

Guidelines for the installation of Tobermore Country Stone Walling

Country Stone Walling should be installed in accordance to BS 5682-3:2005

‘Code of practice for the use of masonry. Materials and components, design and workmanship.’

Country Stone is designed to recreate traditional stone sizes and to coordinate with standard cavity wall construction. When Country Stone blocks are used in housing projects a clear cavity must be retained.

All new work must be protected during construction and must be designed and built in accordance with good building practice. Builders familiar with conventional brickwork will find that similar installation principles apply.

Joints can be finished flush or tooled depending on the overall effect required. Raked joints are not recommended. It is vital that all horizontal and vertical joints between Country Stone blocks must be compacted and free from voids. Shell bedding should not be used.

Pillars

The Country Stone range is commonly used on pillars, entrances and boundary walls. Pillars can be constructed using any of the patterns shown, however, the most popular finish is when the Country Stone single course mixed length pack is used. The product can be used in conjunction with fencing or gates.

Copings

Tobermore supply a specific coping that is suitable for Country Stone. The Country Stone coping is textured on both ends and ensures the wall is capped with an appropriately finished product.

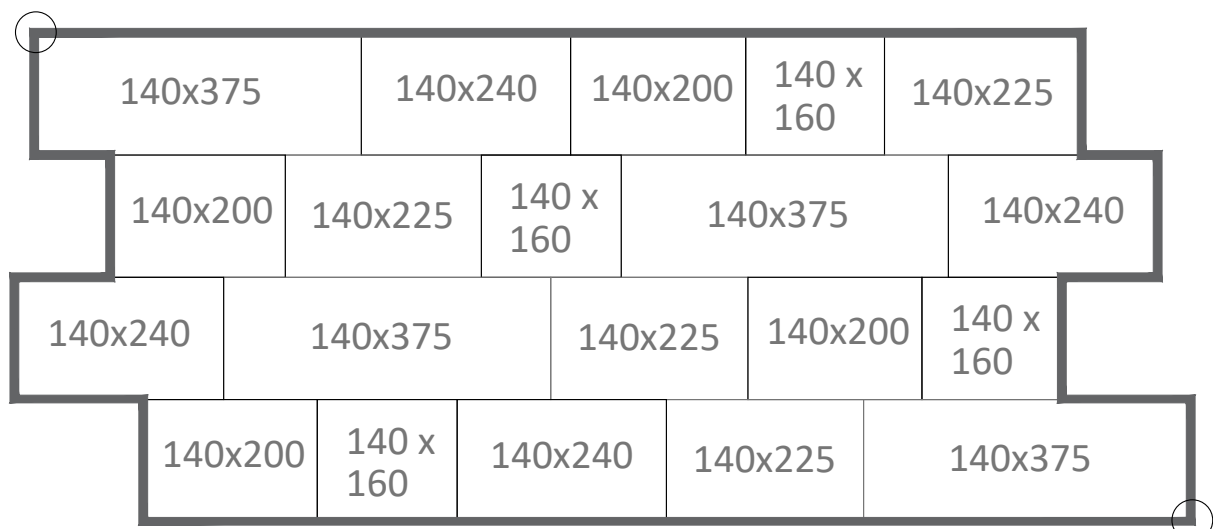
EXAMPLE BONDING PATTERN

**Country Stone Walling mixed pack
– 5 various block lengths X 140mm course height**

Product	Sizes Per Pack
Country Stone (single course mixed length, all sizes in one pack)	375x100x140
	225x100x140
	160x100x140
	240x100x140
	200x100x140

A mixed pack of Country Stone walling contains 5 different block lengths which are all 140mm course height. They are built randomly by mixing all five sizes ensuring that perpendicular joints do not directly line up.

Below is one example of how this can be achieved.



**Example Bonding Pattern
5 various block lengths X 140mm course height**

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.

Installation

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

Colour

Tobermore produces paving and walling products with excellent density and durability, however, as with all concrete products, slight colour variations are inevitable. Although every effort is made to ensure consistency of product colour, variations can occur. In particular, single colours such as Golden, Buff, Natural, Charcoal and Red will have variations. Tobermore therefore recommends that products are thoroughly mixed on site by drawing from a minimum of four pallets.

We would always recommend that when purchasing products, especially in larger quantities, that they are all ordered and manufactured in one batch to reduce the chances of getting colour variation.

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

All colour illustrations in Tobermore's brochures 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.

Efflorescence

Efflorescence is a white crystalline deposit that occurs naturally on the surface of concrete materials. 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 on-site, and installation (for example, during any plate vibrating process). In Tobermore's experience, these marks usually weather off through time. (EasyClean products are protected with a glue dot)

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.

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.

Laying multi-blend coloured paving blocks, flags and walling products

To achieve an even blend of colour when laying multi-blend paving blocks, flags and walling products, it is desirable to mix from three or four different pallets.

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 FACING BRICK/ ENGINEERING QUALITY BRICKS & COUNTRY STONE PRODUCTS

Important Note:

Where the circumstances allow, it is beneficial to complete one building / structure using bricks taken from one batch and mixed on site from a minimum of 3 packs to avoid colour banding / shading. If the circumstances do not allow for this then it is important to minimise the possibility of banding / shading by always mixing bricks from 3 packs concurrently with some overlap between deliveries.

Where the site conditions allow, it will also be beneficial to take receipt of as many bricks as possible at an early stage to maximise colour consistency throughout the site.

