



Secura
Segmental Retaining Walls
v.1.3



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HAPAS

For Secura Grand Geogrid Reinforced Walls

The perfect retaining wall solution

Technical excellence lies at the core of the Secura segmental retaining wall system and Tobermore have engineered every aspect of its design to provide total assurance for the specifier. Secura’s innovative segmental block format delivers many benefits in addition to its core functionality.

Attractive design

Secura’s rugged stone finish and attractive colour range enables architects and landscape designers to blend the retaining wall’s structure into attractive landscaping schemes to complement the surrounding structures. Secura looks and works well compared to other retaining wall systems.

Mortarless wall construction options

Secura is engineered for simplicity and efficiency on-site by reducing the need for wet trades or specialist plant. Contractors appreciate its ability to adapt to the practical reality of site access challenges and varying site conditions. In each case Secura represents a fast, labour efficient option.

The right choice

Secura is the right choice for a vast range of applications - from smaller walls in residential projects up to taller walls in commercial applications. Secura Grand geogrid reinforced walls are also BBA HAPAS approved for use in highways and bridges.



Design support

By offering full technical support including the option of certified structural designs, we are ready to support you throughout your project.



Capability

Secura adapts from gravity walls of up to 1m retained height and two installation options capable of producing retaining walls up to 9m high.



Versatility

Secura adapts easily to a wide variety of layouts enabling curves, corners, steps and terraces to be built using the same simple component range and process.



Cost effective

The mortarless block construction facilitates rapid laying by hand, reducing man-hours for completion. The engineering integrity with built in 7° set back makes efficient use of land. The attractive factory finish eliminates the need for secondary rendering or painting on-site.



ServiceSure

Support is just an email or phone call away and our team are available on the ground. Secura is manufactured and stocked in the UK using locally-sourced materials for efficient delivery to site.

Securely engineered

Secura's geogrid reinforced wall design provides the perfect balance between performance, buildability and long-term durability.

**3X
LOCK**

Secura benefits from a three-way lock which provides connections through the wall for exceptional structural stability.

**1
Aggregate Action**

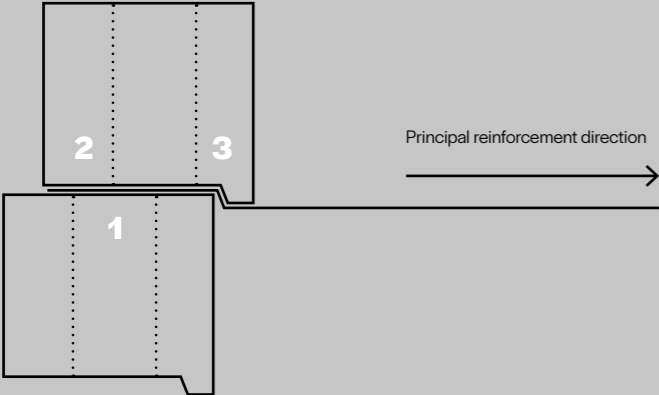
The granular aggregate fill in the hollow core of the Secura Grand blocks plays an important role in the integrity of the wall. Interaction between the geogrid and the aggregate acts as a lock, resisting movement.

