



## Five tips for architects: How to get the most from cast stone



**Cast Stone**  
First Choice Solutions for Architects, Specifiers & Contractors

Cast stone is an extremely versatile material that is suitable for all types of construction project, from renovations, conversions and extensions, through to new-build houses, commercial properties, schools and places of worship. While it is often used to replicate traditional stone features, cast stone is equally effective for adding striking details to contemporary designs.

Extensive ranges of standard products are available either for delivery from stock or on short lead times, or bespoke products can be manufactured to order in specific colours and finishes. Cast stone also offers an exceptional degree of design freedom; almost any three-dimensional geometric form can be cast.

Procter Cast Stone is one of the UK's leading manufacturers and in this guide presents five tips to help architects make the most of this remarkable material.

## 1. Be creative – bespoke items can be very cost-effective

Almost any three-dimensional geometric form can be manufactured from cast stone, allowing architects to design elegant curves as well as straight-edged features. Additional detail can also be incorporated into the surface, such as brick-effects or channels, and the edges of units can be square, bevelled or radiused.

A variety of surface finishes and textures can be achieved, so it is essential that architects discuss their requirements with the manufacturer. This is especially so if exceptionally smooth surfaces are being considered, as the type of finish has a significant effect on the overall appearance.

Standard colours are available to match those of quarried stone such as York stone, Bathstone, Red Sandstone or Portland stone, while non-standard colours can also be produced to meet a client's specific requirements. Unlike quarried stone, the colour of cast stone is very consistent, both within a batch and from one batch to the next. If required, however, controlled variation can be introduced to mimic the effect found in quarried stone. Over time, cast stone weathers the same way as quarried stone.

Manufacturers usually have extensive ranges of standard products, but the manufacturing process means that bespoke items are also very cost-effective, whether they are variants of standard products or made to an architect's original designs. Moulds can be reused many times, so bespoke cast stone products are particularly cost-effective when medium or large quantities are required.



