



ORIGINALSTYLE

Tiles to Inspire

Victorian Floor Tiles FIXING GUIDE



Victorian Floor Tiles

FIXING GUIDE

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Introduction

Geometric floor tiles are part of Britain's heritage and were used originally to ornament medieval churches and monasteries and the homes of aristocracy. Their popularity was enhanced in the 1830s with the accession to the throne of the young Queen Victoria and they soon became the hallmarks of the new romantic movement.

At home, both plain and decorated tiles started to be used in every type of property and situation from porches in terraced houses to bathrooms in stately mansions. Today's nostalgia for Victorian elegance has led to Original Style recreating these classic floor tiles, using modern production methods combined with traditional clay colour stains.

In this planning and fixing guide* you will find useful information when embarking on such a project.

The guide is split into the following sections:

- Planning
- Installation
- Sealing and Cleaning

*Please note this guide is not intended to be a definitive guide to fixing Victorian Floor Tiles and should not be relied upon as such. If you are uncertain about anything having read this guide you should ask your Original Style dealer or consult a professional tiler/ installer.

We strongly recommend that our tiles are laid by an experienced professional tiler.

The satisfactory installation of all ceramic tiles depends on their application to a sound, level surface and use of the correct adhesive for that surface. Laying directly into wet cement is not recommended.

Detailed guidelines are set out in BS5385: Part 3: 2014

The right tools for the job

These tools will help you complete your tiling project to a professional standard. Most are readily available to buy or hire.

Adhesive spreader/ bedding trowel	The notched edge of this tool ensures an even spread of adhesive of an even depth.
Chinagraph pencil	For marking any tiles that need cutting. This will not stain the tiles and will resist being washed away when using a water-fed cutting machine. Never use a felt tip pen as they can leave permanent marks.
Drill bit	Use a masonry or tile drill bit.
Electric water-fed diamond wheel cutter	A diamond wheel cutter is the best way of cutting difficult tile shapes. These are available from tool-hire companies, tile shops, or DIY stores. Follow the manufacturer's advice regarding protective goggles, masks and gloves.
Eye protection, gloves and dust mask	It is vital that you use all possible protection when using any cutting or drilling machinery. Always use personal protective equipment as advised by the HSE. Visit www.hse.gov.uk for further health and safety advice.
Gauging trowel	For removing the grout from its container, or the vessel used for mixing the grout. Use it to place adhesive onto a trowel.
Grout finishing tool	This tool is run along the grout lines before they set completely to give consistent, neat finished grout lines. A piece of dowel can work just as well.
Spacers	These small pieces of plastic are inserted between the tiles to provide consistent spacing. Push them in side-on so they are at right angles to the surface and place them at regular intervals to maintain the spaces. Remove them before the grout is applied.
Spirit level/laser level/plumb line	One or more of these tools will be necessary to ensure that your tile installation is level and that verticals are straight. A plumb line can be made from a small weight on a length of string.
Sponges	Use to remove grout residue and for smooth joints. Always use new sponges and grouting tools rather than old sponges and tools which may have adhesive or grout residue which could scratch tiles.
Squeegee or rubber trowel	Used for spreading grouting compound into the spaces between the tiles.
Ruler/tape measure	For accurate measuring.
Scribe and snap straight cutter	Scribe and snap machine for straight cuts.
Tile gauge	A device for accurately measuring and shaping your tiles.
Tile nippers	A specialist tool for 'nibbling' away unwanted sections of tiles.
Wedges	These are wooden or plastic for minute tile adjustment.

Selecting your tiles

This is obviously the most important (and enjoyable) task! With such a large range of patterns and colours to choose from you may like to take some samples home to see how they fit in with your furnishings and decorations.

If you are in any doubt about the suitability of Victorian Floor Tiles for your particular requirements, please ask for advice.

Designing and planning a Victorian Floor layout can be a time consuming and complex task. Use this guide, in conjunction with the latest Victorian Floor Tile brochure and website www.originalstyle.com to help you decide on patterns, colours and border options.

We also offer a custom 3D visualisation service to help you plan your Victorian floor tile installation. Ask your Original Style retailer for details.



Preparation

The secret to a perfectly laid floor is to lay the tiles as flat and evenly as possible. To do this successfully you need the firmest, flattest surface to start work on.

Some surfaces are ideally suited to tiling, others require a certain amount of preparation first.

IMPORTANT NOTE:

All surfaces must be allowed to dry out completely before tiling. Failure to do this can result in moisture being trapped behind the tiles causing them to become loose.

Sand and cement (screed) floors must be completely dry. Allow at least one week for every 25mm (1") of new screed to dry out. Depending on weather conditions it may take longer.

Concrete should be allowed to dry out for a minimum of 6 weeks.

Tiles are completely inflexible. With this in mind, it is important to ensure the substrate will not move otherwise cracking or de-bonding will occur. If there is movement in the substrate, we strongly advise that you seek professional advice before proceeding any further.

Timber and joist floors are not suitable surfaces for the direct installation of tiles due to the potential for movement (see above). All wooden substrates should be overboarded with cementitious tile backer boards in accordance with the manufacturer's instructions. If in doubt consult a professional before proceeding.

Old stone, quarry and vinyl floor tiles are best removed. If this is impossible or impractical, and they are completely sound, they should be thoroughly cleaned of oily deposits.

