



# Retaining Wall Systems

**Colinwell**   
Building on Tradition since 1888





# A family of Retaining Wall Products

The versatile Allan Block product range allows easy design and construction of retaining walls to meet specific engineering and site requirements.

Walls built using Allan Block Retaining Wall systems are quickly constructed and offer the perfect blend of performance, texture, colour, quality and lasting value.

Constructing retaining walls using the Allan Block **mortarless** system is straightforward and easy.

For walls up to 1.2m in height use the blocks by themselves to build a basic Gravity (unreinforced) wall.

For taller wall projects consider reinforcing the wall with either Geogrid, No-Fines Concrete or building a Double-Width Gravity wall.



Colour illustrated: Abbey Blend  
Location: Birmingham, West Midlands

## Product Profile

Working with our strategic partner, **Allan Block**, a world leader in segmental retaining wall block technology, **Colinwell** manufactures the **Allan Block** Collection to the exacting standards required by the British Board of Agrément (BBA).

Allan Block walls, when designed and constructed in accordance with our BBA (Roads & Bridges) Accreditation to incorporate Huesker Fortrac Geogrid, will have an expected lifespan of at least 120 years.

This ensures the system is suitable for use on all types of road infrastructure projects that require approval by the Highways Agency in GB and the Road Service in NI.

**Colinwell**   
Building on Tradition since 1888

Colinwell, is a fourth generation, privately owned family business. Our factory in Belfast operates from the same site on which the company was founded in 1888.



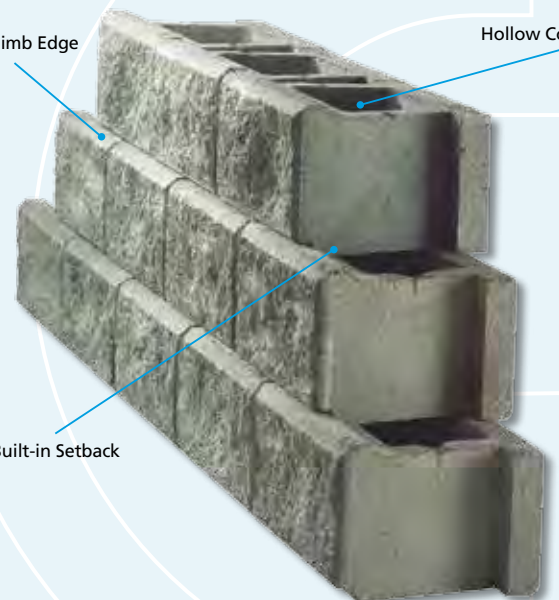
Roads  
and Bridges



Anti-Climb Edge

Hollow Core Design

Built-in Setback



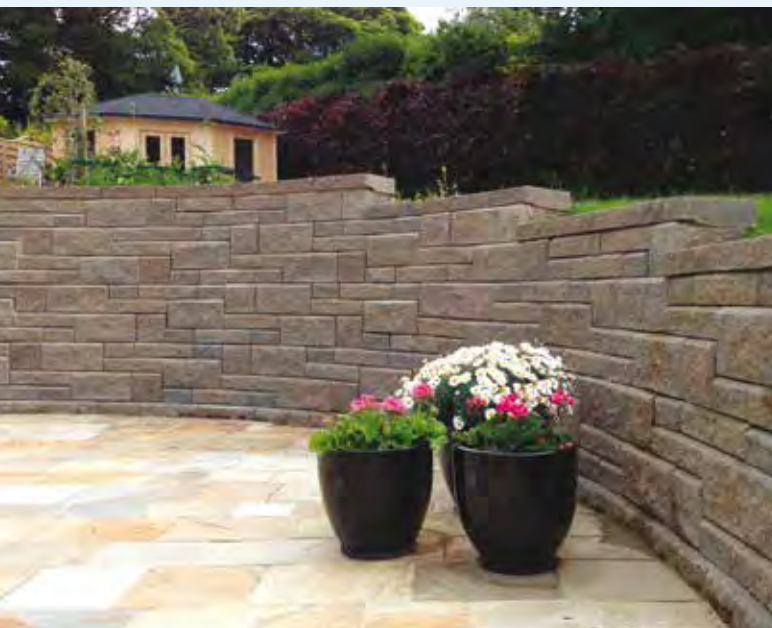
Cover image  
Colour illustrated: Abbey Blend  
Location: Nuneaton, Warwickshire



# The Allan Block Collection from Colinwell

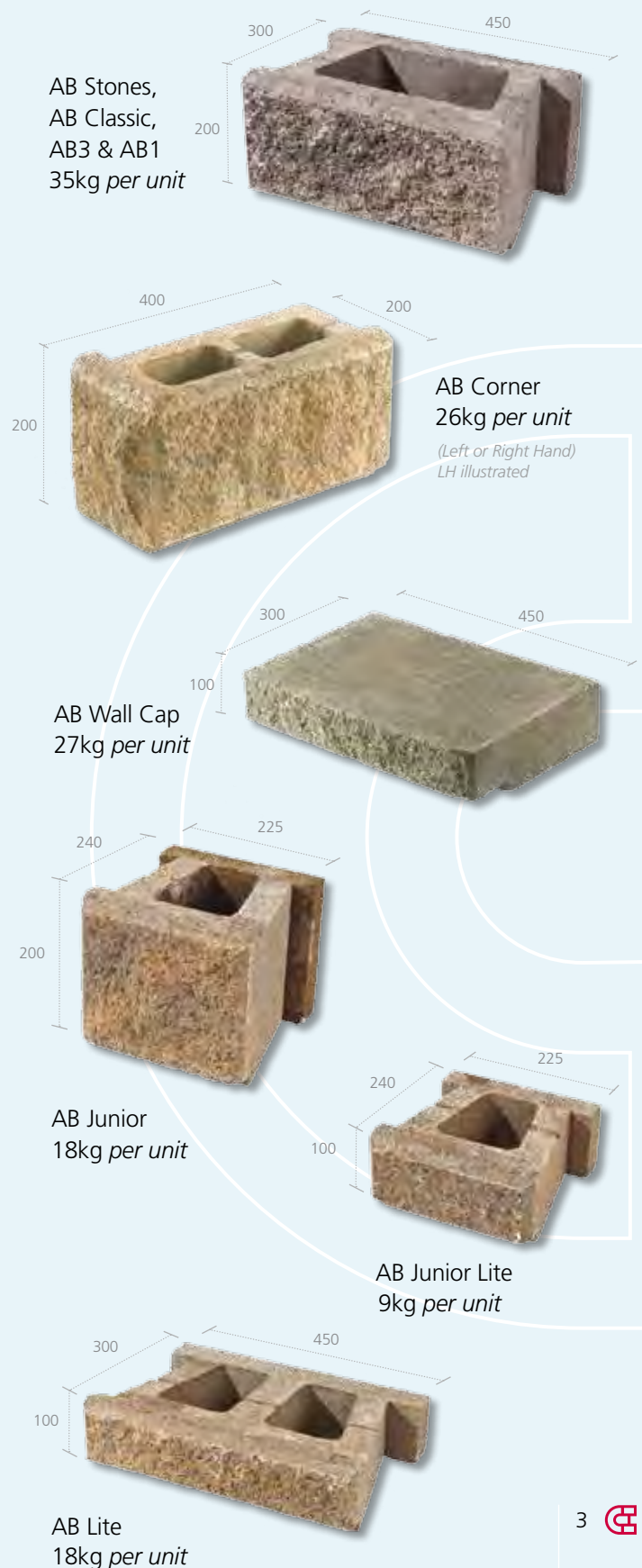
The Allan Block hollow core feature makes them easy to handle, promotes drainage and becomes rock solid when filled with stone. The patented interlocking front lip creates a built-in setback and eliminates the need for pins, clips or mortar, making installation a simple process.

