

# CIVIL PRODUCTS

## SPECIFIERS GUIDE



## Anderton

CONCRETE PRODUCTS LTD

A: Anderton Wharf  
Units 1 & 2  
Cosgrove Business Park  
Soot Hill  
Anderton  
Northwich  
Cheshire CW9 6AA

T: 01606 79436  
F: 01606 871590  
T: 01606 535300 Civils  
F: 01606 75905 Civils

E: [sales@andertonconcrete.co.uk](mailto:sales@andertonconcrete.co.uk)  
E: [civils@andertonconcrete.co.uk](mailto:civils@andertonconcrete.co.uk)  
W: [www.andertonconcrete.co.uk](http://www.andertonconcrete.co.uk)

**Anderton**  
CONCRETE PRODUCTS LTD

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#### Anderton Concrete Products Ltd Mission Statement

- Exceeding customer expectations by always being first to market with the best products.
- Partnering with our customers to make sure they succeed.
- Demanding that everything we do leads to a cleaner, healthier, safer environment.
- To promote good safe working practices within our industry.
- To raise the profile of concrete product manufacturing as a skilled industry.
- To liaise with the Health & Safety Executive and other bodies, including suppliers.
- Committed to ensuring customer satisfaction by continually improving performance in the development of products, quality, technique and service.
- To satisfy this commitment all employees must understand the importance and responsibilities of quality in their work, and utilise only those approved working practices which will assure the required quality standards are achieved.



Accredited to BSI QMS

- Keystone (EN 771-3)
- Slope-loc (EN 771-3)
- Stepoc (EN 15435)



## THE ENVIRONMENT

ANDERTON CONCRETE PRODUCTS LTD operates in an environmentally responsible manner. The resources and processes that we have put in place are focused on achieving industry best practice standards at all of our locations.



#### Environmental Management

Achieving our environmental policy objectives at all our locations is a management imperative; this responsibility continues right up to the Anderton Concrete Products Ltd Board level.

#### Our environmental policy, applied throughout the company, is to:

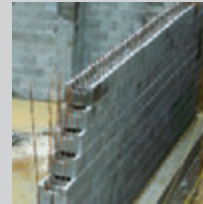
- Comply, at a minimum, with all applicable environmental legislation and continually improve our environmental stewardship towards industry best practice
- Ensure that our employees and contractors respect their environmental responsibilities
- Proactively address the challenges of climate change
- Optimise our use of energy and resources through efficiency gains and recycling
- Promote environmentally-driven product innovation and new business opportunities
- Be good neighbours in the many communities in which we operate.

Daily responsibility for ensuring that the Company's environmental policy is effectively implemented lies with individual location managers.

These personnel are charged with ensuring that company environmental policies are properly adhered to, and that site managers are fully aware of their responsibilities in this regard.

## OVERVIEW - RETAINING WALLS

There are more occasions in the construction market today where there is limited ground for development, and a retaining wall may be specified to extend the area of level ground available for building. Alternatively, walls may be simply required to create terraces and attractive landscaping, particularly on the more prestigious developments. Anderton Concrete offers a whole range of retaining wall and soil reinforcement solutions to cater for these requirements.



### STEPOC

*Manufactured to harmonised standard EN 15435*

#### **THE REAL ALTERNATIVE TO SHUTTERED CONCRETE**

A system of concrete shuttering blocks that are highly-engineered and dimensionally co-ordinated. Stepoc is designed to readily accept vertical and horizontal reinforcement for use where structural performance is the prime consideration and offering cost savings on both time and labour.

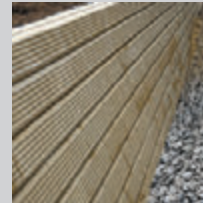


### KEYSTONE

*Manufactured to harmonised standard EN 771-3*

#### **REPLACES GABION, CRIB AND CAST-IN-SITU WALLS**

The number one retaining wall system on the market today; available in a range of finishes and colours providing practical solutions for low-level gravity walls through to tall structural walls in both the domestic and commercial markets.



