
TM / TAYLOR MAXWELL®
The mark of choice.
distinctive™
cast stone masonry
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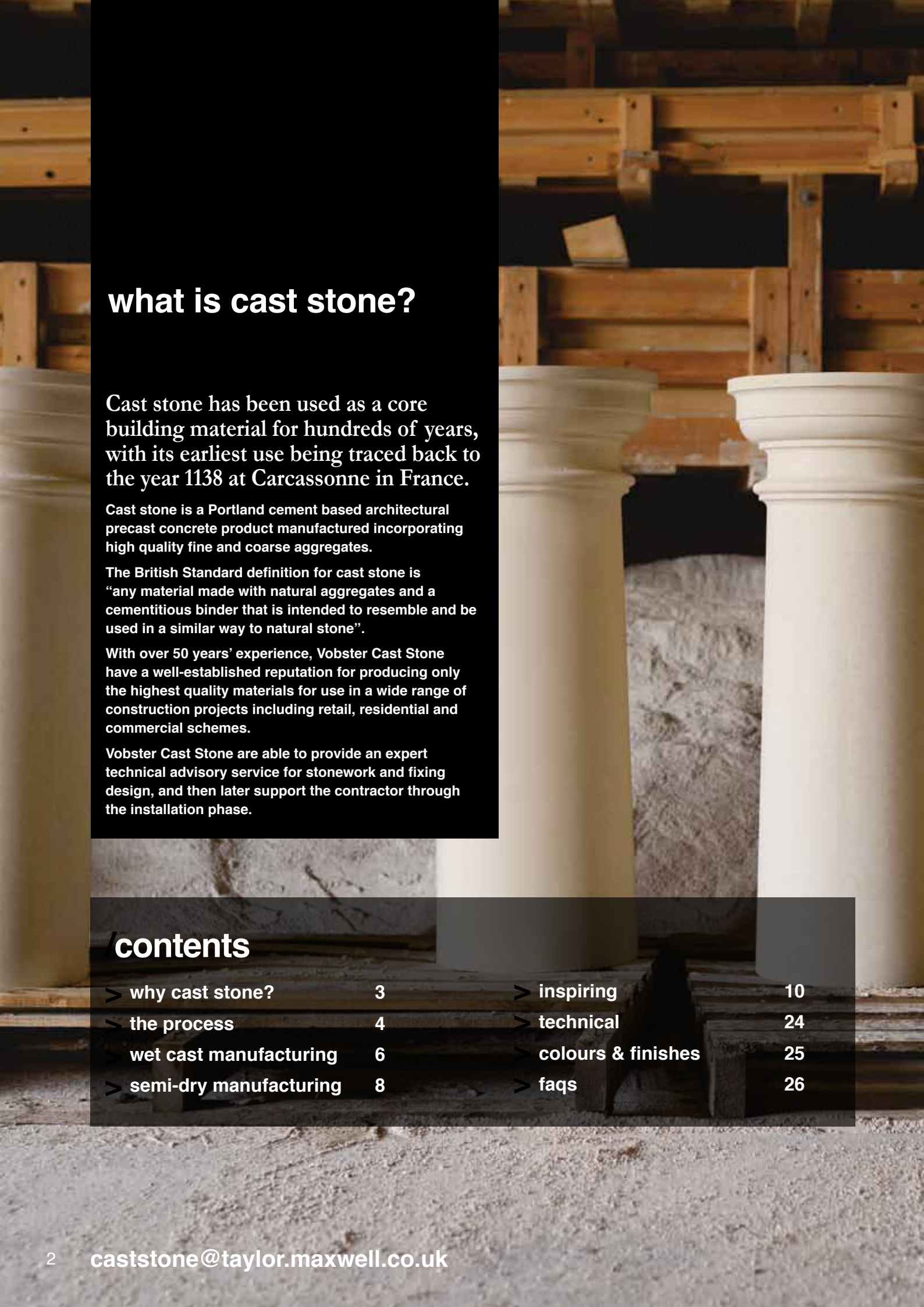


what is cast stone?