Block Type: AB Ashlar Collection  
Colour illustrated: Abbey Blend  
Location: Belfast, Co. Antrim



## Features

- Block setback, 3°, 6° and 12° providing increasing factors of structural performance. (Particularly relevant for Gravity walls).
- Built in drainage, interlock and engineering.
- Cost effective and versatile.
- Mortarless dry-stacking system means walls can be constructed regardless of weather conditions.
- Durable and maintenance free.



# The Allan Block Collection from Colinwell

## AB Vertical

AB Vertical minimises overall wall footprint. The 3° setback allows for good utilisation of land and the space created by the wall.

3°



Block Type: AB Vertical ►  
Colour illustrated: Pewter  
Location: A27, Brighton

For specialist applications AB Vertical is also available with a 1° setback.



## AB Stones

AB Stones are the best choice for basic Gravity (Unreinforced) walls. The 12 degree setback delivers great leverage, performance and stability.

12°



◀ Block Type: AB Stones  
Colour illustrated: Abbey Blend  
Location: Hollywood, Co. Down





# The Allan Block Collection from Colinwell

## AB Classic

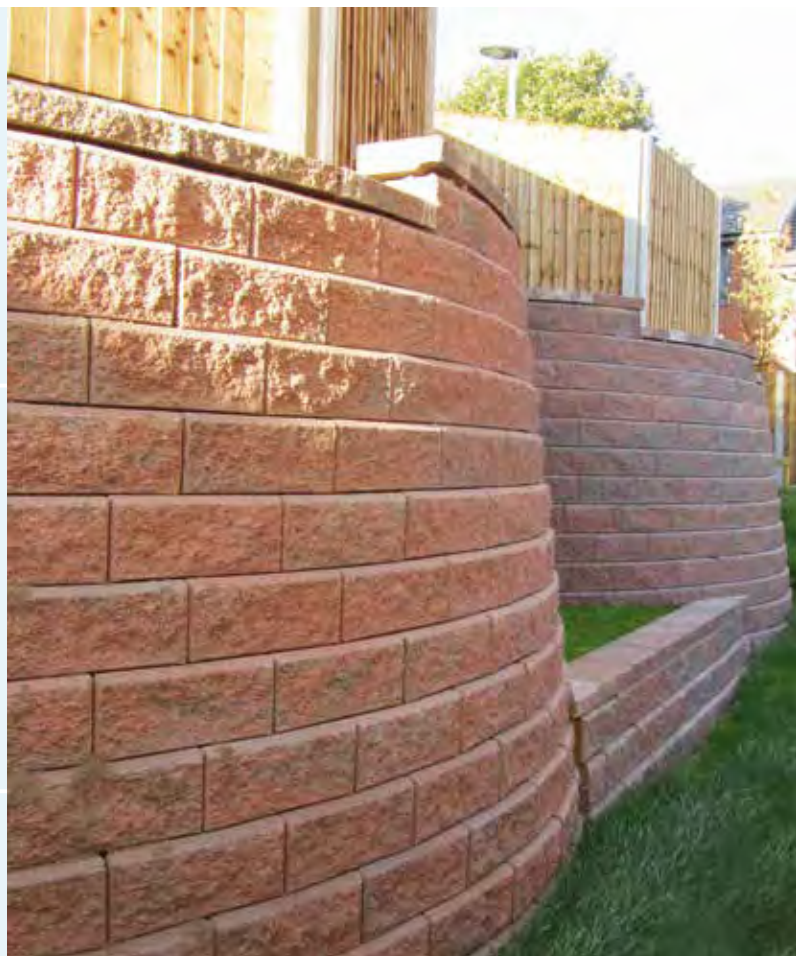
For a perfect blend of performance and style, choose our most popular all-rounder, the **AB Classic**. With built-in 6 degree setback, the **AB Classic** stacks beautifully and creates a fluid finish for every wall.

6°



Block Type: AB Classic ▶  
Colour illustrated: Cinder Blend  
Location: Nottingham, Nottinghamshire

Block Type: AB Classic ▼  
Colour illustrated: Yorkstone Blend  
Location: Bewdley, Worcestershire



## Wall Setback / Batter

The amount that the wall leans back is referred to as the Setback. The larger the setback, the greater the leverage, and the less reinforcement required.

The AB Setback Chart below illustrates the space that each block type will setback over varying heights.

Block Type	Finished Wall Height				Setback
	1.2m	1.8m	2.4m	3.0m	
AB Stones	255mm	380mm	510mm	635mm	Setback
AB Classic	125mm	190mm	255mm	320mm	
AB Vertical	65mm	95mm	125mm	160mm	

AB Stones (12 degree setback) will use more space than either the AB Classic (6 degree) or AB Vertical (3 degree) blocks, but will add more stability, especially when constructing Gravity walls.

# The Allan Block Collection from Colinwell



◀ Colour illustrated: Limestone Blend  
Location: Newton Mearns, Lanarkshire



Colour illustrated: Cinder Blend ▶  
Location: Little Chalfont, Buckinghamshire



◀ Colour illustrated: Slate Blend  
Location: Carlingford, Co. Louth



# A Gallery of Nationwide Projects...



◀ Colour illustrated: Abbey Blend  
Location: Nuneaton, Warwickshire



Colour illustrated: Honey\* ▶  
Location: Belfast, Co. Antrim

*\*This custom colour was manufactured specifically for this project*



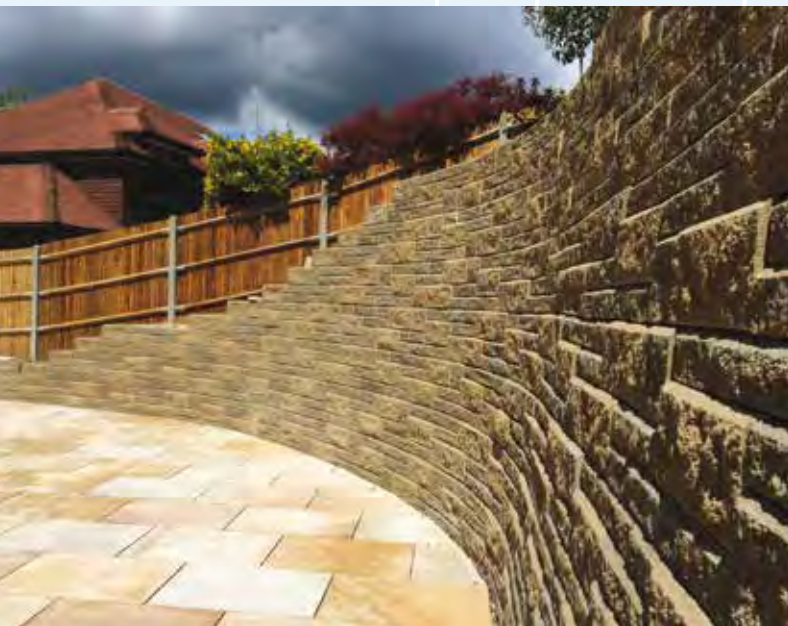
◀ Colour illustrated: Slate Blend  
Location: Cookstown, Co. Tyrone