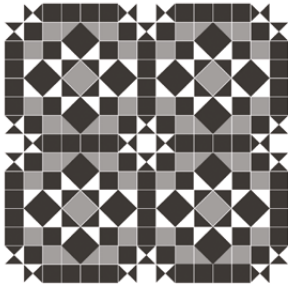
Exterior use

Original Style Victorian Floor Tiles are suitable for outdoor use and are frost resistant, provided that they are laid in such a way that rainwater drains freely off them and cannot penetrate beneath and between them. Tiles should not be laid on flat, asphalt-covered roofs in areas subject to frost. Tiles laid outdoors should be impregnated to increase their water repellence. Please see section on sealing on pages 20-21.

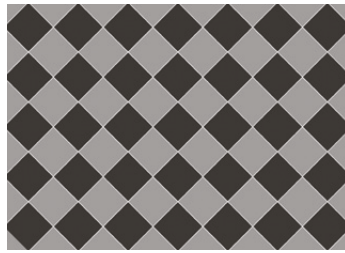
Planning

The key to achieving a Victorian geometric tiled floor that will give pleasure for decades to come is careful advance planning. The following brief guidelines apply to a typical rectangular floor tiled with both a central pattern and a surrounding border.

1. Measure the dimensions of the area to be tiled.
2. Work out the width of the proposed border design, remembering to allow 2mm ($\frac{1}{16}$ "") for each joint.
3. Calculate the length and width of the area available for the central pattern by subtracting twice the border width from each dimension of the overall area.
4. Decide the dimensions of your chosen pattern that will fit into the area calculated in (3) above to give a satisfying, symmetrical finish. This will not necessarily be a whole number of pattern repeats and will usually involve cut tiles along the edges (see Fig 1 a & b).



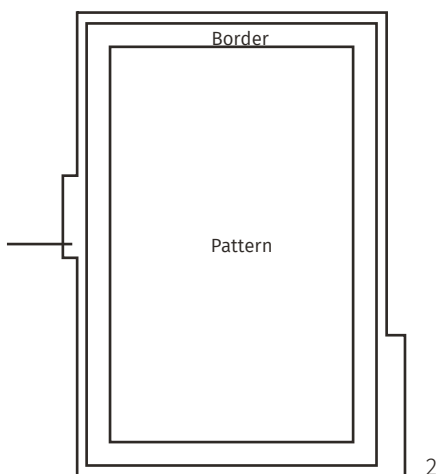
1a



1b

Planning

5. The pattern decided on in (4) with the border laid around it will cover slightly less than the total floor area. Furthermore, there will be irregularities, such as doorways, along the perimeter of the room. Order a supply of 151mm (6") square and/or 151 x 75mm (6" x 3") rectangular tiles in an appropriate colour, which can be cut to fill the remaining space (see Fig 2).
6. Alternatively, if the standard border design that you are using has 151 x 24mm (6" x 1") rectangles along the outer edge, replace these with 151 x 75mm (6" x 3") rectangles which can be cut to fit. You can then make a feature of doorways with a geometric pattern of your choice.
7. Always order a few spare tiles of each size and colour used in your layout to allow for damage in cutting and to avoid delays caused by having to re-order small quantities of tiles at short notice.

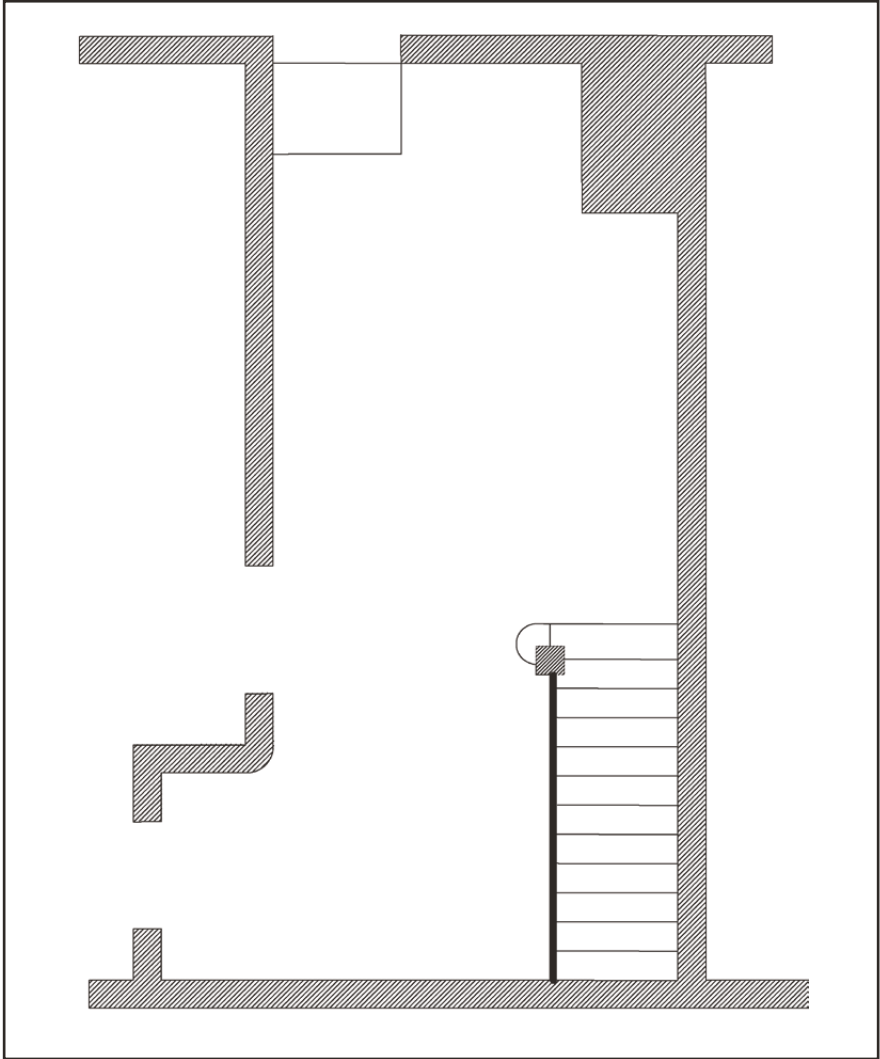


Computer Aided Design. We offer a custom 3D visualisation service to accurately plan your Victorian floor. For more details ask your Original Style retailer.