### SLOPE-LOC

*Manufactured to harmonised standard EN 771-3*

#### **A STYLISH MODULAR HARD FACING TO SOIL SLOPES**

Slope-Loc provides either a simple solution for low level gravity walls in the domestic DIY sector or an engineered solution for taller walls where an alternative to vertical walls is preferred.



THE REAL  
ALTERNATIVE  
TO SHUTTERED  
CONCRETE.

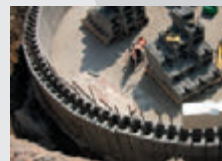
Stepoc's unique design enables reinforcement to be positioned in order to maximise the engineer's design.

Stepoc is filled with concrete, which is pumped down through the inter-connected cavities in the blocks. The blocks' unique design creates a cascade or waterfall effect which ensures a smooth filling of the pumped concrete, forcing out air and eliminating segregation, to create walls which have immense compressive and lateral strength. Stepoc walls have achieved the highest rating for a Security Barrier System under the SEAP (Security Equipment Assessment Panel) testing regime.

Stepoc enables the fast construction of single skin retaining walls up to 4.0 metres high, subject to a design carried out by a structural engineer. Stepoc can be filled in a single pour from 1.8 - 2.25m depending on block thickness. Stepoc is available in three widths, 200, 256 & 325mm and at less than 20kg per unit.



STEPOC in a basement level application



Wine Cellar using 256mm STEPOC

Stepoc is proven in use on applications the length and breadth of the UK and has the backing of an experienced team with a wealth of knowledge in the construction industry. Stepoc combines the ease of blockwork construction with the versatility of in-situ concrete, and yet is faster to apply than both, making it an ideal component for:

- Retaining walls
- Basement walls
- Flood Alleviation Schemes
- Swimming pools
- Laterally-loaded panels
- Blast panels
- Lift shafts
- Platform edges



**TYPE 200**



**L2**



**L3**



**L4**

- L2** - Full Length Standard
- L3** - Full Length Plain End
- L4** - Half Length Plain End

**TYPE 256**



**V2**



**V3**



**V5**



**V6**

- V2** - Full Length Standard
- V3** - Full Length Plain End
- V5** - Third Length Standard
- V6** - Third Length Plain End

**TYPE 325**



**Z2**



**Z3**



**Z4**

- Z2** - Full Length Standard
- Z3** - Full Length Plain End
- Z4** - Half Length Standard

• FIRE RESISTANT TO EUROCLASS A1.

TYPE	Unit	Length	Width	Height	Weight (kg)
200	L2	400	200	225	17.3
	L3	400	200	225	16.9
	L4	200	200	225	8.4

TYPE	Unit	Length	Width	Height	Weight (kg)
256	V2	400	256	225	19.7
	V3	400	256	225	19.9
	V5	133	256	225	7.5
	V6	133	256	225	7.6

TYPE	Unit	Length	Width	Height	Weight (kg)
325	Z2	325	325	225	19
	Z3	325	325	225	19.4
	Z4	162.5	325	225	9.8

# STEPOC



Flood Relief Scheme, Chelmer Village

## Pour Heights

There is a maximum height for each pour so that stability is not lost in the dry laid blocks as they are filled. Lower heights for each pour can also be used. The maximum heights are:

200 Stepoc - 8 Courses = 1.80m

256 Stepoc - 10 Courses = 2.25m

325 Stepoc - 10 Courses = 2.25m

If multiple concrete pours are required, the concrete of the previous pour should finish 50-75mm from the top of the course of Stepoc, with the vertical bars projecting the equivalent of a splice, length taken from the engineer's schedule. This is to ensure a proper key between consecutive pours.