# The Allan Block Collection from Colinwell

## Ashlar Collection

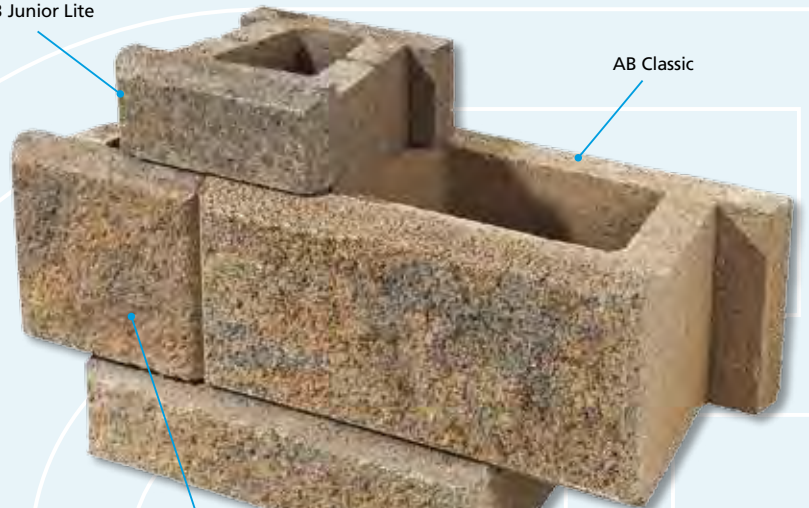
Inspired by traditional cut-stone masonry, the strong lines and rough hewn texture of the **AB Ashlar Collection** will enhance any landscape.

▼ Block Type: AB Ashlar Collection  
Colour illustrated: Abbey Blend  
Location: Sevenoaks, Kent



AB Junior Lite

AB Classic



AB Junior

AB Lite

Colour illustrated: Abbey Blend

The unique **AB Ashlar Collection** pattern is created by combining the **AB Classic** unit with - the **AB Junior**, **AB Lite** and the **AB Junior Lite** units.

AB Ashlar block sizes are not restricted for use as components in the construction of AB Ashlar Collection walls. They can be used individually to create attractive walls, or in the case of the AB Junior incorporated with the AB Classic to construct tight internal and external curves.

In keeping with natural cut-stone, there will be a tonal variation between the individual Ashlar units.





# The AB Colour Range from Colinwell

Yorkstone Blend



Pewter Blend



Slate Blend



Abbey Blend



Cinder Blend



Limestone Blend



*The colours illustrated are reproduced as closely to the manufactured product as photography and printing processes will allow.  
Please request product samples before making your final colour choice.*



# Retaining Wall Systems

from Colinwell



Colour illustrated: Abbey Blend  
Location: Nuneaton, Warwickshire

Allan Block Retaining Wall Systems are manufactured from a carefully controlled mixture of aggregates (65% recycled secondary aggregate content) and cement in accordance with BS EN 8500-1 and BS EN 206-1.

The production method involves the compaction of these materials under great pressure using specialised block manufacturing equipment and curing the resulting blocks in kilns with controlled amounts of heat and steam. This process ensures the blocks have high strength and are efflorescence free.

## Built-in Engineered for Simplicity

Allan Block's many features make retaining walls easy to engineer and build. These simple engineering features make the Allan Block Collections the most efficient and reliable products on the market.

## Built-in Engineering

### Built-In Interlock

Every Allan Block is firmly locked in place by the patented front lip. No pins, no mortar, no complicated connectors.

### Built-In Setback

The raised front lip automatically establishes the setback from vertical. AB Stones (12°), AB Classic (6°), AB3 (3°), AB1 (1°).

## Anti-Climb Feature

Each block has a chamfered edge, which means when the wall is constructed it cannot be climbed.

## Built-in Drainage

The hollow-core design combines with mortarless construction to allow water to drain freely from behind the wall. Incidental water moves easily through a vertical drain that is formed by the layer of stone placed behind the block and in the block cores. The dry-stack construction technique allows the water to escape by flowing around and through the blocks. This built-in drainage helps to eliminate water pressure. However this property should not be used as a primary water management element.

## Hollow-Core System

Allan Block's exclusive hollow-core product design provides many benefits over solid systems:

- Better resistance to freeze-thaw cycles.
- Improved efflorescence control.
- Easier handling, faster installation, lower labour costs.
- Block-to-block interlock created a Positive Connection from the aggregate in-fill between the blocks.

## Maximum Wall Heights - AB Gravity (Unreinforced) Walls

Condition above retaining wall	Soil Type	Friction Angle (of retained soil)	AB Stones 12°	AB Classic 6°	AB Vertical 3°
Level 	Clay	27°	1.00m	0.80m	0.80m
	Silty Sand	32°	1.40m	1.10m	0.90m
	Sand/Gravel	36°	1.70m	1.20m	1.10m
Surcharge 6 kPa 	Clay	27°	0.50m	0.40m	0.30m
	Silty Sand	32°	0.60m	0.50m	0.40m
	Sand/Gravel	36°	0.80m	0.50m	0.50m
Slope 3:1 	Clay	27°	0.70m	0.60m	0.50m
	Silty Sand	32°	1.10m	0.90m	0.80m
	Sand/Gravel	36°	1.40m	1.10m	0.90m

Prior to constructing a gravity wall, please refer to the above which illustrates the maximum Gravity Wall heights that can be achieved depending on the chosen block type, the type of soil which is being retained and the conditions above the wall. If you are still in any doubt please contact a Geotechnical Engineer.



# Allan Block Gravity Wall solution...



Colour illustrated: Abbey Blend (AB Lite)  
Location: Hollywood, Co. Down

## Constructing an Gravity (Unreinforced) Wall

### Step 1: Site Prep and Excavation

- Remove surface vegetation and organic soils.
- Excavate base trench a minimum of 600mm wide and 300mm deep.
- Buried block should be a min of 150mm.
- Compact and level trench.

### Step 2: Install Base Material

- Place a minimum of 150mm of 6-38mm graded stone in the base trench and rake smooth.
- Compact and level base material.

### Step 3: Install Base Course

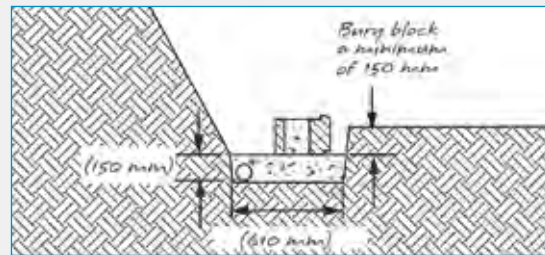
- Begin at the lowest wall elevation. Place Allan Block units on base material, check and adjust for level and alignment of each unit.
- A drainage pipe is recommended for all walls regardless of height and particularly walls that are constructed in silty or clay soils.

### Step 4: Install Wall Rock and Backfill Materials

- Fill the Allan Block hollow cores and a minimum of 300mm behind the wall with drainage stone.
- Use approved material to backfill behind the drainage stone and in front of the base course.
- Use a plate compactor to consolidate the area behind the block. Compact in lifts of one block course i.e. 200mm.