**2
Friction Lock**

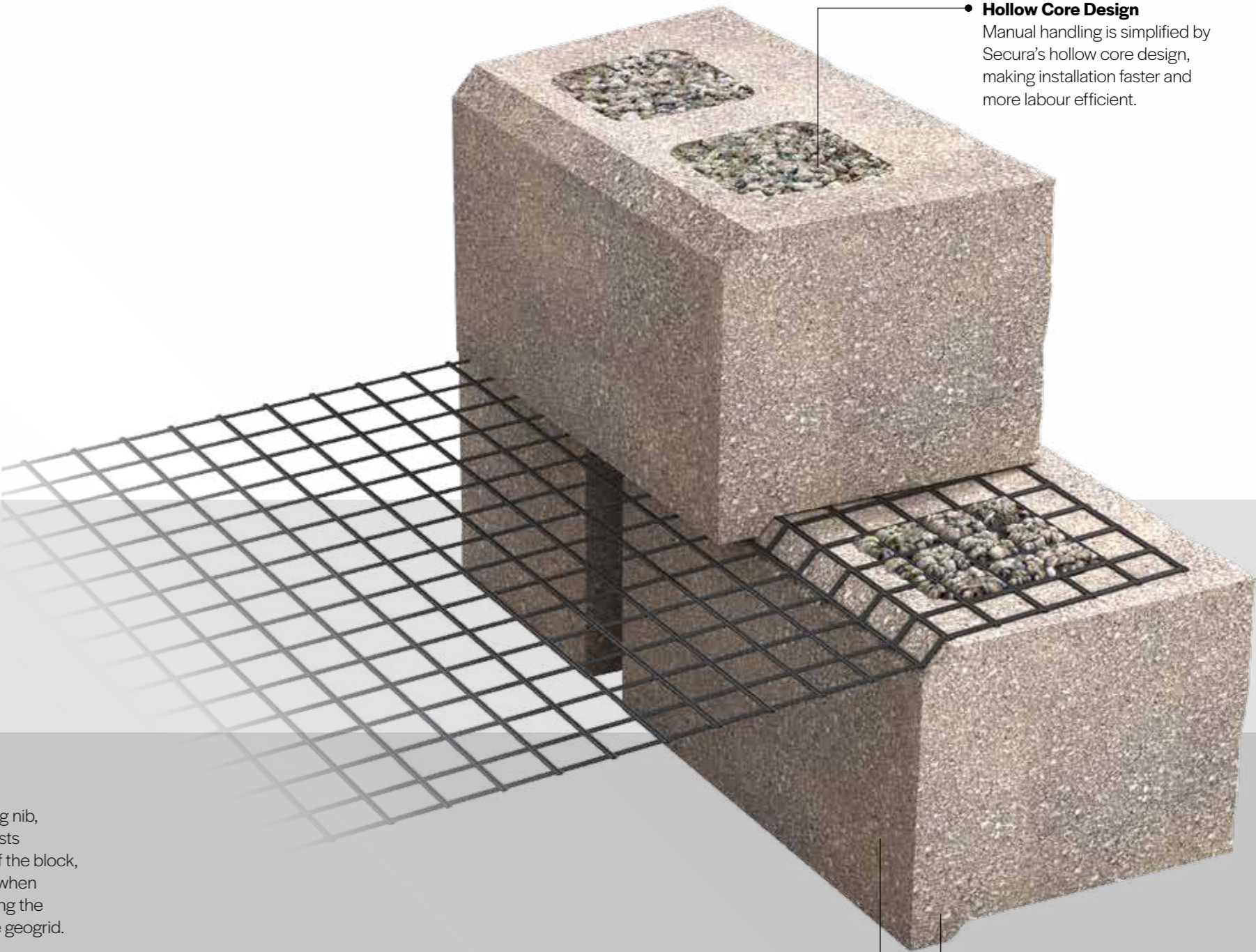
Under loading, the geogrid's ribbed texture grips the coarse surface of the Secura block creating friction to further resist movement.

**3
Nib Lock**

Secura's rear retaining nib, which effectively resists forward movement of the block, also acts as a clamp when under load, maintaining the engagement with the geogrid.



Hollow Core Design
Manual handling is simplified by Secura's hollow core design, making installation faster and more labour efficient.



Mortarless Construction
Speed of construction is enhanced by Secura's mortarless geogrid or gravity construction methods which eliminate curing delays, regardless of wall height or weather conditions.

Built In Set Back
Secura Grand's rear nib automatically produces the 7° setback for an extremely space effective design.

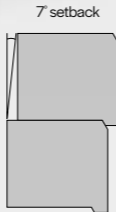
Why Secura?