## 2. Specify cast stone for projects in conservation areas and on listed buildings

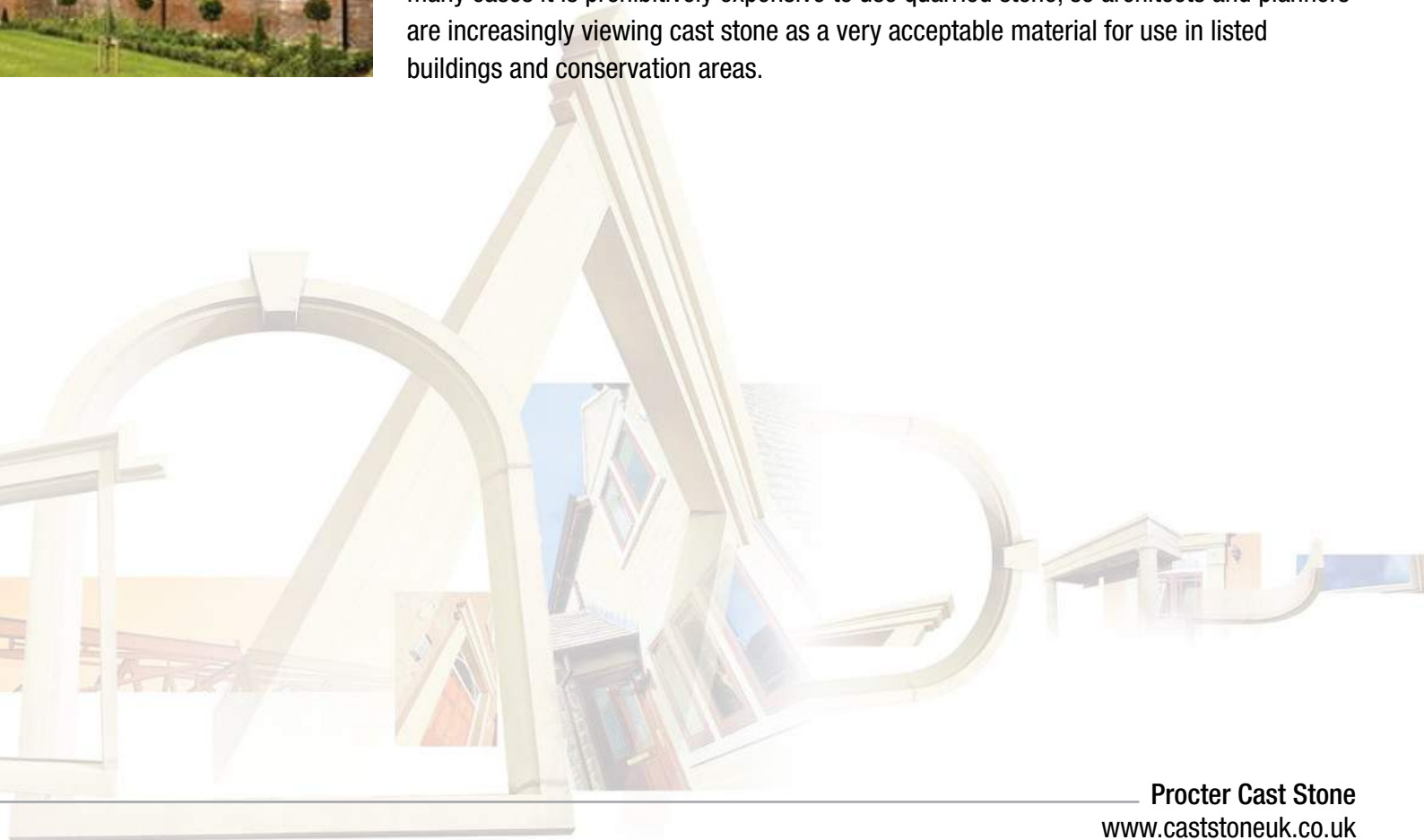


Many architects do not realise that cast stone can be used on listed buildings and in conservation areas. While it is true that approval must be granted for this material to be used in place of quarried stone, Procter Cast Stone has experience of supplying products for such applications, as well as supporting and assisting clients in their negotiations with planners.



Listed buildings that are being repaired, restored, altered, extended or converted can all benefit from cast stone. In some cases it is appropriate to replace quarried stone that has been damaged or lost, while elsewhere cast stone can be used to mimic quarried stone features so that extensions or alterations blend in with or complement the existing building. Procter Cast Stone's experienced staff can undertake site surveys to ensure as close a match as possible, including colours and surface textures. Because cast stone weathers in the same way as quarried stone, the new units soon develop a comparable finish.

To the untrained eye, cast stone is indistinguishable from the quarried alternative. In many cases it is prohibitively expensive to use quarried stone, so architects and planners are increasingly viewing cast stone as a very acceptable material for use in listed buildings and conservation areas.