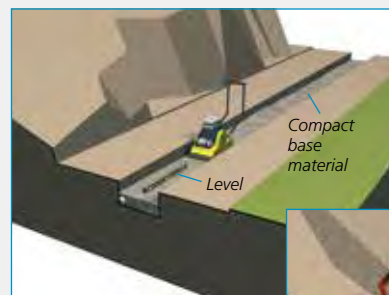
### Step 5: Install Additional Courses

- Remove all excess material from the top surface of Allan Block units. This can be done when installing the next course of block, by sliding the block into place.
- Stack the next course of blocks so that the vertical seams are offset from the blocks below by at least 75mm or 1/4 the length of the block.
- Check and adjust for level and alignment of each unit and the wall batter as the wall stacks up.

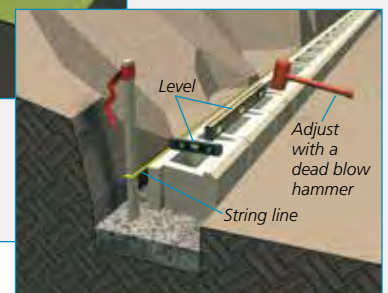


Gravity wall base course cross section

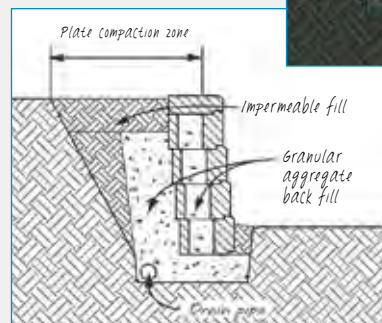
- Fill the block cores and behind with drainage stone and place approved soils as described in Step 4.
- From course 2 and above use a plate compactor to compact directly on the blocks as well as the area behind the blocks. Compact in lifts of 200mm or less.
- Complete wall to required height.
- Use 200mm of impermeable fill on the last lift to finish off wall.



Install base course, level and compact



Level blocks, adjust where needed



Gravity wall typical cross section

# Allan Block Geogrid Reinforced Wall solution...



▲ Colour illustrated: Pewter  
Location: Dundee, Angus

## When the wall needs Reinforcement

Depending on individual site conditions, sometimes the block weight and setback alone do not provide enough structural support, in these cases the wall will require reinforcement.

One method of reinforcement is to install Geogrid. Geogrid helps to create a solid structure to increase resistance to soil pressure and surcharges.

If there is not enough space to accommodate the incorporation of Geogrid, other methods of reinforcement are possible (see pages 14 & 15).

**For all residential walls over 1.8m in height and all commercial walls regardless of height please consult with our Technical Department.**

## Geogrid Installation

- Cut sections of Geogrid to specified lengths. Install by placing cut edge to the back of the raised front lip and roll out to the back of the excavation area. The excavation area must be fully compacted and level before this is done.
- Stack the next course of block on top of the Geogrid so that the blocks are offset from the units below. Each new course should be positioned so that the vertical joints are offset by at least 75mm and are tight against the front edge of the units below. Perfect running bond is not required.
- Remove slack and stake Geogrid in place.
- Fill the hollow cores and 300mm behind the block with drainage stone. Use approved infill to backfill behind the drainage stone.
- All drainage stone and infill materials within 0.9m of the wall must be properly compacted. Compact in maximum 200mm lifts, this time starting on the block and working in a path parallel to the block towards the back of the excavation area. **Never compact directly on Geogrid.**
- Install additional block courses to next Geogrid location.
- Repeat process to top of wall. Install cap blocks as required.
- Finish grade away from wall for water management.

## Materials

- For the base material, in the block cores and directly behind the block, use a well-graded compactible aggregate, ranging in size from 6-38mm and containing less than 10% fines.
- Geogrid.
- Perforated drainage pipe.
- Capstone adhesive.
- Allan Block.



## Estimating Guide for AB Blocks

Number of AB Full Blocks required					
Approx Wall Height	Wall Length				
	3m	6m	9m	12m	15m
0.2m	7	14	20	27	34
0.4m	14	28	40	54	68
0.6m	21	42	60	81	102
0.8m	28	56	80	108	136
1.0m	35	70	100	135	170
1.2m	42	84	120	162	204
1.4m	49	98	140	189	238
1.6m	56	112	160	216	272
1.8m	63	126	180	248	306

*For walls up to 1.8m in height ask for AB Reinforcement Grid - available 1.2m wide by 15m in length. For walls above 1.8m in height, seek advice on Geogrid Spec.*

▼ Colour illustrated: Abbey Blend  
Location: Hattersley, Greater Manchester







Colour illustrated: Pewter Blend  
Location: Chepstow, Monmouthshire

## Geogrid Reinforcement

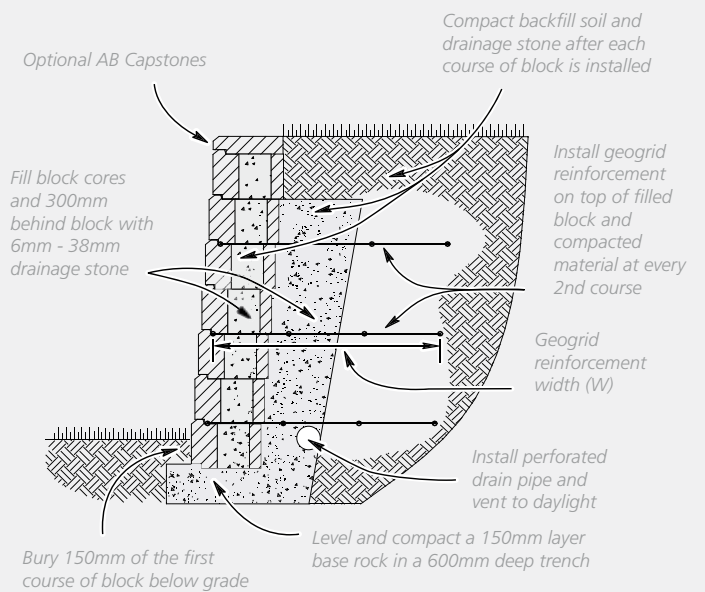
The information provided here should be used to assist in the proper installation of Allan Block walls.

For full information on installation, refer to the Allan Block Installation Guidelines. Visit: [allanblock.com](http://allanblock.com) or contact Colinwell's Allan Block Technical Department for advice.

Colinwell hold a stock of commercial and domestic grade Huesker Fortrac Geogrid should it be required for your project.



## Typical Section Reinforced Wall



# Allan Block Double-Width Gravity Wall solution...



▲ Colour illustrated: Pewter Blend  
Location: Coventry, Warwickshire

## Double-Width Gravity Wall

### How to Build the First Course (Base Course)

- Begin the base course at the lowest wall elevation.
- Place the front blocks with the raised front lip facing up and forward on the base material near the front of the base trench.
- The buried block should be placed upside down, so that the front lip is facing downwards and rotated 180 degrees so that the backs of the block butt up against one another.
- Check and adjust each block for level and alignment as it is installed. Check the blocks for level frequently from side-to-side and front-to-back.
- Make minor adjustments by tapping the Retaining Wall blocks with a dead blow hammer or by placing up to 10 mm of coarse sand under the blocks.
- Any irregularities in the base course become larger as the wall grows in height.
- Careful attention to a straight and level base course will ensure a quality finished wall.