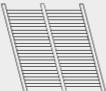
Secura Grand



Key Benefits of using Secura Grand as a Retaining Wall Solution

- ✓ Cost effective retaining wall solution
- ✓ Quick to install
- ✓ Mortar-free installation
- ✓ Builds up to 9m retained height
- ✓ Attractive stone finish with a range of colour options
- ✓ Full design and technical support available
- ✓ BBA HAPAS approved

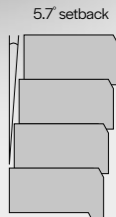



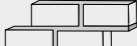

Retaining Wall Comparison					
Benefits	Secura Grand	Masonry	Reinforced concrete wall	Gabion wall	Crib Wall
Attractive stone finish	✓	X	X	X	X
Mortarless option	✓	X	X	✓	✓
Maintenance free	✓	X	X	✓	✓
Speed of construction	✓	X	X	X	X
Cost effective	✓	X	X	✓	X
Simplicity on-site	✓	X	✓	✓	X
Reduced efflorescence	✓	X	X	✓	✓

Secura Lite

Key Benefits of using Secura Lite as a Retaining Wall Solution

- ✓ Easy to build - suitable for DIY
- ✓ Mortar-free installation
- ✓ Builds up to 960mm retained height
- ✓ Attractive stone finish
- ✓ Vibrant long-lasting colours
- ✓ Ideal for domestic applications
- ✓ Available in a combination of three block widths



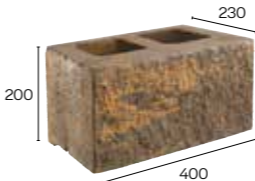
Retaining Wall Comparison			
Benefits	Secura Lite	Block and Render	Masonry
Attractive stone finish	✓	X	X
Mortarless option	✓	X	X
Maintenance free	✓	X	X
Speed of construction	✓	X	X
Cost effective	✓	X	X
Simplicity on-site	✓	X	X
Reduced efflorescence	✓	X	X



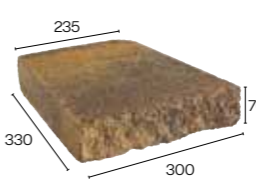
Secura Grand Range & Technical



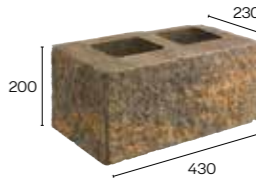
SCAN HERE



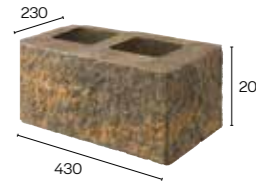
Block
400 x 230 x 200mm



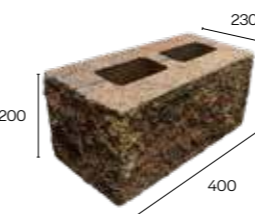
Coping
300/235 x 330 x 70mm
Tapered coping



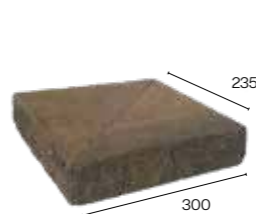
Left Corner Block
430 x 230 x 200mm
Can be used as end blocks.



Right Corner Block
430 x 230 x 200mm
Can be used as end blocks.



Double Sided Block
400 x 230 x 200mm



90° Coping
300/235 x 330 x 70mm
Tapered coping

Note: Any external 90° corner will require left and right hand corner blocks, which are alternately laid between courses. To facilitate ordering these are supplied as a pair.