Planning

Floor plan

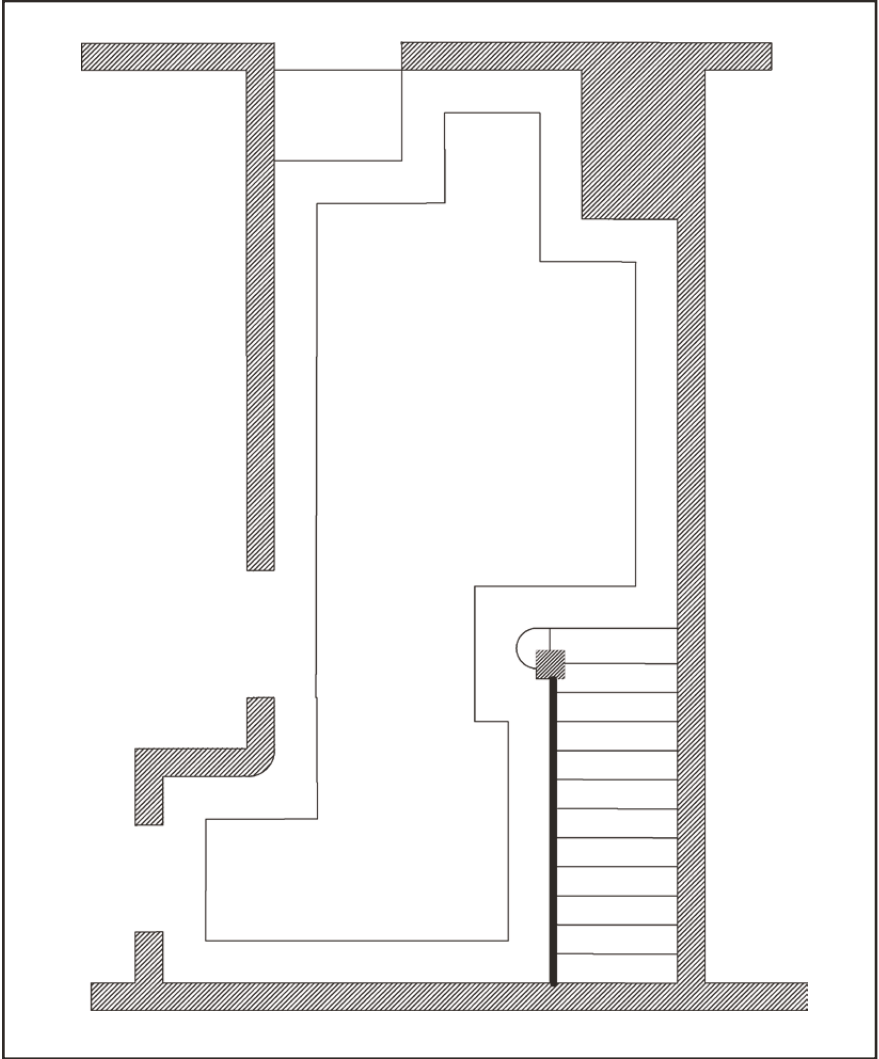
Area of floor on which tiles are to be fitted. This example shows typical features that may be encountered in a traditional hallway. The finished floor can be viewed on page 16