Cast stone has been used as a core building material for hundreds of years, with its earliest use being traced back to the year 1138 at Carcassonne in France.

Cast stone is a Portland cement based architectural precast concrete product manufactured incorporating high quality fine and coarse aggregates.

The British Standard definition for cast stone is "any material made with natural aggregates and a cementitious binder that is intended to resemble and be used in a similar way to natural stone".

With over 50 years' experience, Vobster Cast Stone have a well-established reputation for producing only the highest quality materials for use in a wide range of construction projects including retail, residential and commercial schemes.

Vobster Cast Stone are able to provide an expert technical advisory service for stonework and fixing design, and then later support the contractor through the installation phase.

/contents

why cast stone?

Cast stone has caught the imagination of architects and indeed their clients as it offers distinction by greatly enhancing and complementing the other building materials on a façade.

It is regularly used in areas with sensitive planning constraints or where quarried natural stone is the prominent material.

The use of cast stone also offers the designer flexibility to choose their required colour, texture, finish and stone unit dimensions. Frequently manufactured products include finishes to replicate quarried natural Portland and Bathstone.

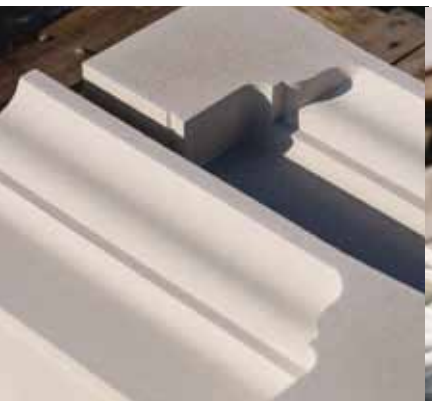
Vobster's wet cast standard Portland and Bathstone finishes contain no pigmentation, and are solely the natural colours of the aggregates within them.

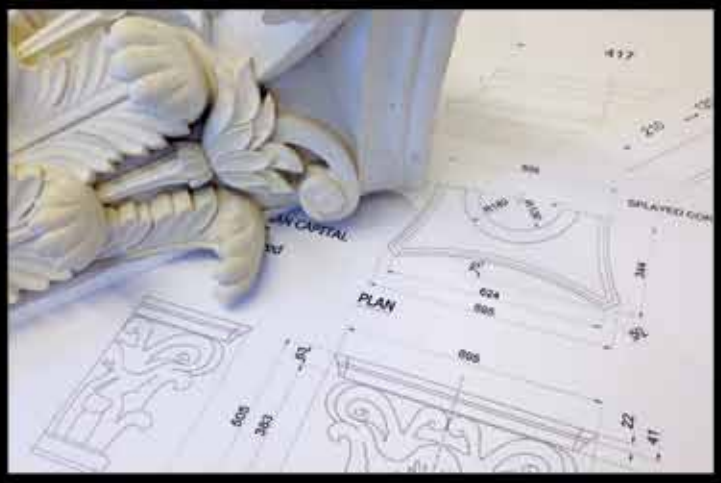
Its performance is superior to quarried natural stone with regard to its increased strength and reduced moisture absorption, resulting in improved freeze/thaw durability.

This opens up a new range of options to the designer such as bespoke sized units with stand-alone structural performance which is not achievable from quarried natural stone.

Due to the use of the highest quality handmade moulds, the finished product presents the designed level of detail with precise crisp sharp arrises. Vobster Cast Stone produces a finished product which is virtually impermeable and is able to withstand the corroding influences of the external environment.

Due to changes in legislation CE marking is always displayed where applicable.