Specification



Product type	Concrete Block
Manufactured to	BS EN 771-3:2011
Efflorescence	Minimum 12 hour vapour curing to significantly reduce the possibility of efflorescence
Strength	Typical tensile splitting strength of >30N/mm²
Design and Installation to	BS 8002:2015
Dimensional Tolerances	Length +3mm -5mm, width +3mm -5mm, height +3mm -5mm
NS	Plus D41 310 Create 45-25-66/320
Applications	Can be built as a gravity, engineered reinforced or concrete backfilled retaining wall. Please refer to Tobermore's Secura Grand installation guidelines or consult with Tobermore for design advice.
Energy used	100% renewable energy
Water used	100% from our rainwater harvesting system and groundwater bore hole
Recycled content	Not less than 10%
Carbon footprint	5kgCO ₂ e/ea
Recyclable	100% of this product can be recycled
Manufacturing & Delivery	From one location within the UK
Building rating	Refer to the Green Guide to Specification, 4th Edition 2009.

Tobermore products are manufactured in accordance with an accredited ISO 9001:2015 quality, Manufacturing facilities are accredited to ISO14001:2015 Environmental Management. The company publish environmental labels and declarations in accordance with BES 6001.

Colour Range

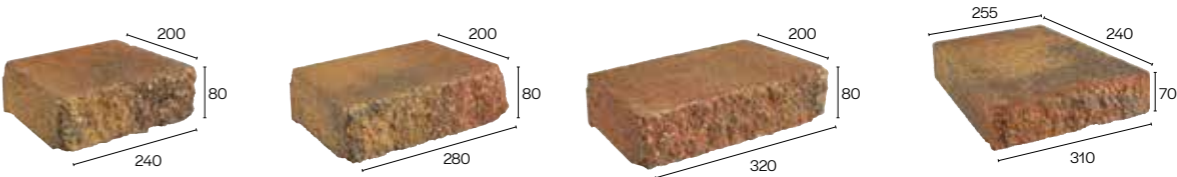


Stock

product	size (mm)	colours available	in stock	m² per pack	no. per m²	no. per pack	weight kg per pack GB	weight kg per pack NI/ROI
Secura Grand	400 x 230 x 200	Bracken, Heather, Slate	YES	3.84	12.5	48	1340	1340
Secura Grand Corners	430 x 230 x 200	Bracken, Heather, Slate	YES	-	-	48	1464	1464
Secura Coping	300/235 x 330 x 70 (tapered coping)	Bracken, Heather, Slate	YES	-	3.77LM	99	1415	1403
Secura Coping 90 degree Internal/External Kit (4 copings cut from corner coping)		Bracken, Heather, Slate	YES	-	-	-	105	105
Secura Double Sided End Block	430 x 230 x 200	Bracken, Heather, Slate	YES	-	-	32	1165	1165



Secura Lite Range & Technical



Blocks (mm)
320 x 200 x 80
280 x 200 x 80
240 x 200 x 80

All three sizes in one pack

Coping (mm)
310/255 x 240 x 70
(tapered coping)

Specification



Product type	Concrete Block
Manufactured to	BS EN 771-3:2011
Surface finish	Processed to give aged appearance
Efflorescence	Minimum 12 hour vapour curing to significantly reduce the possibility of efflorescence
Strength	Typical tensile splitting strength of >30N/mm ²
Dimensional Tolerances	Length +3mm -5mm, width +3mm -5mm, height +3mm -5mm
Design and Installation to	BS 8002:2015
NBS	Plus D41 310 Create 45-25-66/320
Applications	Low height gravity retaining wall solution for walls up to a maximum of 880mm high. Please refer to Tobermore's Secura Lite installation guidelines.
Energy used	100% renewable energy
Water used	100% from our rainwater harvesting system and groundwater bore hole
Recycled content	Not less than 6%
Carbon footprint	1.6kgCo ₂ e/ea
Recyclable	100% of this product can be recycled
Manufacturing & Delivery	From one location within the UK
LEED rating	Refer to the Green Guide to Specification, 4th Edition 2009. www.bre.co.uk