Planning

Calculating main pattern area

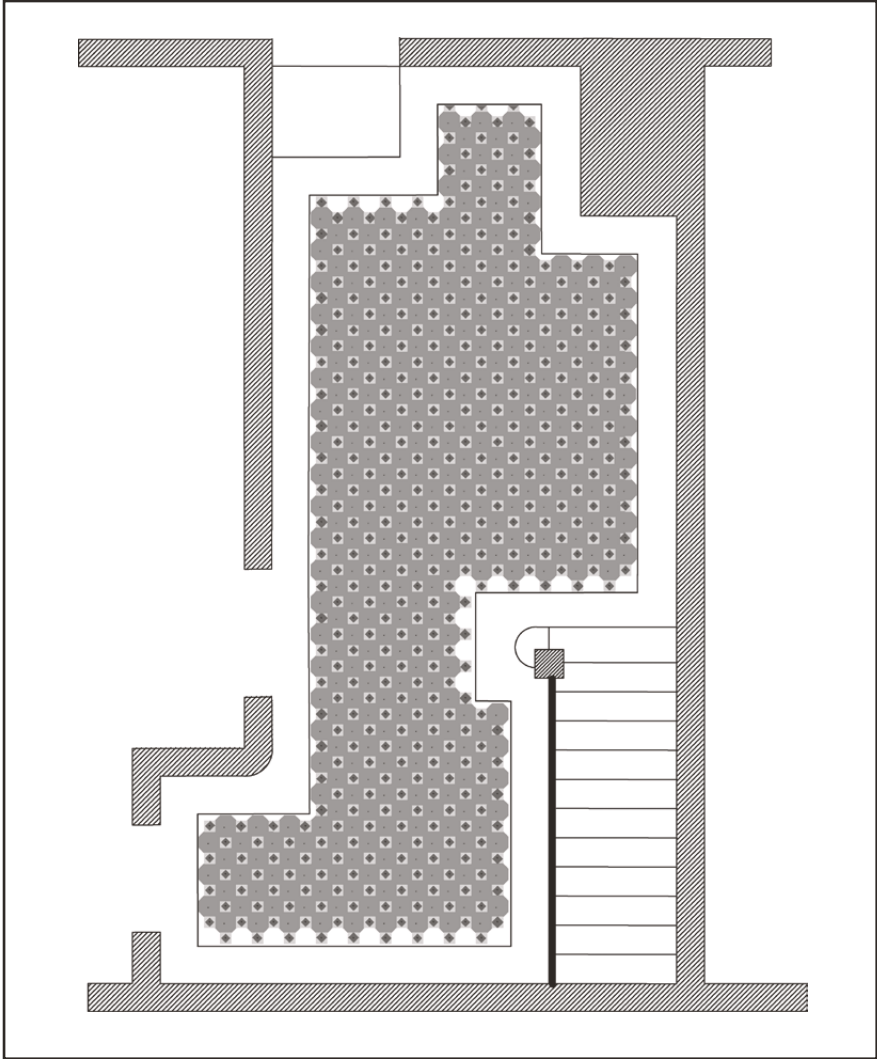
Deduct width of chosen border from perimeter of the floor area.
This will leave the area of the main pattern.



Planning

Positioning the main pattern

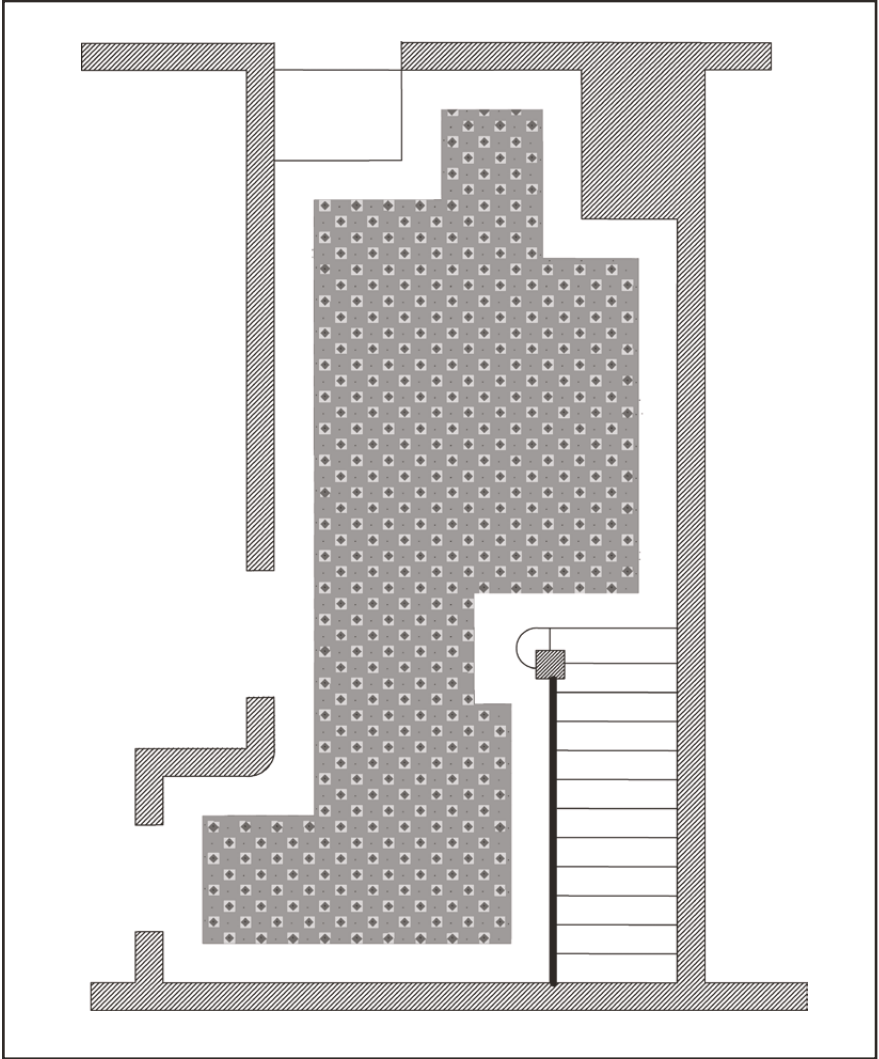
Position tiles of main pattern within the area. The outer edges of the main pattern should not intrude into the space allocated for the border.