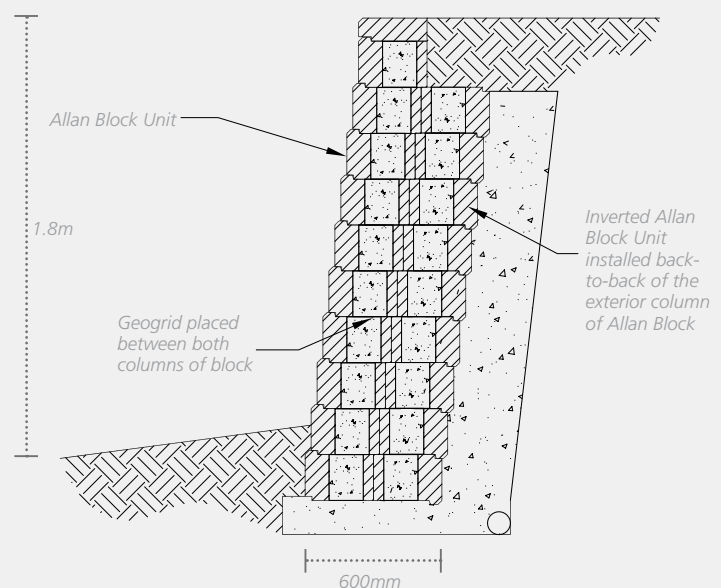
### Backfilling and Compaction of base course

- Fill in the area in front of the base course blocks with on-site soil. This will keep the base course of blocks from shifting while filling and compacting.
- Fill the hollow cores of the base course at least 300 mm behind the block with granular fill to the height of the blocks.
- Use granular fill or approved on-site soils to backfill behind the wall rock in lifts of no more than 200mm (i.e. the height of one block).
- Use a plate compactor to consolidate the granular fill directly behind the block then compact in a path parallel to the wall, working from the back of the block to the back of the excavated area with a minimum of 2 passes.
- Check the base course for level and adjust as necessary.

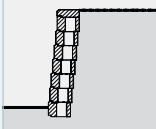
### Additional Courses

- Every course after the first course requires compaction, beginning on the block.
- After backfilling and compacting, a layer of Geogrid should be installed on top of the front and buried block (as shown in the cross section), on every second course. This will help to tie the two walls together.

### Double-Width Gravity Wall



### Maximum wall heights - Double-Width Gravity Wall

Condition above retaining wall	Double-Width Gravity Wall Maximum Heights				
	Soil Type	Friction Angle (of retained soil)	AB Stones 12°	AB Classic 6°	AB Vertical 3°
	Firm to Silty Clay	27°	1.98m	1.68m	1.52m
	Silty Sand	32°	2.75m	2.14m	1.83m
	Clean Sand/ Gravel	36°	3.04m	2.44m	2.13m



# Allan Block No-Fines Concrete Wall solution...



▲ Colour illustrated: Abbey Blend  
Location: Dublin, Co. Dublin

▲ Porous No-Fines  
Concrete Sample

## No-Fines Concrete Backfill

When using the Allan Block products with No-Fines Concrete the permeable concrete actually attaches to the back of the block and extends the depth of the wall mass.

Reinforcing Allan Block Retaining Walls using No-Fines Concrete will allow for taller walls to be constructed with less excavation than conventional Geogrid Reinforced Walls. This allows Allan Block Walls to be built where Geogrid reinforced construction would not be possible because of property line constraints or limited excavation options.

**Typical Geogrid reinforced walls will require an excavation depth of 70 percent or more of the wall height to accommodate geogrid tails. No-Fines Concrete reinforcement will require an excavation depth of around 40 percent of the wall height.** Limiting the excavation depth, will not only save time and money, but it might extend the opportunities for Allan Block Wall solutions.

## Installation Steps:

Follow the complete installation steps outlined previously when preparing the base trench, levelling pad and first course of blocks. Once the first course of blocks are installed and levelled, follow these simple steps to place the No-Fines Concrete Backfill:

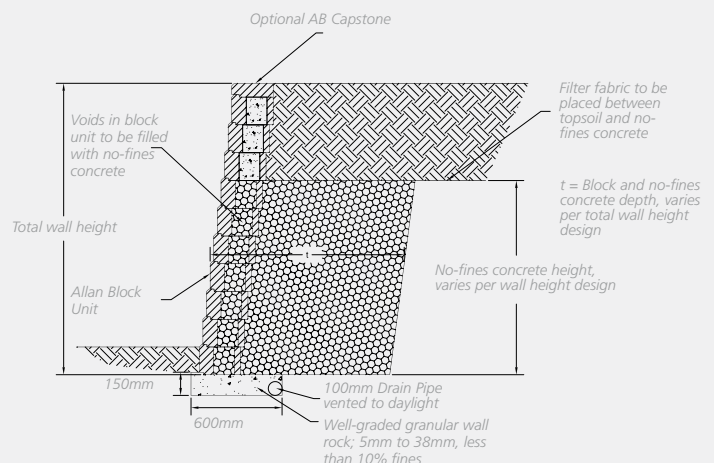
1. Fill all the voids in the block and backfill to the specified depth with the No-Fines Concrete.
2. It is recommended, but not required that on straight wall segments, one of the back wings of the Allan Blocks be removed to help secure the block face to the concrete backfill.
3. No more than two courses of Allan Block should be filled with no-fines concrete at once. The vertical height of a pour should not exceed 400mm or two courses of block.
4. Additional pours can be made as soon as the No-Fines concrete backfill in the previous lift has set. This is usually not longer than 2 to 3 hours.
5. Additional courses of block could be stacked while waiting for the backfill to cure.
6. Additional Courses – Brush the top of the blocks to remove any excess material. It is recommended that this be done before allowing the concrete to harden.

7. Install the next course of blocks ensuring that they are level. Place the No-Fines Concrete Backfill the same way as outlined in the previous step.
8. Continue these steps until the wall reaches its designed height.

## Engineering Properties:

- No-Fines Concrete Backfill can be used with both the Standard and Ashlar Pattern Allan Block Retaining Wall Collections.
- No-Fines Concrete Backfill typically consists of cement, water and coarse aggregate. The quantity of cementitious material is approximately 296.6kg/m<sup>3</sup> with a water/cement ratio of approximately 0.30 – 0.40.
- No-Fines Concrete Backfill is designed using 10mm to 20mm aggregate with an aggregate/cement ratio of 6:1.
- The density of this product will vary with the density of the aggregate used, but will typically range between 1600 kg/m<sup>3</sup> – 2160 kg/m<sup>3</sup>.
- No-Fines Concrete Backfill has little to no slump. It will exert pressure on the soil and Allan Block wall similar to loosely poured aggregate until cured.
- When using No-Fines Concrete Backfill, the backfill zone will also serve as the required drainage within the cores and directly behind the wall.

