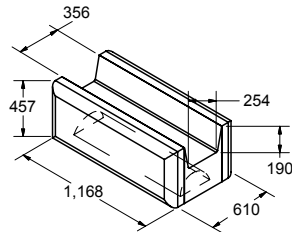
## Straight

**Full**  
0.296 m<sup>3</sup>  
679 Kg +/-



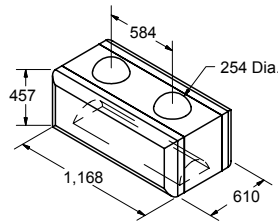
**Half**  
0.148 m<sup>3</sup>  
339 Kg +/-

**Full**  
0.198 m<sup>3</sup>  
518 kg +/-



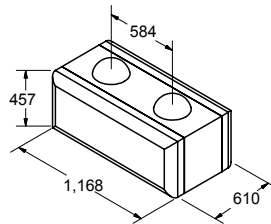
**Half**  
0.112 m<sup>3</sup>  
257 kg +/-

**Full**  
0.302 m<sup>3</sup>  
693 kg +/-



**Half**  
0.151 m<sup>3</sup>  
346 Kg +/-

**Full**  
0.326 m<sup>3</sup>  
703 kg +/-

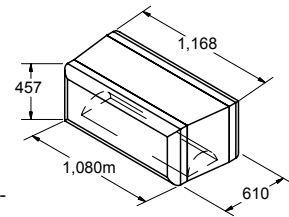


**Half**  
0.163 m<sup>3</sup>  
372 kg +/-

## Curved

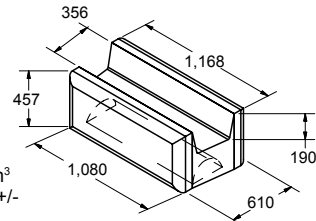
### Top - Smooth or Textured

0.284 m<sup>3</sup>  
651 kg +/-



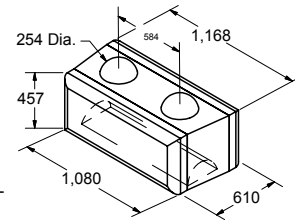
### Top - Garden

0.217 m<sup>3</sup>  
496 kg +/-



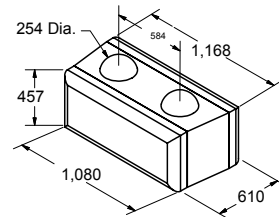
### Middle

0.290 m<sup>3</sup>  
665 kg +/-



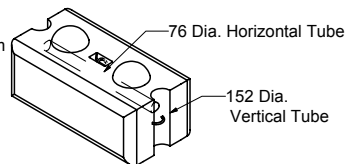
### Bottom

0.314 m<sup>3</sup>  
720 kg +/-



### Force Protection

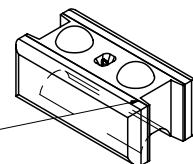
All block styles are available with 75mm Horizontal Tube (for post tension cable) and/or 150mm Vertical Tubes (for mechanical tie-down bolts) to allow the blocks to be used in a Force Protection application.



(Straight full bottom block shown)

### Variable Radius Walls

All straight block styles are available with the end block insert to allow the blocks to be used in variable radius walls.



Field saw blocks on ends as needed to provide variable radius walls

(Straight full middle block shown)

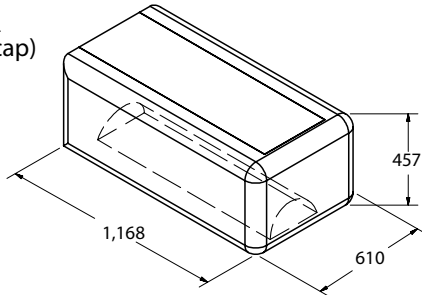
Drawn by	12/28/08		Cpm Group Ltd - Technical Offices Tel: 01902 356220 Fax: 01902 356221 www.cpm-group.com
Checked by			
Approved by		Drawing file: freestanding.dwg	Revision 1
Issue date		Scale: No Scale	Sheet No. 1 of 1