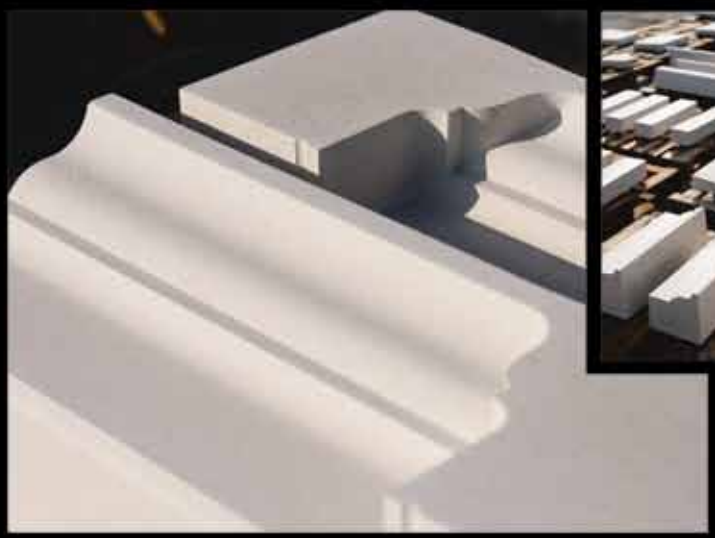


Architectural concepts and design intent are transformed into detailed stonework CAD drawings with full consultation and design consideration provided.

1 /design

Moulds are filled and the material compacted thoroughly, with reinforcement and cast-in fixings added if specified for either handling or full structural purposes.

4 /casting



7 /curing

Stones are cured to ensure the required product specifications are achieved, and their technical performance is maintained for the design life of the building.

Bespoke moulds are constructed from premium materials and designed to maintain the required level of detail achieving crisp sharp arrises to every stone.

2 /mould construction

Premium well-graded aggregates are batched with a cementitious binder to ensure a precise high-performance mix.

3 /mixing

Moulds are carefully stripped from the stones to ensure the units remain in perfect condition as they move to the next stage of the process.

5 /stripping

Stripped stones are dressed and then finished.

6 /finishing

8 /packaging

Installation guides are included within every pallet and all stones are labelled with their weights and unit specific codes. Due to changes in legislation CE marking is always displayed where applicable.

Stonework is delivered safely to site on an appropriate vehicle in accordance with site call-offs.

9 /delivery

wet cast manufacturing

The wet cast stone manufacturing process provides a close grained, smoothe and dense surface which offers precise rendering of fine detail.

The mix of raw materials in this process uses considerably more water than in the semi dry process covered in the next section. Wet cast manufacturing offers a through colour homogenous mix which when etched exposes the natural aggregate colours within the material. This gives the finished stone the look and feel of quarried natural stone.

Our standard Portland and Bathstone finishes contain no pigmentation, and are solely the natural colours of the aggregates within them.

The wet cast manufacturing process yields one cast per mould per day and can be produced in large units with complex reinforcement to form structural units of high tensile strength.

…precise, strong, durable…beautiful

vobster

semi-dry manufacturing

The semi-dry cast stone manufacturing process involves the use of a lower water content than the wet cast process.

The semi-dry process facilitates multiple casting from each mould at a faster rate than wet cast due to the reduced moisture content. In most cases the moulds can be stripped from the finished product almost immediately.

Having the ability to quickly turnaround the use of each mould as part of the semi-dry process, offers a significant cost saving over the wet cast process.

In addition, this method of manufacturing requires no secondary treatment, and can be supplied in most colours to match existing stonework.

The process is highly suited to regular building features such as Copings, Cills, Heads and String Courses.