STEPOC in a multi-storey development



Brick Clad STEPOC



STEPOC swimming pool walls

## Concrete Mix

The concrete should possess the characteristic strength specified by the structural engineer who has carried out the design of the wall, but not less than 35N/mm<sup>2</sup>

Block type	Concrete Infill
200mm	0.12m <sup>3</sup> per m <sup>2</sup>
256mm	0.15m <sup>3</sup> per m <sup>2</sup>
325mm	0.19m <sup>3</sup> per m <sup>2</sup>

The concrete should be designed to be suitable for the specific means of delivery, possessing a slump of no less than 150mm.

The maximum aggregate size should not exceed 10mm and the mix should contain no less than 300kg of cement per cubic metre of fresh concrete.

Filling is best accomplished by a concrete pump or skip with a 75mm nozzle, and the design of the concrete should take this into account. Mechanical vibration must not be used. The use of water reducing agents is acceptable to lower cement content in the mix design.



THE NUMBER  
ONE  
RETAINING  
WALL SYSTEM  
ON THE  
MARKET  
TODAY.

Keystone's ability to connect positively with proprietary geogrid systems has enabled it to be built to heights of over 15 metres worldwide – making it ideal for roadside and bridge locations and its simple, dry build construction enables it to handle the most challenging site design.

## KEYSTONE'S VERSATILITY IS IDEAL FOR:

- Retaining Walls
- Embankments
- Culverts
- Bridge Abutments
- Tunnel Entrances
- Access Ramps
- River Diversions / Flood Alleviation Schemes



Seafront, Southend-on-Sea



Passenger Access,  
Littleborough Station, Rochdale

## Aesthetic Impact

Keystone provides design flexibility to meet the unique challenges of modern commercial development projects; whether you are building tall retaining walls, short walls, using curves or corners, considering rapid changes in elevation detail or using Keystone with other specialist materials. This proven system enhances the architectural importance of any structure whether new-build or refurbishment.

A Keystone retaining wall offers a positive solution to the most challenging and demanding design and construction requirements.

This inner strength is complemented by the aesthetic impact of a system capable of combining classic lines, graceful curves, shadows and textures.

# KEYSTONE



Keystone block showing grid connection

Keystone is a system of modular retaining wall units that are manufactured from high strength, durable concrete which are laid dry and can be used in conjunction with a geogrid to provide tall walls or to accommodate high surcharges.

Alternatively, it can be used with or without a concrete backing to create a gravity wall.

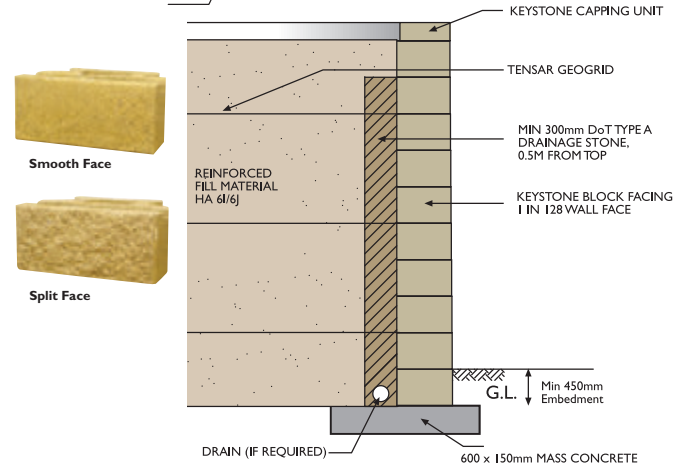
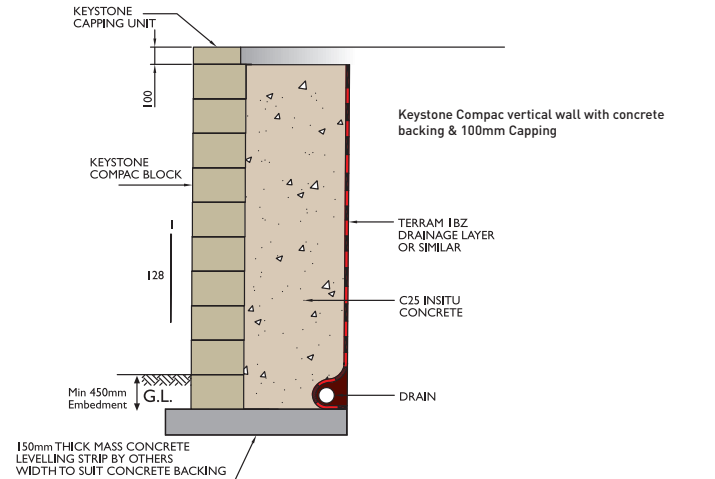
Keystone uses a unique high strength fixing system which securely locks the component parts in place. At the centre of the system is the patented blue comb connector that provides exceptionally high connection strengths. A combination of Keystone modular units,