Planning

Completing the main pattern

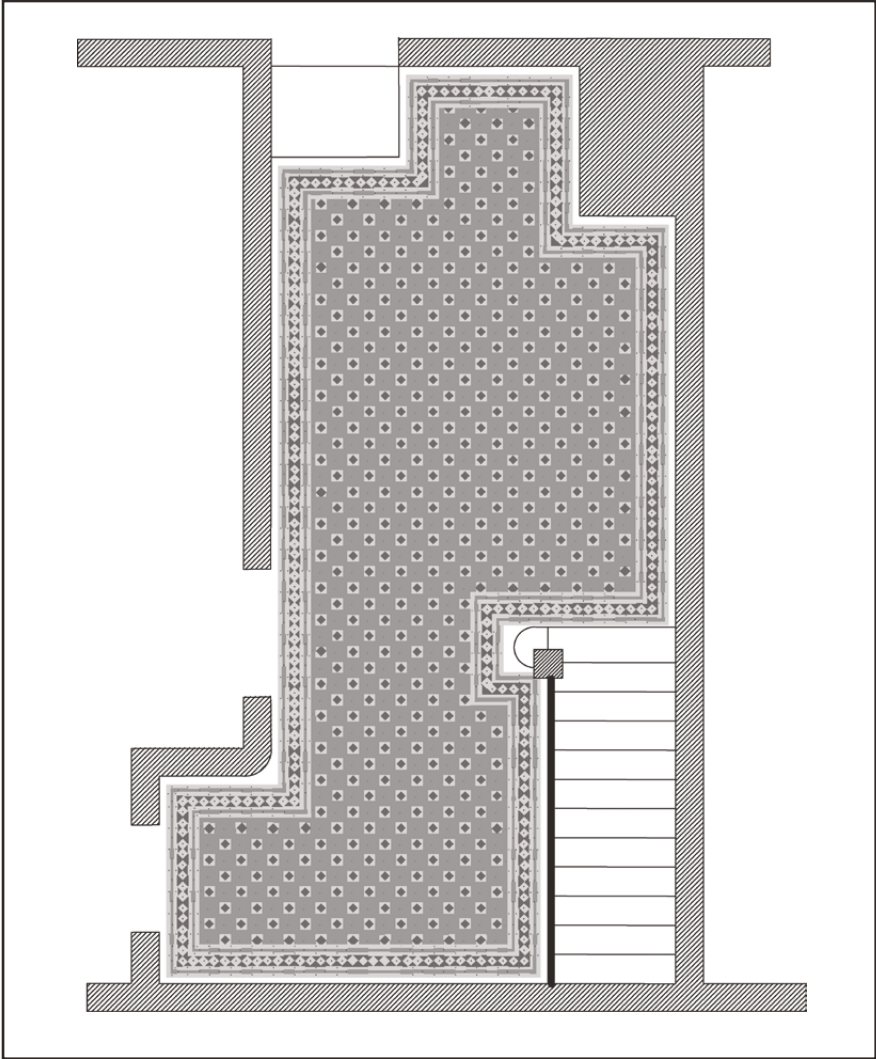
By using the appropriate tiles (cut if necessary), complete the outer edges of the main pattern.



Planning

Border

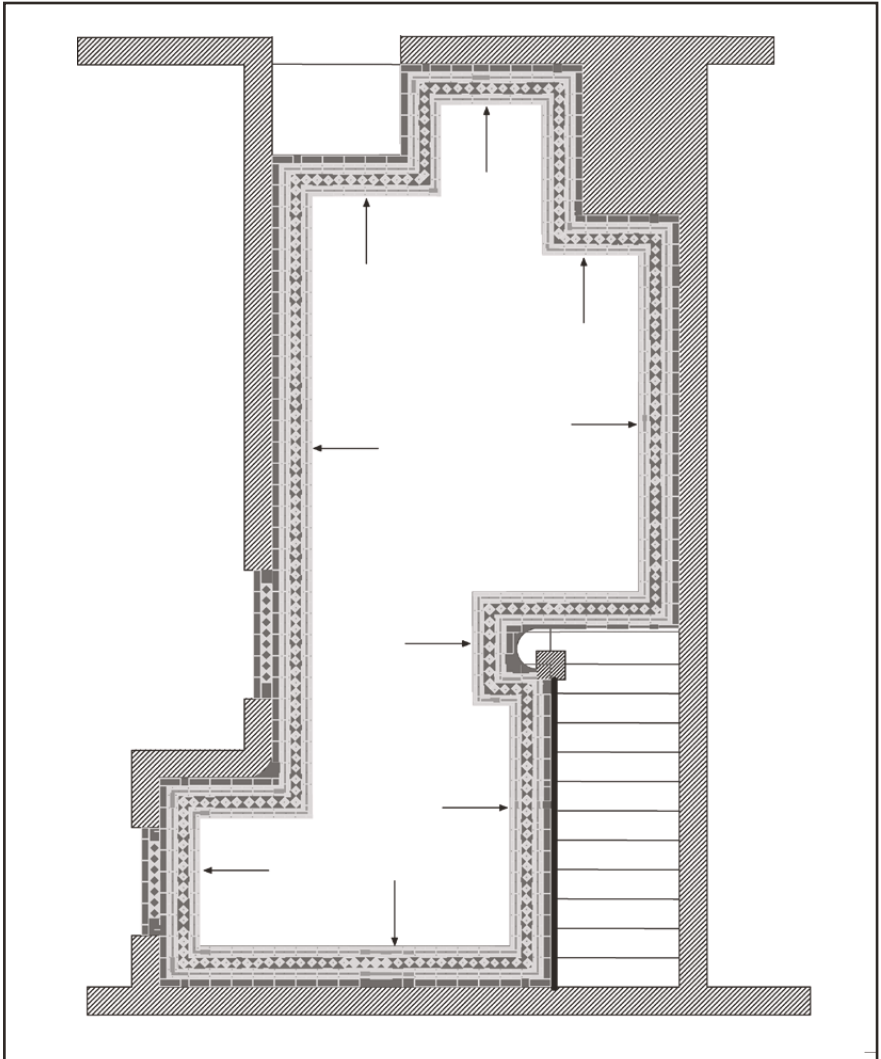
Fit the border around the main pattern leaving any space between border and wall empty. NOTE: See diagram on next page on fitting the border.