…by hand, by craftsmen

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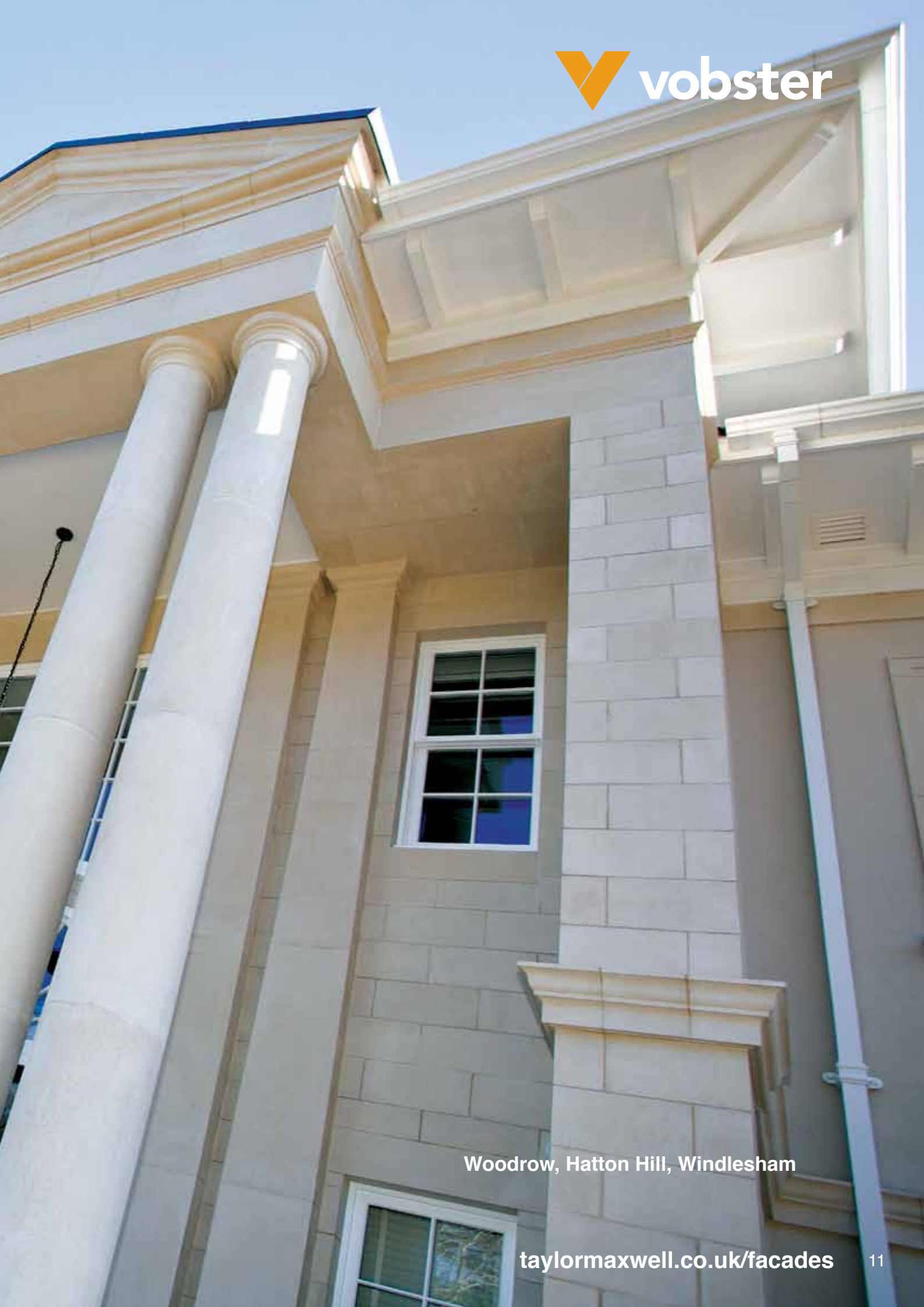
/inspiring



Woodrow, Hatton Hill, Windlesham

/inspiring

Woodrow, Hatton Hill, Windlesham

/inspiring

Hauser & Wirth Gallery, Somerset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/inspiring

Kings Square Studios, Bristol

/inspiring

Everyone Active Acton Centre, London

/inspiring

caststone@taylor.maxwell.co.uk

Marine Drive Pumping Station, Brighton

/inspiring

Wiltshire & Swindon History Centre, Chippenham


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/technical

material specifications

Project specific technical specifications are written on request, however please see tables below for general values.