Installation – Facing Bricks/Engineering Quality Bricks

Please refer to Tobermore's detailed 'Guide to the use of Tobermore Concrete Bricks' available on our website: www.tobermore.co.uk

Installation – Country Stone

Tobermore's Country Stone products are designed to recreate traditional stone sizes and to co-ordinate with standard cavity wall construction. When used in housing projects, a clear cavity must be retained.

All work must be protected during construction and must be designed and built in accordance with accepted industry standards and practice. Builders familiar with conventional brickwork will find that similar installation principles apply.

Joints can be finished flush or tooled depending on the overall effect required. Raked joints are not recommended. It is vital that all horizontal and vertical joints between Country Stone blocks must be compacted and free from voids. Shell bedding should not be used.

Good Practice during Construction - Facing Bricks/Engineering Quality Bricks & Country Stone

- If mortar dry's on the surface of the bricks it will stain the product and may not be removed.

- Mortar extruding from joints should be removed when the mortar is wet and during the process of laying.

- Any mortar smears on the brick surface should be removed by dry or wet brushing.

- Scaffolding should be installed as per regulatory instructions. Please note that mortar can drop and hit the scaffolding and then also go onto the wall. You should inspect the work area at all times to ensure the brick surface remains mortar free.

- When it rains be careful that any wet mortar on the scaffolding does not get 'splashed' onto the wall.

- When work stops or is interrupted by inclement weather conditions, brickwork should be protected immediately with polythene sheeting that is held in place with a suitable fixing. If new brickwork is not protected efflorescence, patchy mortar colour, patchy brickwork and staining can occur.

- Bricks should always be covered with polythene sheets to avoid getting damp or dirty when not being used.

General Cleaning Advice - Facing Bricks/Engineering Quality Bricks & Country Stone

- It is always important to keep bricks as clean as possible while laying and tooling. See Good Practice above.

- If mortar has been allowed to dry on the surface of the bricks the options you have to clean it off are as follows; Each process should be tested first and should ensure the facing bricks are not damaged - a. Dry brushing b. Wet brushing c. Using a 'like coloured' brick to rub the stained brick d. Pressure washing - should only be used as a last resort as it will damage the surface and the mortar joint if not completed correctly (this method cannot be attempted until the area has been allowed to set for a minimum of 7 days).

- Acid cleaning should be avoided.

Movement Joints and Mortar Guidance - Facing Bricks/Engineering Quality Bricks & Country Stone

1. NHBC recommends that walls constructed of concrete facing bricks should have vertical movement joints included every 6m to allow for drying/shrinkage, see PD6697:2010 section 6.2.6.3.4, maximum ratio for brickwork panels is to be 3:1 length : height. PD6697:2010 section 6.2.6.4 gives advice on joint positions, the benefit of brickwork reinforcement at window openings is covered in section 6.2.6.7 of the same document. Movement joints should be planned prior to commencing any construction to enable them to be concealed behind down pipes etc. and ensure the aesthetic of the building is maintained.

2. It is important to ensure that the mortar specified for the construction is suitable for the contract, see table 15 of PD6697:2010 - class M4 is the maximum recommended for normal external facing brick walls. This should not be exceeded when using Tobermore Concrete facing bricks.

3. We would recommend that you discuss this guidance with all parties involved in the design, construction and installation of this scheme. We also recommend that you refer to BS EN 1996-1-1 and PD6697:2010.

4. Specific professional advice should be obtained at all times before commencing building work.

Important Guidance Information: Tobermore Concrete Facing & Engineering Quality Bricks

1. Professional advice, specific to the project, should be sought before commencement of the building work.

2. Tobermore Facing Bricks and Engineering Quality Concrete Bricks have different properties. These properties will also be different to clay bricks especially in relation to moisture movement. Please refer to 'Guide to the Use of Tobermore Concrete Facing Bricks', which is available on request or at www.tobermore.co.uk

3. Tobermore recommends that vertical movement joints be spaced at no more than 6m apart. Panels of brickwork where the length: height ratio exceeds 3 are particularly vulnerable to cracking; if they cannot be avoided they should include movement joints at closer centres.

4. Movement joints should be planned prior to any construction so that they can be concealed behind drainpipes etc. Further guidance on moisture movement is available in the 'Guide to the Use of Tobermore Concrete Facing Bricks' and BSI documents BS EN 1996 (Eurocode 6) and PD 6697 (Recommendations for Design).

5. It is important to ensure that the mortar specified is suitable for the construction, see Table 15 of PD 6697. Mortar of strength class M4 will generally be suitable except where engineering quality brickwork is required. Please refer to 'Guide to the use of Tobermore concrete facing bricks', which is available on request.

6. When building with dissimilar materials allowances should be made for differential movement. Design guidance from a structural engineer should be sought when combining dissimilar materials such as clay and concrete facing and Engineering Quality bricks. Examples of using dissimilar materials would be where a clay brick is used to build up to the dpc level and then Tobermore concrete facing bricks are used above the dpc. Another example would be where Tobermore Engineering Quality concrete bricks are used below dpc level and then clay facing bricks above the dpc. In some circumstances the dpc acts as a slip plane to separate the two materials which helps to dissipate tensile stress. However expert guidance should always be sought as to ensure structural stability as further slip planes or bed reinforcement may need to be incorporated into the design.

7. It is recommended that this guidance is discussed with all persons involved in the design and construction of the building work.