# Freestanding corner blocks - finished on 3 sides

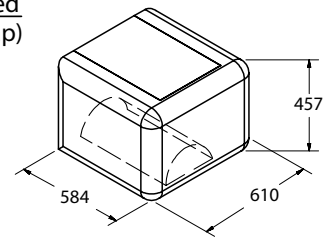
## Corner

Top - Textured  
(or smooth for cap)  
0.295 m<sup>3</sup>  
677 Kg +/-

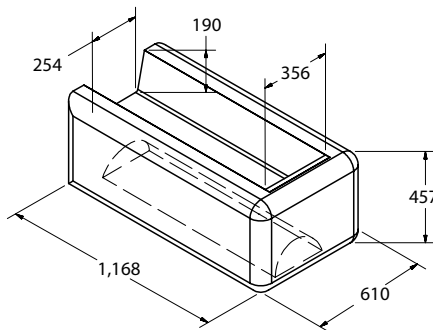


## Half Corner

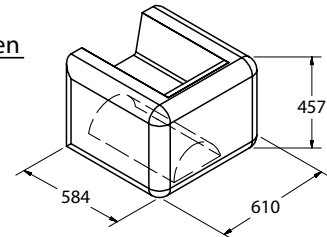
Top Half - Textured  
(or smooth for cap)  
0.146 m<sup>3</sup>  
336 Kg +/-



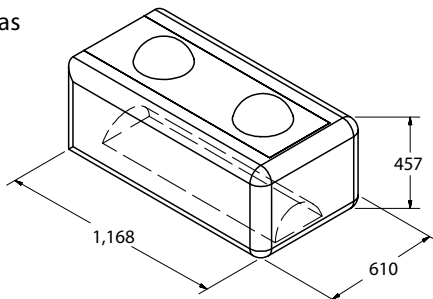
Top - Garden  
0.233 m<sup>3</sup>  
536 Kg +/-



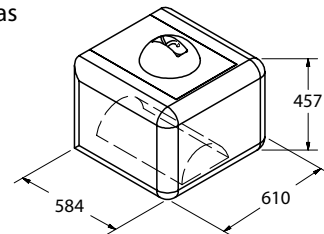
Top Half - Garden  
0.120 m<sup>3</sup>  
275 Kg +/-



Middle  
(note: use also as  
bottom)  
0.304 m<sup>3</sup>  
696 Kg +/-



Middle Half  
(note: use also as  
bottom)  
0.149 m<sup>3</sup>  
342 Kg +/-



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## Inspirational ideas for your projects