Planning

Fitting the border

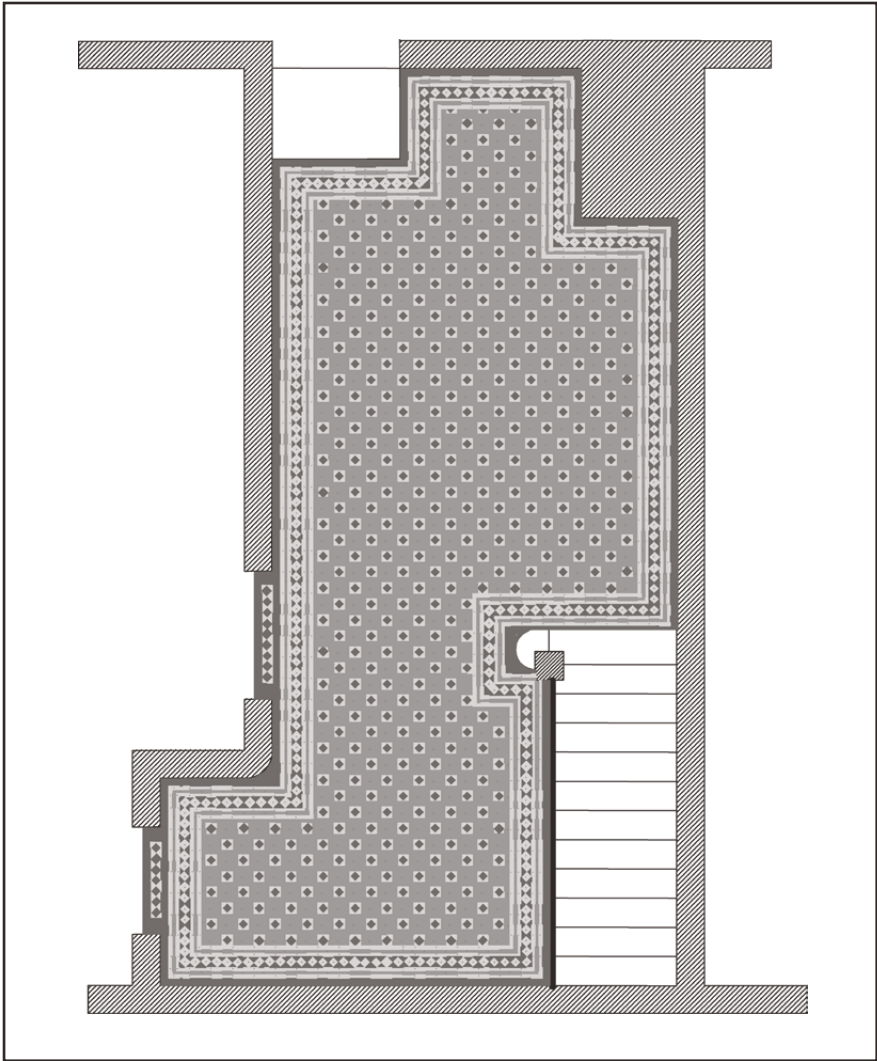
In this example, the spacing of the square tiles (set at 45°) has been increased from the suggested 2mm (1/16") so that each corner has a full tile. Enlarging or reducing the grout space can help avoid cut tiles in borders.



Planning

Border

Finally, fill in the remaining space around the outer edge of the border with tiles cut to size. Turn the page to see the finished result.





Installation

The following step-by-step guide is designed to explain the particular requirements of Victorian geometric tiles. It is not a comprehensive manual for floor tile laying.

We strongly recommend that our tiles be laid by an experienced professional tiler.

The satisfactory installation of all ceramic tiles depends on their application to a sound, level surface and use of the correct adhesive for that surface. Laying directly into wet cement is not recommended. Detailed guidelines are set out in BS5385: Part 3:2014

Caution

Because Original Style tiles are made of natural clays, some shade variation may occur between one tile and another of the same colour. It is therefore important to ensure that such shade differences are evenly distributed before installing the tiles.

Ensure tiles are clean and free of dust and dirt; seal the individual tiles before any installation commences.

Size variation

Due to the nature of the clay firing process tile dimensions may vary by up to one per cent above or below the stated size. Installers should particularly be aware that patterns such as Dorchester and Oxford, consisting of tiles of one nominal size in two different colours, may require increased grout spacing to allow for this variation.

Sealing

Our Victorian floor tiles are unglazed and although they are classified as vitrified we do recommend that they should be impregnated before and after installation, please see section on sealing on pages 20-21.

Installation



1

Check that the floor is level and that it has a dust and grease free surface. (Wooden floors should be made as stable as possible with sheets of 18mm marine plywood screwed down at 300mm/12-inch centres.)



2

Accurately measure the floor, including the dimensions of irregular features, such as doorways.



3

Determine the exact centre of the floor and draw central grid lines in both directions with a chalk line.



4

Without adhesive, lay a row of tiles along each grid line (width and length), see fig 6, leaving 2mm (1/16") between each tile and wider movement joints where necessary (see national standards). Adjust the tiles until you have achieved the symmetrical layout that you want (see Fig 1 in previous section).