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Swatches



Stock

product	size (mm)	colours available	in stock	LM per pack	m ² per slice	no. per m ²	no. per pack	weight kg per pack GB	weight kg per pack NI/ROI
Secura Lite (all three sizes in one pack)	320 x 200 x 80 280 x 200 x 80 240 x 200 x 80	Bracken, Heather, Slate	YES	33.6	0.84	44.64	40 40 40	1121	1121
Secura Lite Coping	310/255 x 240 x 70 (tapered coping)	Bracken, Heather, Slate	YES	-	-	3.5LM	120	1316	1316

On-site Safety & Maintenance

Wall Design

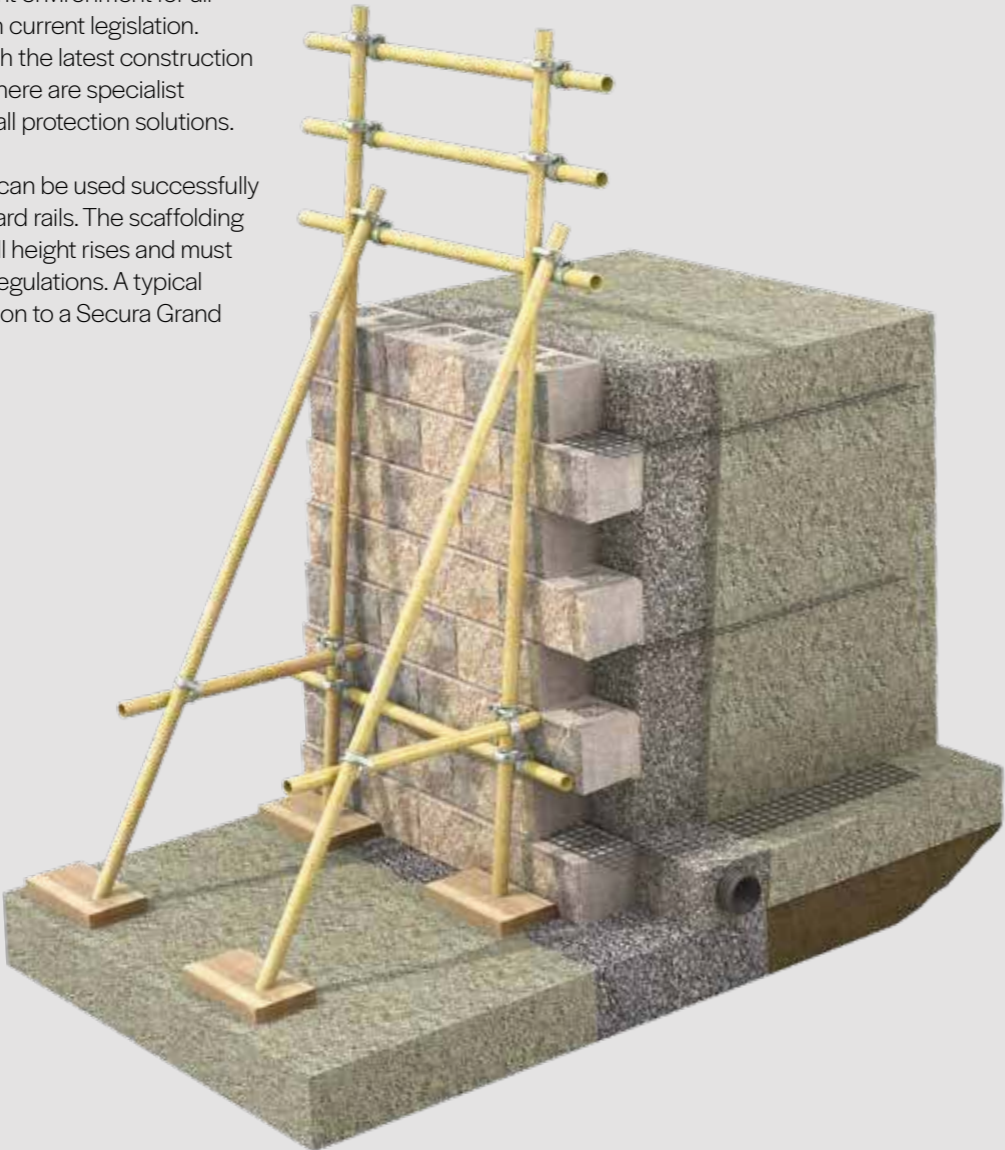
The design of any retaining wall requires the input of an engineer to assess the unique conditions of every site in respect of loads in conjunction with site and soil conditions. Correct site assessment and appropriate wall designs are the essential prerequisites to safety during construction.