**REDI-ROCK**

MODULAR WALL SYSTEM



## Endless possibilities with the cpm Redi-Rock system



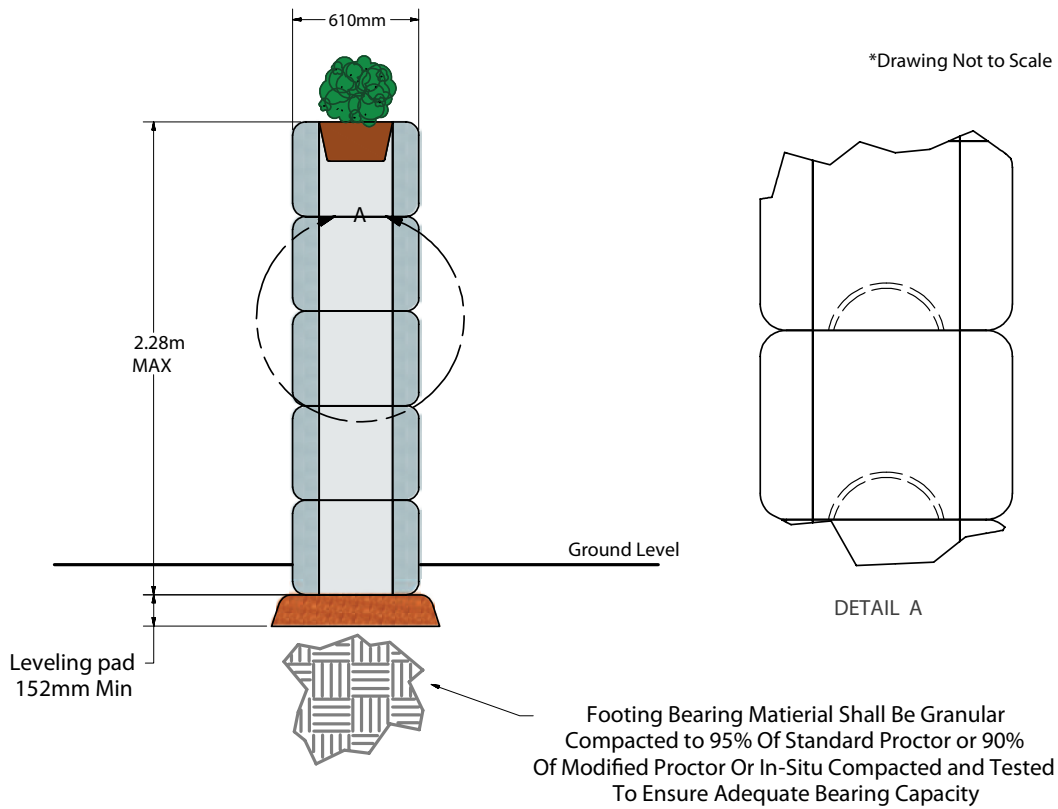


## Cpm Redi-Rock freestanding perimeter walls

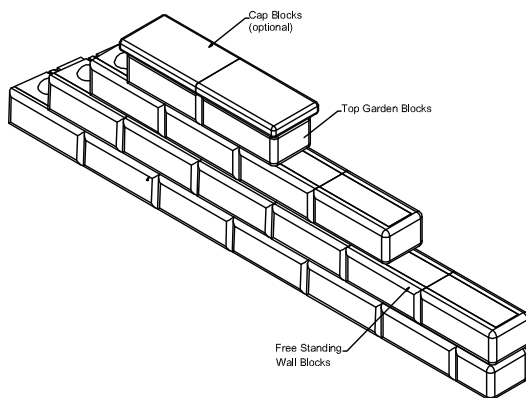




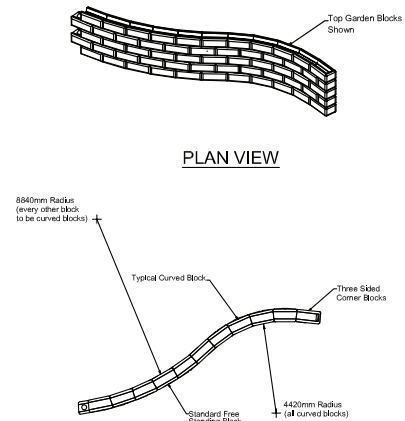
# Perimeter freestanding wall detail



## FREE STANDING WALL BLOCKS



## CURVED FREE STANDING WALL



## Water applications - protecting the environment

To answer the national challenge of rising water levels, CPM Group Ltd, offers a range of flexible low cost, high quality solutions based on their innovative Redi-Rock interlocking modular wall system.

Concrete has a proven track record of performance in water applications, and the blocks are 100 per cent concrete and not steel-reinforced. As the blocks are dry laid, they can be easily moved should the situation on the ground change.

Whether looking to heighten river banks, build new sea walls or construct flood plane defences, Redi-Rock offers considerable benefits over alternative solutions, not least an aesthetically pleasing finish that blends perfectly into the local environments.

### CPM system advantages:

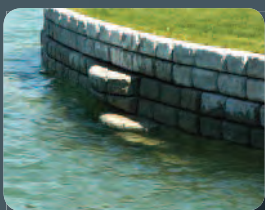
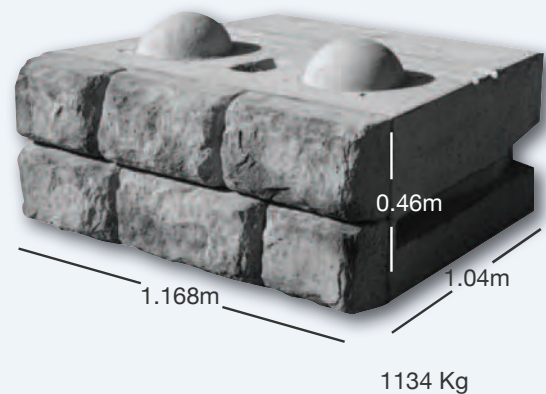
- Quick and economical installation, up to 10x faster than traditional walling
- Overall cost savings on projects typically more than 30% compared to alternatives  
In fact, many projects have achieved even greater savings when taking into account massive labour savings, less land take and faster installation
- Dry laid with no cement, formwork or shuttering and minimal foundations
- Can be installed in any weather or into water
- Minimal delays to work and schedules
- No maintenance
- Natural stone appearance to blend into or complement local landscapes