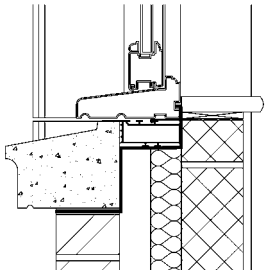
Wet cast masonry

Declared Performance	
Compressive strength	>35 N/mm²
Gross dry density	2300 kg/m³
Water absorption by capillarity	<1.0 gm/m²s
Moisture movement	0.17 mm/m
Reaction to fire	Euroclass A1
Dimensional tolerances	≤ 600mm +/-2mm 601-1000mm +/-3mm 1001-2500mm +/-4mm 2501-4000mm +/-5mm > 4000mm +/-6mm
Technical specifications	BS1217:2008, BS EN 771-5:2011 or BS EN 845-2:2003

Semi-dry masonry

Declared Performance	
Compressive strength	>25 N/mm²
Gross dry density	>2000 kg/m³
Water absorption by capillarity	<4.0 gm/m²s
Moisture movement	0.45 mm/m
Reaction to fire	Euroclass A1
Dimensional tolerances	≤ 600mm +/-2mm 601-1000mm +/-3mm 1001-2500mm +/-4mm 2501-4000mm +/-5mm > 4000mm +/-6mm
Technical specifications	BS1217:2008 or BS EN 771-5:2011

typical details



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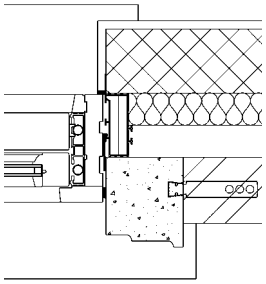

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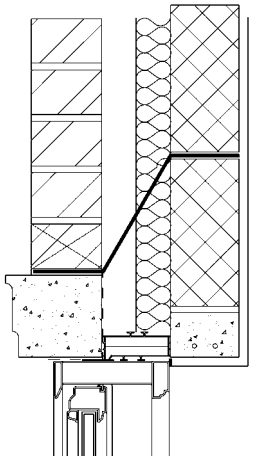
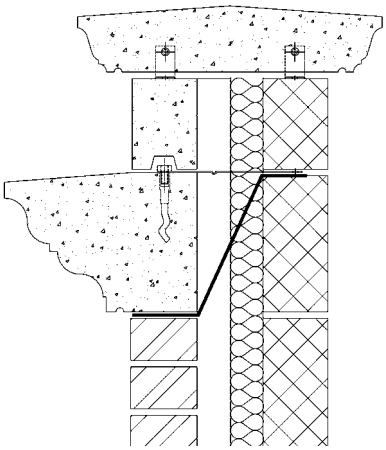


Head



Cornice / Coping

/colours & finishes

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wet cast

semi-dry

Other colours and finishes are available. Special colours or finishes can be produced upon request.

Every effort has been made to ensure swatches provide an accurate colour representation. However we advise clients to request an actual stone sample during the procurement process.

/frequently asked questions

Should I use wet cast or semi-dry and how do they differ?

Due to its increased water content and aggregate size, wet cast stone can be produced in large units with complex reinforcement to form structural units of high tensile strength. Wet cast uses a through colour homogenous mix which when etched, exposes the natural aggregate colours within the material. This gives the finished stone the look and feel of quarried natural stone.

The semi-dry process is highly suited to traditional regular building features such as Copings, Cills, Heads and String Courses. This method of manufacturing generally results in materials being on shorter lead-in times, and offers a more economical solution to wet cast.

How does cast stone compare with natural stone?

It is superior to quarried natural stone with regard to its increased strength and reduced moisture absorption, resulting in improved freeze thaw durability. Independent research has shown that over time, cast stone weathers much like quarried natural stone.

What colours and finishes are available?

The use of cast stone offers a designer the flexibility to choose their required colour, texture and finish. Frequently manufactured products include finishes to replicate quarried natural Portland and Bathstone, but many other variations are available as shown on page 25.

What shapes and profiles can be manufactured?

Moulds can be manufactured to achieve almost any shape or profile.

What are the recommended joint sizes?

Typically 6mm vertical and horizontal.


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feeling inspired?

contact your nearest facades solutions provider

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