Risk Assessments

It is the responsibility of the contractor to ensure that a full site-specific Health & Safety risk assessment has been carried out prior to construction.

Adequate fall protection should be constructed to provide a safe working at height environment for all employees in compliance with current legislation. Please ensure compliance with the latest construction Health & Safety regulations. There are specialist companies who can provide fall protection solutions.

In our experience scaffolding can be used successfully to construct fall protection guard rails. The scaffolding and rails should rise as the wall height rises and must comply with Health & Safety regulations. A typical restraint is shown here in relation to a Secura Grand retaining wall.

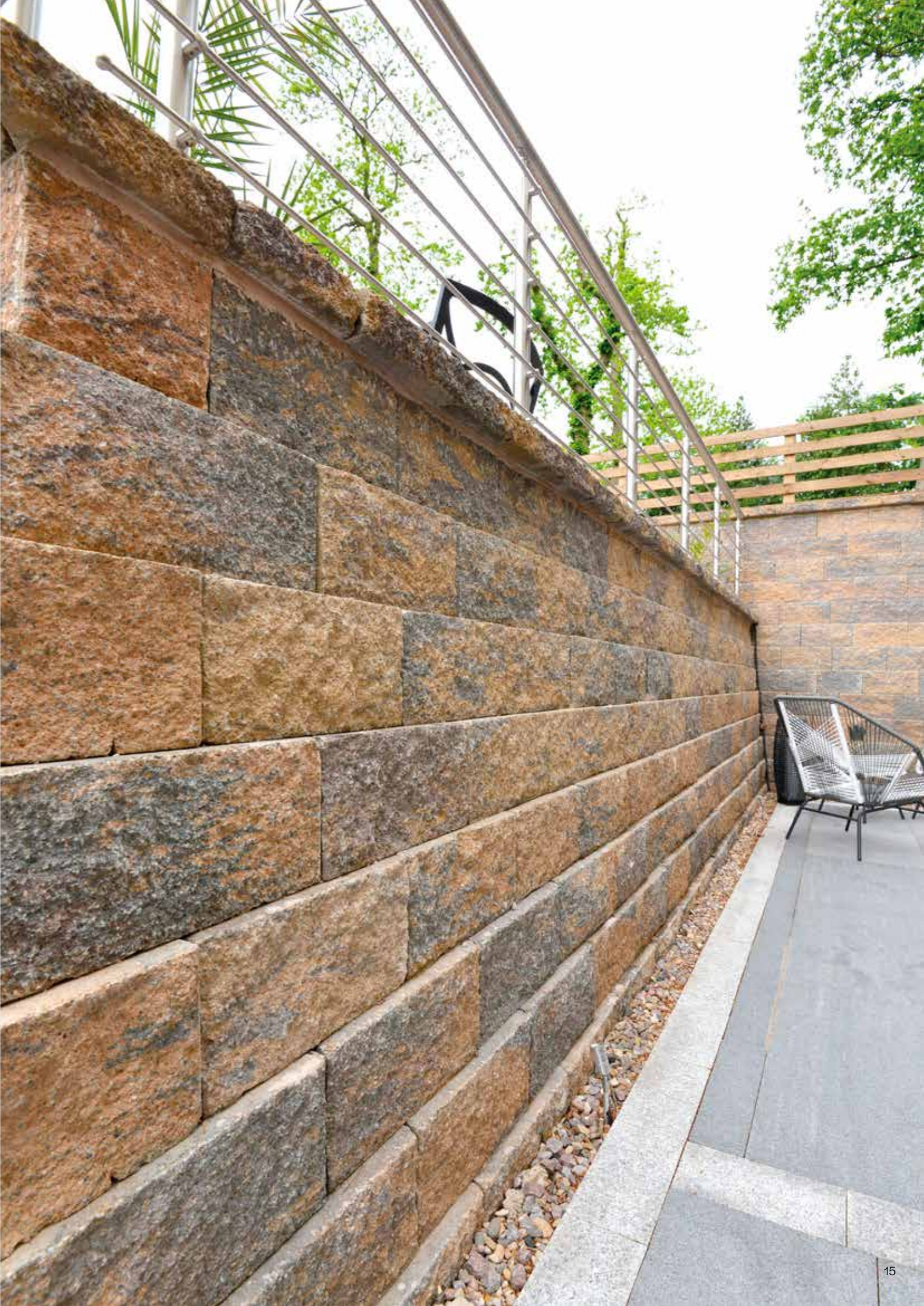


Cutting Blocks

The use of a water suppressed masonry saw is recommended to reduce the risk of staining. Please observe regulations with regards to the use of PPE.

Maintenance

Secura segmental retaining walls require very little maintenance. However, where any specific requirements have been set out in the project engineers wall design, these should be adhered to.



Instructions & Warnings

As referred to in Tobermore’s Conditions of Sale

CORE TERMS (PAVING & WALLING)

Product

All products should be carefully inspected for defects or damage upon delivery and prior to being laid or fitted.

Product Information

Within Tobermore, design and development of products is a continuing process, and product information is subject to change without notice. Accordingly, please check with Tobermore to ensure that the product information you have represents the most up-to-date product information.

Delivery

Tobermore will ship your products as soon as they are ready, due to yard storage restrictions all products must be delivered within 28 days of the material being ready for delivery.

Prior to installation

It is good practice to sort products to ensure consistency of colour, texture and dimensional tolerance. Any defects must be reported without delay. If products are installed with any form of defect which was clearly apparent prior to installation the installer will be responsible for all costs incurred to rectify the issue.