## No-Fines Concrete Wall Section





# Retaining Wall Systems

from Colinwell



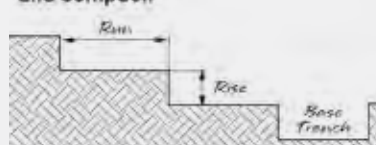
Colour illustrated: Limestone Blend  
Location: Lisburn, Co. Antrim

## Steps

### Basic Step Construction

- Excavate the required depth and width for each step riser and compact the entire area with a plate compactor.
- Check that the area is level.
- Fill the first step with 150mm of granular aggregate fill and rake smooth.
- Compact the area and check for level (Stairs will require extra compaction to avoid any future settlement).
- Install the blocks on the compacted granular aggregate fill, allowing a space of at least 150mm behind the blocks for granular aggregate fill.
- Ensure the blocks are level and aligned as each block is installed.
- Fill the blocks with granular aggregate fill, as well as any space in front of and behind the block. When backfilling behind the blocks, fill the entire area that was excavated earlier to create a base for the next step riser. This should create a level base for the next set of risers. We recommend backfilling and compacting in 100mm lifts to achieve better compaction when possible.
- Rake the granular aggregate fill smooth and then compact, with the first pass of the plate compactor directly on top of the blocks, working in a path parallel to the block.
- Repeat this process for each additional course of steps that is required.

Excavate for stairs and compact.



Install and level blocks on base material.



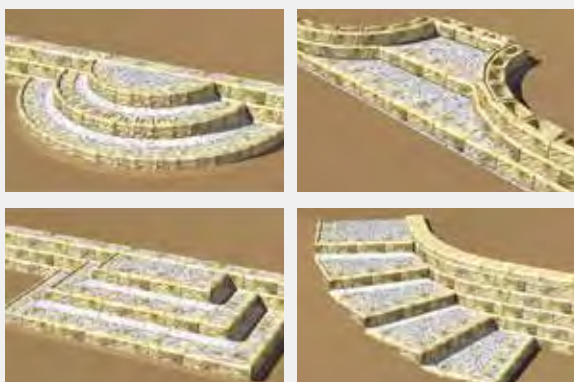
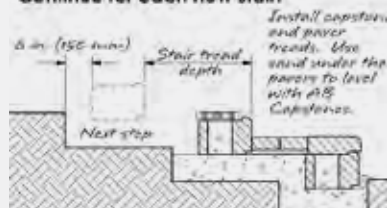
Backfill block cores and behind block with wall rock. Compact.



Install next stair course.

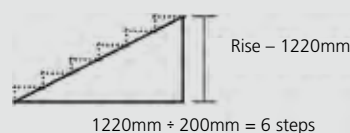


Continue for each new stair.



### How Many Steps?

To find the number of steps needed, measure the total rise of your slope in mm and divide by 200mm which is the height of a step.







Colour illustrated: Limestone Blend  
Location: Gorebridge, East Lothian

## Corners

### Inside Corners

- To construct an inside corner simply remove part of the raised lip on one block on each course.
- Use a diamond blade saw or a chisel to remove half of the raised front lip. This will allow the next course to be installed on a level surface. (Step 1)
- Lay the modified block perpendicular to another AB Unit, this will create the corner. (Step 1)
- On the next course, remove the opposite half of the lip of a AB unit and position it over the right angle. (Step 2)
- On each successive course, simply reverse the position of the modified block to obtain an interlocked corner.



### Outside Corners

**Left Handed Corners units** when viewed from the front will have a Finished/Textured end to the left.

**Right Handed Corners units** when viewed from the front will have a Finished/ Textured end to the Right.

*Note: A Left Handed Corner unit is shown on page 3.*

- Always build your retaining walls by starting at the corners and working out.
- Set the first corner block in place and install the two perpendicular base courses.
- Level, backfill and compact.
- Place an alternating corner block on the second course and set the entire second course of block in both directions. Level, backfill and compact again.
- Repeat as often as needed to the top of the retaining wall.

Corner units will always have a 12° setback, however, with a slight modification they can be used with either the AB Classic (6°) or AB Vertical (3°) Block. For example:

- To modify the block for an AB Classic (6° Setback), cut a notch on the short side of the block 20mm deep.

For information on how modification can be done please visit [Allanblock.com](http://Allanblock.com) or contact our Technical Department on 028 90 618145 or e-mail [info@colinwell.com](mailto:info@colinwell.com)

#### Step 1

Ensure base is level going both directions



#### Step 2



#### Step 3





# Retaining Wall Systems

from Colinwell



Colour illustrated: Abbey Blend  
Location: Milford, Co. Donegal

## Curves

Curves accent any landscape, are simple to design and easy to build. Consider how tight or gentle you want the curves to be and then choose the block, or combination of blocks that are best suited for your design. See the radius chart for more information (page 19).



Allan Block's patented design allows for easy installation of both inside and outside curves. Most curves can be built with no cutting involved.

## Offset the vertical seams

Try to maintain an offset of the vertical seams by at least  $\frac{1}{4}$  of the block length from the courses below for both inside and outside curves. Cutting a block in half or using the half length (AB Junior) blocks will assist in creating a proper offset.

Before constructing your retaining wall, lay out the design using a garden hose or paint. Measure the radius of each curve and refer to the radius chart. Select blocks that will fit your design or adjust your design to fit the blocks you have selected. As a rule, gentle sweeping curves produce more aesthetically pleasing retaining walls.

*Note: For very tight radii, it is possible to use AB Junior Units.*

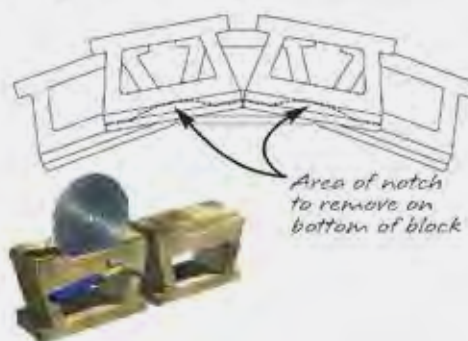
## Inside Curves

To build a flowing inside curve, keep the front of the blocks tight together and fan out the blocks keeping the space consistent between the backs of the blocks.

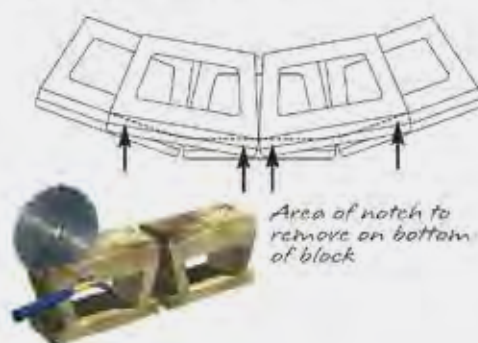
## Outside Curves

To build smooth outside curves, remove one or both of the "wings" from the back of the blocks and tighten the radius of the curve. To obtain a clean break, hit the back of the wings with a hammer.

### Cutting The Bottom Notch For Tighter Inside Curves



### Cutting The Bottom Notch For Tighter Outside Curves





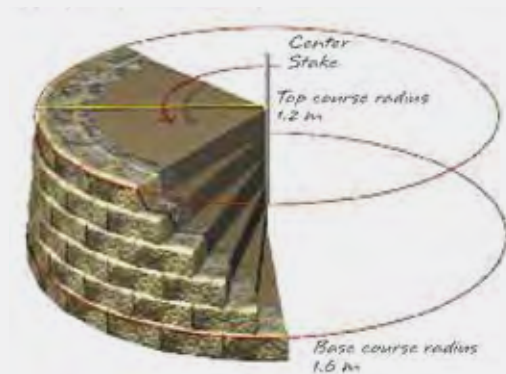


## Determining the Radius

Curved walls have a greater setback, which causes a coning effect to occur. This causes your retaining wall to have its tightest radius at the top of the wall, which in turn creates the need for a larger radius at the base course.