positive pin connections and soil reinforcing geogrids delivers 'rock solid' stability and performance its enhanced connection between grid and block is critical to ensure economic designs.

## Design

Keystone is available on a design and supply basis. Our engineers have a wealth of knowledge and expertise in the field of Geotechnology. Wherever possible we aim to work with clients from the outset, in order to offer them the most cost-effective design solutions possible.

This system has the British Board of Agrément approval. This Certificate contains all respective design and construction information.



Keystone Compac with grid system retaining wall



# KEYSTONE

## EASY TO INSTALL

- **Interlocked, mortar-free assembly**  
No mortar required, thus allowing free flow drainage through the wall, releasing hydrostatic loads.
- **Patented fibreglass pin system**  
These ensure a proper alignment, unit interlock and the ability to create convex or concave curves.
- **Rapid installation**  
A walling system that allows for faster construction – no mortar, simple foundations and straight-forward build .



East London Line railway.

## Creating gravity or unreinforced walls up to 2m high

Keystone can be used to create gravity or unreinforced wall up to 2m in height. For most applications, no structural foundation is required and a simple levelling pad will suffice. Even in the case of unreinforced soil walls – only the base course of facing units require bedding on mortar.

## Creating reinforced soil walls

For taller and more critical walls, Keystone units are combined with soil reinforcement options to create larger composite structures. With this properly designed combination, the reinforced soil mass can support greater earth pressure and surcharge loads; and the pin/comb fixing concept allows geogrid material to be fully incorporated into the structure of the wall providing an exceptionally strong 'mechanical' link.

## ANCILLARY COMPONENTS

A choice of ancillary components are available to add the 'finishing touches' to walls and to solve on-site engineering problems.

## DESIGN SERVICE

We have many years of experience developing our Keystone products and are able to offer exceptional levels of design and service support. We have an experienced technical support team and a very comprehensive design support programme to assist you with your individual requirements.

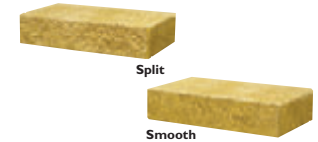
The Keystone system comprises of four units – **Compac, Corners, Caps and Slips**. These units provide the ability to vary height and the opportunity to further explore the variations created by light and shadow by introducing band courses.



COMPAC

Keystone Compac is the perfect choice for either gravity or reinforced walls. It is available with a split or smooth finish.

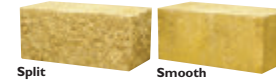
Size (L x W x H)  
455 x 300 x 200mm - 39.5kg  
Exposed face area 0.091m<sup>2</sup>



CAPS

Caps are available with a smooth top surface, and in split or smooth profiles.

Size (L x W x H)  
455 x 267 x 100mm - 25.9kg  
455 x 228 x 200mm - 43.5kg  
Exposed face area 0.0457m<sup>2</sup> - (100mm)  
0.091m<sup>2</sup> - (200mm)



CORNER BLOCK

Keystone corner block is used to create 90 degree corners. It is available with a split or smooth finish.

Size (L x W x H)  
455 x 228 x 200mm - 43.6kg  
Exposed face area 0.136m<sup>2</sup>



SLIPS

Slips are used to face concrete or piled structures to provide continuity of appearance. Split face finish only.