5

Use a serrated-edge trowel to lay an even, solid bed of adhesive 3-6mm (1/8 x 1/4") thick. Use the adhesive recommended by a reputable adhesive manufacturer for your particular conditions (floor surface, interior/exterior etc).

Important: Do not lay tiles directly into a bed of wet sand and cement, as this may give rise to efflorescence ("bloom") on the surface of the tiles.

6

If the pattern allows, lay the larger tiles first with 2mm ($\frac{1}{16}$ ") spacers between them. In patterns such as Oxford and Dorchester (see brochure), which use tiles of the same shape and size in different colours, there may be a size variation which will have to be allowed for with extra spacing. This variation is an inevitable result of the clay firing process and is within the tolerance permitted by EN14411.



7

Place the smaller tiles in position, leaving even spaces between them and the larger tiles.



8

Lay the border tiles. The most professional result can usually be achieved by starting at the corners and working towards the centre. In borders with small tiles, cutting can usually be avoided altogether by slight adjustments to the spacing. With larger border designs, make your cut at the centre point of each length of border (i.e. half-way between 2 corners) for a neat, symmetrical finish.



9

Where borders follow irregular perimeters with several inside and outside corners, mitring, as shown in this photograph, may be inevitable. Original Style tiles are hard, but can be neatly cut with a heavy-duty, professional "score and break" tile cutter.



Tiles should be spaced **2mm ($\frac{1}{16}$ ")** apart and grouted with a grey cement based grout. We only recommend the use of a light grey cement based grout for the installation of these tiles. Pigments in coloured grouts, including black, may cause staining - even if the tiles are impregnated prior to grouting.

Victorian Floor Tiles are suitable for use with under-floor heating systems. Please refer to the manufacturers' instructions for installation.

Sealing

Interior use

Victorian Floor Tiles are unglazed and although they are classified as vitrified we recommend that they should be impregnated to protect against any staining. Tiles laid in interiors should be impregnated or surface sealed.

For kitchens, commercial installations and exteriors:

apply an impregnating sealer such as Lithofin KF Stainstop or LTP Mattstone. Impregnate the tiles prior to grouting, after cleaning and fully drying. Impregnate again after grouting, cleaning and drying. Impregnators must not be allowed to dry out and must be fully wiped off the tile while still wet. If needed, add more impregnator during the process to prevent drying out.

The following products can be used:

**Lithofin: Apply Lithofin KF Stain-Stop prior to grouting. Leave to absorb and cure before applying the grout. Once the grouting has dried, apply Lithofin KF Tile Polish.

*LTP: For a natural finish use LTP Mattstone and maintain with LTP Wax Wash.

For a sheen finish use LTP Glaze Protector and maintain with LTP Floorshine. We recommend a cement based light grey grout to reduce the possibility of staining. Follow all manufacturers' instructions carefully.

Exterior use

Victorian Floor Tiles are frost resistant and therefore suitable for outdoor use provided these guidelines are followed.

- Make sure that the tiles are impregnated before installation and after installation.
- Lay on a gentle slope and in such a way that rainwater drains freely off them, and cannot penetrate beneath and between the tiles.
- They should not be laid on flat, asphalt-covered roofs in areas subject to frost.
- Thoroughly clean and dry tiles before applying any sealing products.
- Use a cement based light grey grout to reduce the possibility of staining.
- Impregnate before grouting. Also impregnate following grouting after cleaning and allowing to fully dry. Follow all manufacturers' instructions carefully.

Location	Sealing, stain protection
Interior floors, walls	Impregnator or surface sealer
Bathroom floors	Impregnator or surface sealer
Shower floors	n/a
Exterior floors, walls	UV resistant impregnator
Around swimming pools	n/a
Use with under floor heating	Make sure heating is off when impregnating/sealing tiles and during drying time

Check with your retailer for the most appropriate products available in your country. Always follow the manufacturers' instructions for all adhesives, grout and sealing products.

a) Impregnating before installation

Application of penetrating sealers

The correct application of penetrating sealers is important. Follow the manufacturer's application guidelines. The tile surface must be thoroughly clean, dry and free of any material that may prevent the sealer from penetrating. Apply the sealer following the manufacturer's instructions. A lint-free roller should be used. Do not allow the penetrating sealer/impregnator to dry on the surface. Penetrating sealers have a life expectancy of certain years, so please check this before installation as this will eventually need to be replaced. Please seek advice on this from the sealer manufacturer.

NB: Not all adhesives, cleaners, grouts and sealers are equally suitable for all types of tiles. We do not recommend mixing products from different manufacturers when impregnating /sealing tiles. Please take advice from your tile and sealant supplier.

b) Impregnating after installation

Switch off any underfloor heating and wait until the floor cools before applying any sealants when all floors are totally dry. See note above regarding suitability. Floors need at least one layer of impregnator/ sealer prior to grouting and after grouting to seal the grout. Make sure you use only new brushes and new, clean, lint-free white cloths for sealing and keep dirt and dust away from the work area.

After the final seal, avoid walking on the floor until the sealer has set thoroughly (always follow the manufacturer's recommendations).

Cleaning And Maintenance

Please note, the use of certain acid based cleaning products may cause some tiles to react and change in character. It is advisable to test a new cleaning product on a small inconspicuous area before use. All manufacturers will have impregnators and suitable cleaning products to work in conjunction with their impregnators and sealers.