The final height of the wall will determine what the minimum radius at the base course must be. Use the radius chart to determine what the minimum recommended radius of the base course of the wall.

### Base Course Radius for an outside curve on a 1.2m tall 6° wall



## Starting the Curve

From the point of where the curve will start, measure straight back from the wall the required amount (shown in the radius chart above) and drive a stake into the ground. This will be the centre of the curve.

Attach a string line to the stake the length of the radius and rotate it around to mark the location of the base course.

Install the blocks with the front of the blocks lining up with the mark.

To transition the curve back into a straight wall or another curve, lay out the curve and the first couple of blocks of the next section. Adjusting 1 or 2 of the blocks will help in the transition of the next section of the retaining wall.

**AB Radius Chart for the Base Course**

Setback	Wall Height			
Full Length Blocks (450mm Long)	1.2m	1.8m	2.4m	3.0m
<b>AB Vertical</b> 3°	1.43m	1.52m	1.6m	1.7m
<b>AB Classic</b> 6°	1.6m	1.7m	1.8m	1.9m
<b>AB Stones</b> 12°	1.7m	1.8m	2.0m	2.1m
Half Length Blocks (225mm Long)	0.9m	1.5m	2.1m	
<b>AB Junior</b> 6°	1.0m	1.3m	1.49m	

**AB Vertical**

**AB Classic**

**AB Stones**

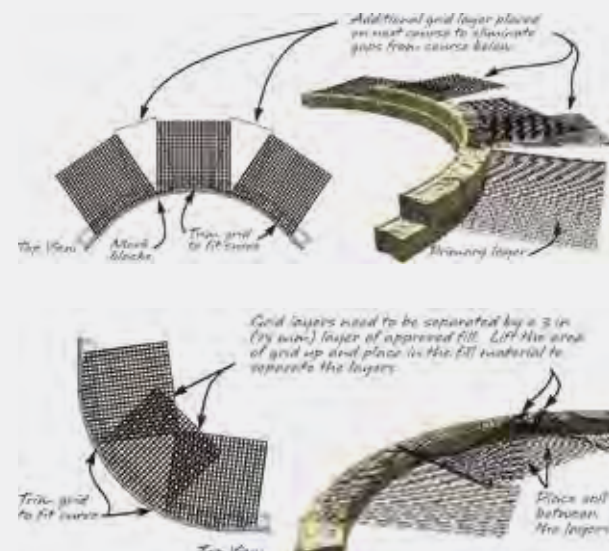
**AB Junior**

Use this chart to find the minimum recommended radius at base of wall.

## Building Tighter Curves

Use the AB Junior whenever possible to build tighter curves within the wall.

When using full size blocks, it may be necessary to remove parts of the bottom notch to fit the blocks closer together.





# Retaining Wall Systems

from Colinwell



▲  
Colour illustrated: Abbey Blend  
Location: Liverpool, Merseyside

## Finishing Walls

### Ending and Topping Off Walls

Allan Block offers a great variety of finishing options for the wall.

Allan Block's patented raised front lip provides a built-in edging for landscape rock, mulch, grass or soil.

Capstones can be used to finish off the top of a wall. Use a high grade, waterproof flexible masonry adhesive to secure AB Capstones in place.

### Building Turn-Ins

For a graceful, flowing end to the wall, curve the wall to create a plantable area that can soften the look of the wall.

When building a turn-in, a base trench will need to be excavated, backfilled and compacted, the same as the base course of blocks.



### Building Step Downs

Walls with step downs can be easily finished by adding a AB Lite, or turning the corner blocks back into the hillside.

Figure 1: Gradual step-down is using the AB Lite Stone.

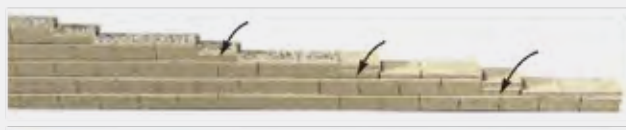


Figure 2: For a full course step-down, use the AB Corner Block.

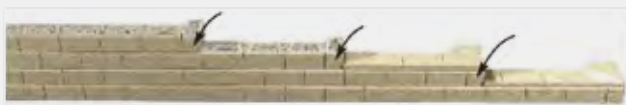


Figure 3: Flowing turn-in of wall.



Figure 4: For a step-down that doubles as a planter, turn the wall in 2 or 3 blocks after the AB Corner Block.



Figure 5: For a natural flow into the landscape, curve the wall back into the hillside.







Colour illustrated: Abbey Blend  
Location: Redhill, Surrey

## Terraced Wall

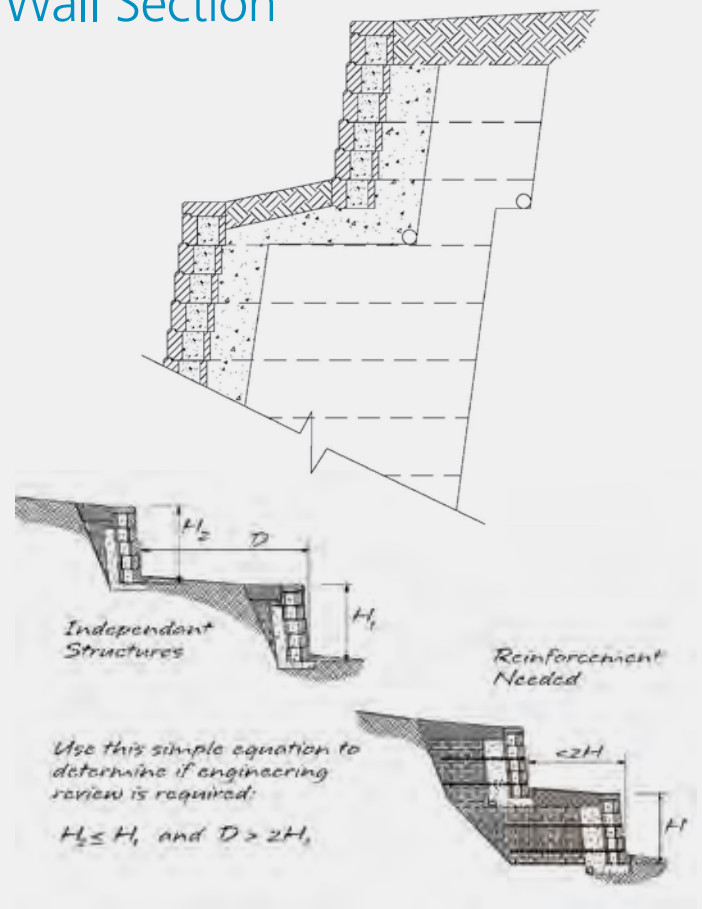
Often it is more aesthetically pleasing to replace one large retaining wall with two or more smaller terraced walls. However, terraced walls can act as surcharges on each other and may create global instability, therefore reinforcement may be necessary. Always check with a local qualified engineer when building terraces.