### CPM specialist water applications include:

- River bank walls
- Flood storage planes
- Sea defence walls
- Inland flood defences for buildings
- Bridge abutments and wing walls

Massive engineered blocks provide strength without geogrid

Permanent or temporary



Jutting breaker blocks added to slow down current and prevent eddies forming



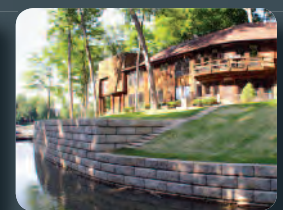
Easy and quick assembly like giant Lego™ with only 2-3 men required to fit blocks



Harbour entrance



Erosion control of an underground stream. Listed building saved, wall took 3 men 17 days.



A attractive solution to protect at risk homes in flood areas.



# Redi-Rock is the perfect solution in water applications



Engineered with toe-in to minimise erosion of the bank



Attractive culverts can be achieved



Perfect for large flood storage plains



Complete high flood control for when waters rise.  
Optional stepped design increase water capacity and reduces pressure on banks



Homes protected from flooding in Tregaron - South Wales.  
Environment Agency specified



Wavewall on Yorkshire Water reservoir



Watercourse diversion



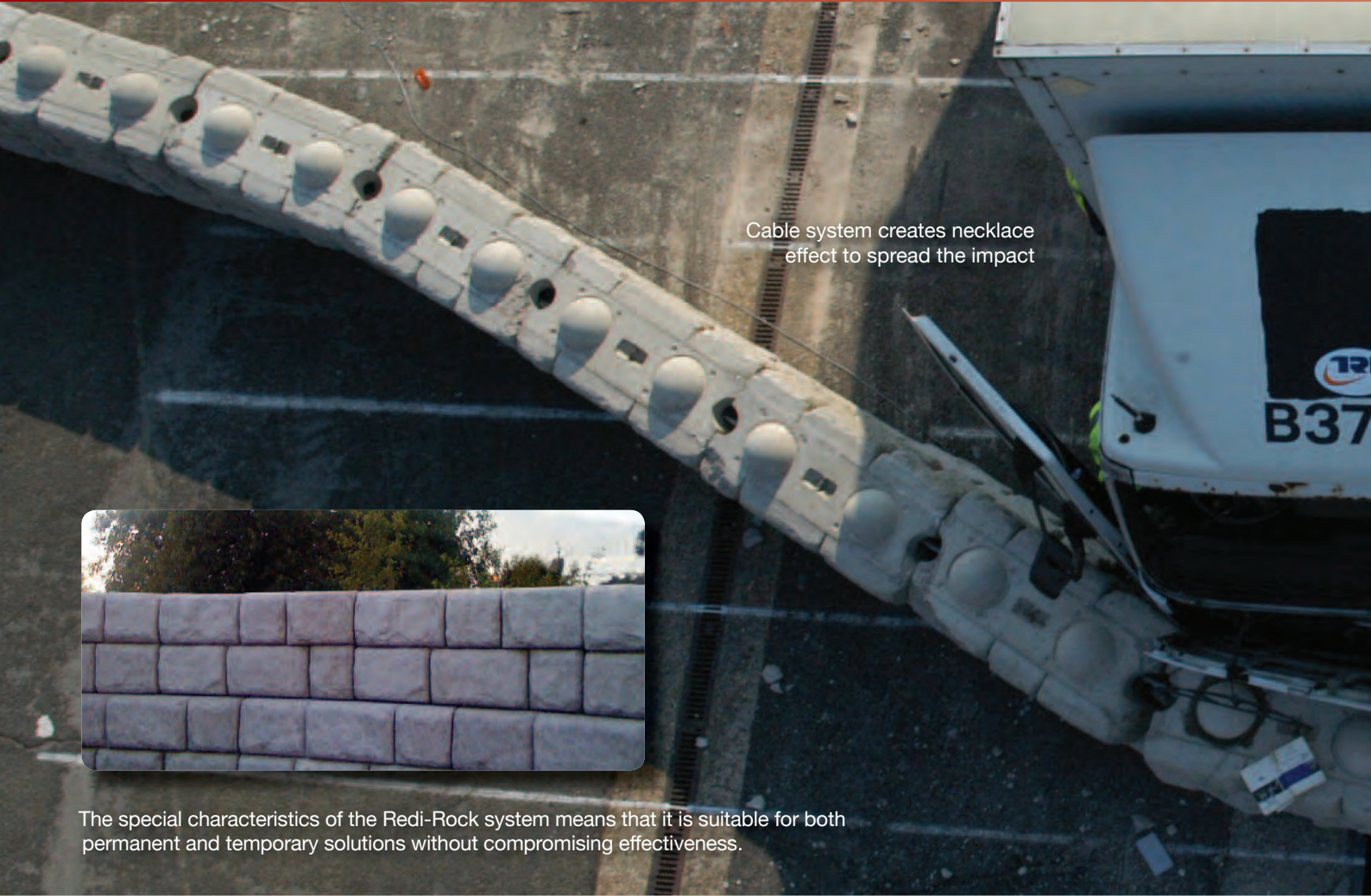
Riverbank reinstatement

**REDI+ROCK**

MODULAR WALL SYSTEM



## Cpm hostile vehicle protection system



Cable system creates necklace effect to spread the impact

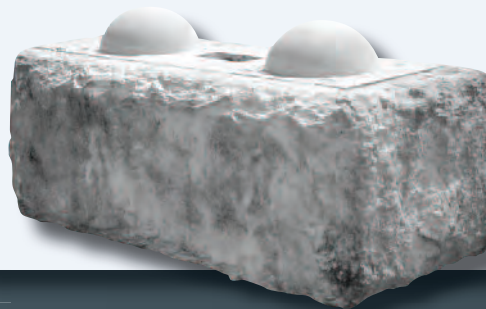


The special characteristics of the Redi-Rock system means that it is suitable for both permanent and temporary solutions without compromising effectiveness.

**The fast, effective, Re-usable solution to perimeter hostile vehicle attack.**

**Ideal for:**

- Airports