NB: Not all cleaners are equally suitable for all types of tiles. Take advice from your supplier. However, pH neutral cleaners are suitable for most tiles.

All spills should be cleaned up as quickly as possible.

Use only the recommended dilution of pH neutral cleaner. More is not always best; the higher concentration of detergent in the cleaning solution will only make it more difficult to rinse. If the floor is exposed to excessive spills or large amounts of traffic, a stronger cleaning agent may be required. These stronger cleaning agents should be on the alkaline side of the pH scale and generally have a pH of 9 or higher for the initial clean, after which reduce to a pH neutral cleaner. Follow the manufacturer's recommendations at all times when using these products as some may not be suitable for other surfaces in a room i.e. chrome finishes on showers and varnishes, paint etc.

Once the detergent has been applied allow it to sit as per manufacturers' recommendations then rinse thoroughly with clean, clear water, vacuum any excess water away and towel dry the floor to eliminate water marks and streaks.

Steam Cleaning

We do not recommend steam cleaners or steam mops to clean our tiles.

Steam cleaning may remove or render ineffective any sealer that has been applied, leaving the tiles unprotected.

Adhesives and grouts

Selection of the correct adhesive and grout is crucial to a successful, trouble-free tile installation. Detailed adhesive selection guides are published by the major adhesive manufacturers, including:

Building Adhesives Ltd (BAL)

Longton Road
Trentham
Stoke-on-Trent
ST4 8JB
Telephone 01782 591100
www.bal-adhesives.co.uk

Ardex (UK) Ltd

Homefield Road
Haverhill
Suffolk
CB9 8QP
Telephone 01440 714939
www.ardex.co.uk

It is imperative to follow the manufacturers' instructions on the products and, if in doubt, please consult the dealer you purchased the products from or your installer for more information.

Always follow the manufacturer's directions when mixing and applying installation materials. Take special care to note if a product is suitable for interiors and exteriors as well as floors. A recognised adhesive manufacturer will have a range of products, each appropriate to specific substrates.

NB: Not all adhesives, cleaners, grouts and sealers are equally suitable for all types of tiles. Take advice from your supplier.

Limits of liability

Original Style accepts no liability for the faulty installation of its products. In the case of any claim relating to the tiles themselves, Original Style's liability, to the extent permitted by law, is limited to either the replacement of the product or a refund of the cost of the product, and does not extend to cover any consequential loss. Claims must be reported within seven working days from receipt of the tiles. Tiles must be inspected prior to installation and claims cannot be considered after the tiles have been installed. Please be advised that installation constitutes acceptance of the quality, colour, size, texture and shade of the tiles. Original Style warrants that its tiles conform to their description and are fit for their purpose. Original Style makes no other express or implied warranty as to fitness or suitability of the products for particular installations. We extend no guarantees, express or implied, as to wear resistance or maintenance procedures. Original Style do not recommend bedding these tiles in sand and cement.

It is imperative to follow grout and adhesive manufacturers' instructions regarding their suitability with our products. If in doubt please consult the grout/adhesive stockist from whom you purchased the products. Original Style makes no representations as to the fitness for purpose of third party adhesives and grouts.

Please note the use of certain acid based cleaning products may cause some of the tiles to react and change in character.

Please note, this Fixing Guide does not apply in the USA. In the USA please follow the recommendations of a reputable adhesive manufacturer and always comply with American National Standards Institution (ANSI) specifications as set out in the Handbook for Ceramic Tile Installation published by the Tile Council of America.

Useful links:
ctioa.org
tileusa.com

Specifications

Geometric Victorian Floor Tiles	
Tested to:	BS EN ISO 14411:2016, in conjunction with BS EN ISO 10545 parts 1-16
Description:	Annex H, dry pressed with low water absorption 0.5% < Eb < 3% Group BIb, vitrified
BS EN ISO 10545-2:	Conforms to all standards of dimensions and surface quality.
BS EN ISO10545-2:	Length and width working tolerance: 7 cm < N < 15 cm + 0.9 mm N > 15 cm + 0.6% max 2.0 mm
MOHS UNE 67-101-92:	Surface Resistance: 7
BS EN ISO 10545-3:	Water absorption < 3%
BS EN ISO 10545-4:	Strength S > 1750 N
BS EN ISO 10545-5:	Coefficient of restitution: conforms to standard
BS EN ISO 10545-6:	Deep abrasion < 175 mm: conforms to standard
BS EN ISO 10545-7:	Surface abrasion for glazed tiles Wear rating on screen printed tiles: PEI Class 4
BS EN ISO 10545-9:	Thermal shock resistance: conforms to standard
BS EN ISO10545-12	Frost resistance: 100 freeze thaw cycles: no damage
BS EN ISO 10545-13:	Chemical resistance UA, ULA, UHA
BS EN ISO 10545-14:	Determination of resistance to stains > 3 Conforms to standard
BS 7976-2:	Pendulum 4S 96 slider [printed]: >63 dry and >49 wet Pendulum 4S 96 slider [unprinted]: >50 dry and >40 wet
BS 7976-2:	Pendulum TRRL 55 slider [printed]: >90 dry and >35 wet Pendulum TRRL 55 slider [unprinted]: >26 wet
DIN 51097:	Inclined platform test under wet bare foot conditions: A
DIN 51130	Inclined platform test under shod conditions: R10
96/603/ECC	Reaction to Fire: Class A1 _{FL}



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V1/04/23