Retaining walls perform independently and may not need engineering when the distance between gravity walls is at least two times the height of the lower retaining wall, and the height of the upper retaining wall is equal to or less than the height of the lower retaining wall.

Walls that must be evaluated by an engineer are those needing Geogrid reinforcement; walls closer than two times the height of the lower wall; walls with more than two terraces, and terraced walls with structures above.

Terraced walls that do not perform independently must also be evaluated for global stability, and the lower walls must be designed to resist the load of the upper walls.

## Reinforced Terraced Wall Section



Colour illustrated: Abbey Blend  
Location: Drains Bay, Co. Antrim





# Accreditations



Colour illustrated: Pewter Blend  
Location: Jordanstown, Co. Antrim

## ISO 14001 Certification

At Colinwell we take our environmental responsibilities seriously. Over the years our products have helped to form the foundations and fabric for a number of the UK and Ireland's landmark buildings. We feel it is our obligation to continue to do business, in a sustainable and responsible manner to benefit current and future generations. As such, we hold the internationally-recognised ISO 14001 Environmental accreditation.

## CE Marking

Allan Block Retaining Wall Systems carry a CE Marking, this demonstrates that they comply with EU Legislation and that all European Union Health, Safety and Environmental requirements are satisfied.



## BBA (Roads & Bridges) Certification

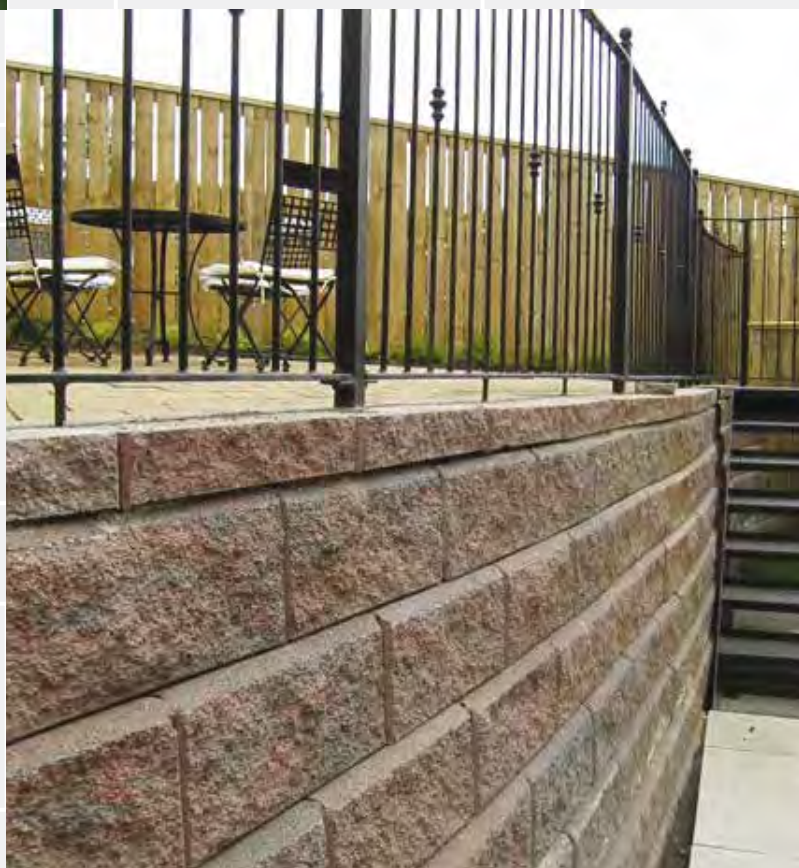
The Highways Agency in Great Britain and the Roads Service in Northern Ireland require all retaining walls located within 6 metres of a road boundary or that support a road to have full TAS Approval (Technical Approval for Highway Structures).

Allan Block holds a BBA (Roads & Bridges) Accreditation meaning that it is suitable for use on any of these projects. Numerous such examples can now be seen across the UK and Ireland.

## ISO 9001 Certification

At Colinwell we constantly strive to provide products of the highest quality, provide excellent service, first class staff and satisfied customers. In order to achieve this we have developed Quality Management Systems of the highest level. It is in recognition of these systems that we have been awarded the Internationally recognised ISO 9001 Quality Management Accreditation.

Colour illustrated: Cinder Blend  
Location: Lisburn, Co. Antrim





# How to specify



▲  
Colour illustrated: Abbey Blend  
Location: Redhill, Surrey

## Allan Block Retaining Wall Blocks By Colinwell Concrete Ltd

### Manufacturer:

**Name:** Colinwell Concrete Ltd  
**Web:** colinwell.com  
**Email:** info@colinwell.com  
**Tel:** +44 (0)28 9061 8145  
**Fax:** +44 (0)28 9062 4240  
**Address:** 37 Colinglen Road, Belfast, BT17 0LP

### Detailed description

#### Dimensions (approx. width x depth x height):

Standard Block: 450 x 300 x 200mm

#### Setback:

AB One: 1° Batter  
AB Vertical: 3° Batter  
AB Classic: 6° Batter  
AB Stone: 12° Batter

#### Compressive strength:

Mean compressive strength of standard block: 30N/mm<sup>2</sup>  
Mean compressive strength of BBA block: 40N/mm<sup>2</sup>

#### Density:

Standard Block: 2100kg/m<sup>3</sup>  
BBA Block: 2200kg/m<sup>3</sup>

#### Unit Type:

Hollow Core

#### Absorption rate:

3-6%

#### Weight (approx.):

Standard Block: 35kg

#### Face coverage (approx.):

11.11m<sup>2</sup>

#### Bond:

Stretcher

#### Product specification:

Allan Block Retaining Wall System

#### Finish:

Split Face Texture

#### Colour:

Abbey Blend  
Cinder Blend  
Yorkstone Blend  
Limestone Blend  
Pewter Blend  
Slate Blend

#### Special Shapes:

AB Wall Cap: 450 x 300 x 100mm –  
Weight: Approx. 27kg  
AB Corner Block: 400 x 200 x 200mm (Handed Left or Right) –  
Weight: Approx. 26kg  
AB Lite: 450 x 300 x 100mm –  
Weight: Approx. 18kg  
AB Junior Lite: 225 x 240 x 100mm –  
Weight: Approx. 9kg  
AB Junior: 225 x 240 x 200mm –  
Weight: Approx. 18kg

#### Accessories:

Reinforcement may be required for walls over a certain height, please contact Colinwell's Technical department for advice.

If a job's  
worth doing,  
it's worth  
doing ...

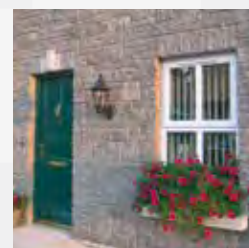
**Colinwell**   
Building on Tradition since 1888

**colinwell.com**

Also available from Colinwell:



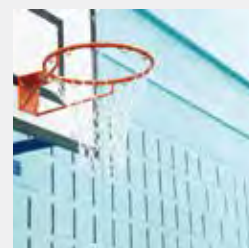
Architectural Masonry



Martello Stone Walling



Facing Bricks



Acoustic Masonry

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Dunmurry  
Belfast  
BT17 0LP  
Tel 028 9061 8145  
Rol 048 9061 8145  
Fax 028 9062 4240  
Email [info@colinwell.com](mailto:info@colinwell.com)