Installation

All products should be installed in accordance with the latest British Standard.

Colour & Texture

Tobermore produces paving and walling products with excellent density and durability. All products are manufactured in batches using naturally extracted raw materials including aggregates, pigments and cement etc. Products such Braemar, Sienna, Fusion, Mayfair Flags, Manhattan, City Pave and Fusion Kerbs are manufactured using premium naturally occurring granite aggregates. To achieve their final appearance some products undergo secondary processes, this involves shot blasting or grinding the surface of the product.

Whilst we have several factory procedures in place to help control shade, colour and texture within and between batches we cannot guarantee consistency. This is due to the natural materials and secondary processes. Therefore, slight variations in the finished products is normal between and within batches. These variations actually enhance the character and natural beauty of the products. Taking delivery of orders within 28 days can reduce the likelihood of variations.

To achieve the best possible finish we recommend the following advice is followed to evenly distribute any slight variations in shade, colour and texture over a large area. When the circumstances allow complete one area of paving, one retaining wall or one house / building by using products taken from the same batch. This is achieved by checking the batch code label displayed on the packs.

Always, thoroughly mix products from a minimum of three packs.

Where products are supplied in packs with vertical slices always take them “vertically slice by slice” this ensures that colours are distributed evenly.

When the circumstances do not allow the use of products from the same batch then it is extremely important to minimise possible colour banding/ shading by always, thoroughly mixing products from a minimum of three packs concurrently with some overlap between deliveries / batches.