Size (L x W x H)  
455 x 95 x 200mm - 17.5kg  
Exposed face area 0.091m<sup>2</sup>

## Standard Colours



Flint Yorkstone Sandstone Pewter Ivory

## Alternative Colours

The reproduction of colour is as close as is possible within the photographic and printed processes. Where precise colour tolerances are vital, you are advised to view actual product samples. Whenever practical, blocks should be mixed from more than one pack.



## INNOVATIVE & ATTRACTIVE RETAINING SYSTEM FOR SOIL FACED SLOPES.

A Straightforward Dry Lay Block System For Facing Retaining Slopes. Slope-Loc can be used domestically in garden retaining wall projects or on a larger scale in commercial applications for embankment repairs and situations where an aesthetic slope is required.

Available in three standard colours:

- Flint • Yorkstone • Sandstone

The Slope-Loc system comprises dry laid, ribbed face concrete blocks, in combination with a HDPE geogrid, secured with a patented blue connector, offering enhanced strength characteristics that ultimately provides the ability to design and construct taller walls that can support high loadings.

### KEY BENEFITS:

- Unique economical alternative to vertical retaining walls
- Fully Professionally insured design
- All units less than 20kgs
- Proven block/grid connection
- Choice of colours - bespoke colours available to special order
- Fast, efficient delivery

### Standard Colours



Flint

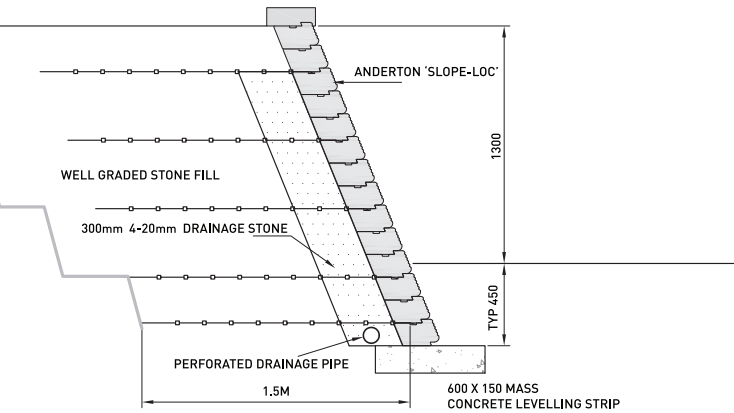


Yorkstone



Sandstone

# SLOPE-LOC



## Typical Cross Section:

### NOTES:

1. Wall shall be founded upon Competent Foundation Soils.
2. Slope-Loc walls have been designed based on a 5kPa Surcharge.
3. Well graded stone fill assumed with the following geo-technical properties  $\text{PHI}'_{pk} = 36^\circ$ , Bulk Density = 20kN/m<sup>3</sup>.

## Block Specification:

### DIMENSIONS

(L x W x H) 300 x 245 x 125mm

Face area 0.0375m<sup>2</sup>



Build stage cross section showing geogrid and blue grid connector



Suitable for garden projects and large scale commercial applications



## LOCATIONS

### CONTACT ANDERTON CONCRETE

For more information or a quotation for any of our products please contact us using the details below and one of our team will be happy to help.

#### HEAD OFFICE

Anderton Concrete Products Limited (Cheshire)  
Units 1 & 2, Cosgrove Business Park  
Soot Hill, Anderton  
Northwich, Cheshire CW9 6AA

T: 01606 535300 (Civils)  
F: 01606 75905  
E: [civils@andertonconcrete.co.uk](mailto:civils@andertonconcrete.co.uk)

T: 01606 79436 (Fencing, Building & Rail Products)  
F: 01606 871590  
E: [sales@andertonconcrete.co.uk](mailto:sales@andertonconcrete.co.uk)

#### MERSEYSIDE

Anderton Concrete  
Products Limited  
(Merseyside)  
Bridle Way  
Bootle  
Merseyside L30 4UA