- Train stations
- Military facilities
- Utility and critical infrastructure



Attractive face has the appearance of natural stone. Limestone finish is also available.

The Redi-Rock Force Protection system has successfully been tested by the Transport Research Laboratory (TRL) to the test standard PAS 68:2007 type 7500-48.

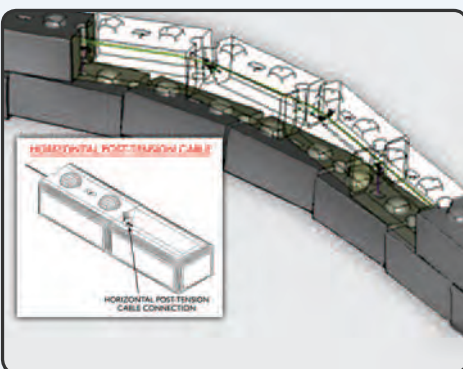
To achieve this the freestanding concrete blocks systems interconnected with steel cable successfully arrested a 7.5 tonne lorry at an impact speed of 48 kmph (30mph) with only 1.6m penetration of the load carrying space.



# The security barrier system that protects from vehicle impact



The neckless effect means the blocks slide to absorb impact  
Result: Only 1.6m penetration of the load carrying space



## System advantages:

- Fast to install Lego™ like system (30m can be laid in circa 1.5 hours by 2-3 men)
- Removable / Relocatable
- No ground anchor - uses its own weight.
- Integral cable dissipates kinetic energy
- Proven to stop a 7.5 Tonne truck at 48 kmph (30mph)
- Aesthetically pleasing, with the look of natural stone
- Can be coloured to blend with local environment

All block styles are available with 75mm Horizontal Tube (for post tension cable) and/or 150mm Vertical Tubes (for mechanical tie-down bolts) to allow the blocks to be used in a Force Protection application.



(Straight full bottom block shown)



703kg freestanding blocks can be deployed, or picked up and moved very quickly, with no ground work required



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