Mixing thoroughly from a minimum of three packs is of particular importance when installing single colours such as Golden, Buff, Natural, Charcoal, Graphite, Silver, Mid-Grey, Sandstone, Alto Silver, Aaron Stone, Jura Grey and Innis Black.

We would always recommend that when purchasing products, especially in larger quantities, that they are all ordered at the same time.

Please note that the colour of new products will inevitably vary compared to those that have been installed for a period of time as weathering does take place.

All colour illustrations are as accurate as the printing process will allow. For a more accurate colour match please refer to actual product samples, which can be provided.

Colours and textures illustrated are representations and therefore should not be expected to be an exact match.

Note: Whilst we strive to ensure consistency, complimentary products such as Kerb Specials, Step Flags, Facing Brick Specials, Historic Circles etc. may not be an exact colour / texture or shade match to the standard version of the product as they will have been manufactured at varying times using different processes.

CORE TERMS (PAVING & WALLING)

Tegula

Tegula is manufactured using a secondary process that distresses the edges and corners of the blocks to give the desired aged antique appearance. The process randomly distresses the blocks, therefore some blocks will be more distressed than others will, this is completely normal and does not affect the product performance.

Staining

Some chemicals that are commonly used in gardens such as lawn feed containing Ferrous Sulphate can stain concrete products. Any chemicals that are spilt must be removed immediately by rinsing away with clean water. Please check the information on the instruction label of the container holding the chemical.

Moisture

Occasionally, after installation, some units may show variations in shade and have a patchy appearance. This is due to the varying amounts of moisture within the concrete and the ground. The drying out process of concrete continues in-situ after installation. Some units may also retain more moisture than neighbouring units and take longer to dry out. This is caused by the variations in density of the naturally extracted aggregates used in the manufacturing process. Given time and natural weathering, the capillaries within the surface of the concrete will gradually close and any patches or moisture retention will dissipate as the product matures. This does not affect long-term performance..

Efflorescence

Efflorescence is a crystalline deposit that occurs naturally on the surface of concrete materials. It usually appears as white deposit but can also be brown or yellow in appearance. Tobermore use market-leading technology to significantly suppress the occurrence of efflorescence, however, if it occurs, it may mask the colour of the product for a period of time, but tends to be washed away gradually by rain. Tobermore do not replace products with efflorescence. Packs of products which have had packaging removed should always be re-covered with appropriate packaging to prevent the occurrence of secondary efflorescence.

Surface Scratches

Minor scuffs or bruises may occur during delivery, movement onsite, and installation (for example, during any plate vibrating process). In Tobermore’s experience, these marks usually weather off through time. To reduce the risk of surface scratches we strongly recommend the use of a vibrating plate with a rubber protective mat.

Ordering

To avoid waste, please ensure that your contractor accurately measures the area on site before ordering products. In Tobermore’s experience, dimensions taken from a project plan can vary significantly from the final layout. Depending on the layout of the project, we recommend ordering an additional 2 - 5% of material to allow for cutting, detailing and wastage.

Manufacturing & Quality Systems

Tobermore is a BS EN ISO 9001, BS EN ISO 14001 and BES 6001 registered company. Tobermore uses an integrated management system to manage all health & safety and environmental issues.

Product Maintenance

Routine cleaning and maintenance is required to keep the overall appearance of products in pristine condition. All concrete products can develop algae, lichen, and moss growths due to environmental conditions and may require cleaning. Areas adjacent to plant borders and trees may discolour from transfer of plant-life. Tobermore cannot accept responsibility for any of these conditions.

Queries & Complaints

Please contact one of Tobermore’s Paving & Walling Centres or offices (contact details at www.tobermore.co.uk) with any queries or complaints. Any complaints must be notified to Tobermore without delay.

FOR SECURA PRODUCTS

Installation

All Secura products should be installed in accordance with the latest relevant British or European Standards. When constructing a retaining wall, ensure that you follow the design provided by the scheme engineer.





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Paving



Walling & Retaining Walls



Facing Brick