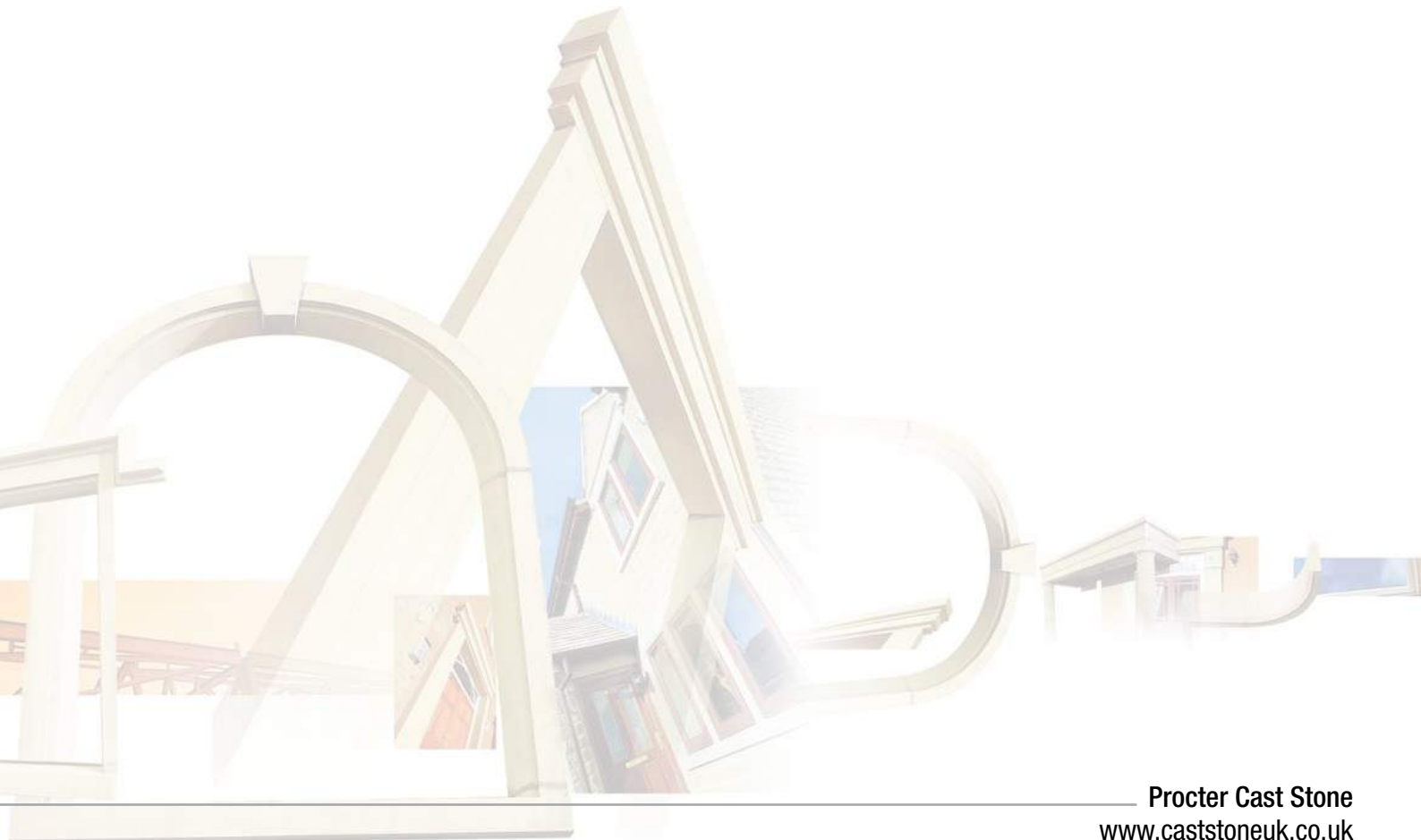
### 3. If specifying standard products, choose ones for which CAD files can be downloaded



Standard cast stone products are extremely cost-effective, so it makes sense to maximise efficiencies by specifying products for which CAD files are readily available. FastrackCAD is one of the most widely used architectural CAD databases and Procter Cast Stone has uploaded files of its standard products, including: balustrade, bullseyes, canopies, chamfered and plain quoins, cills, columns, copings, corbels, gable vents, heads, keystones, name and date stones, pier caps, plinths, porticos, spheres and finials, steps, string courses and label mould, and window surrounds.

CAD files for Procter Cast Stone standard products are also available via the IHS Specify-it and Construction Centre websites, or a complete drawing pack can be requested on a CD-Rom.

Of course, architects can also use the drawing files as a starting point for creating customised products based on standard designs. Alternatively, if totally bespoke products are required, Procter Cast Stone can work from architects' CAD files or sketches.



## 4. Involve the manufacturer as early as possible

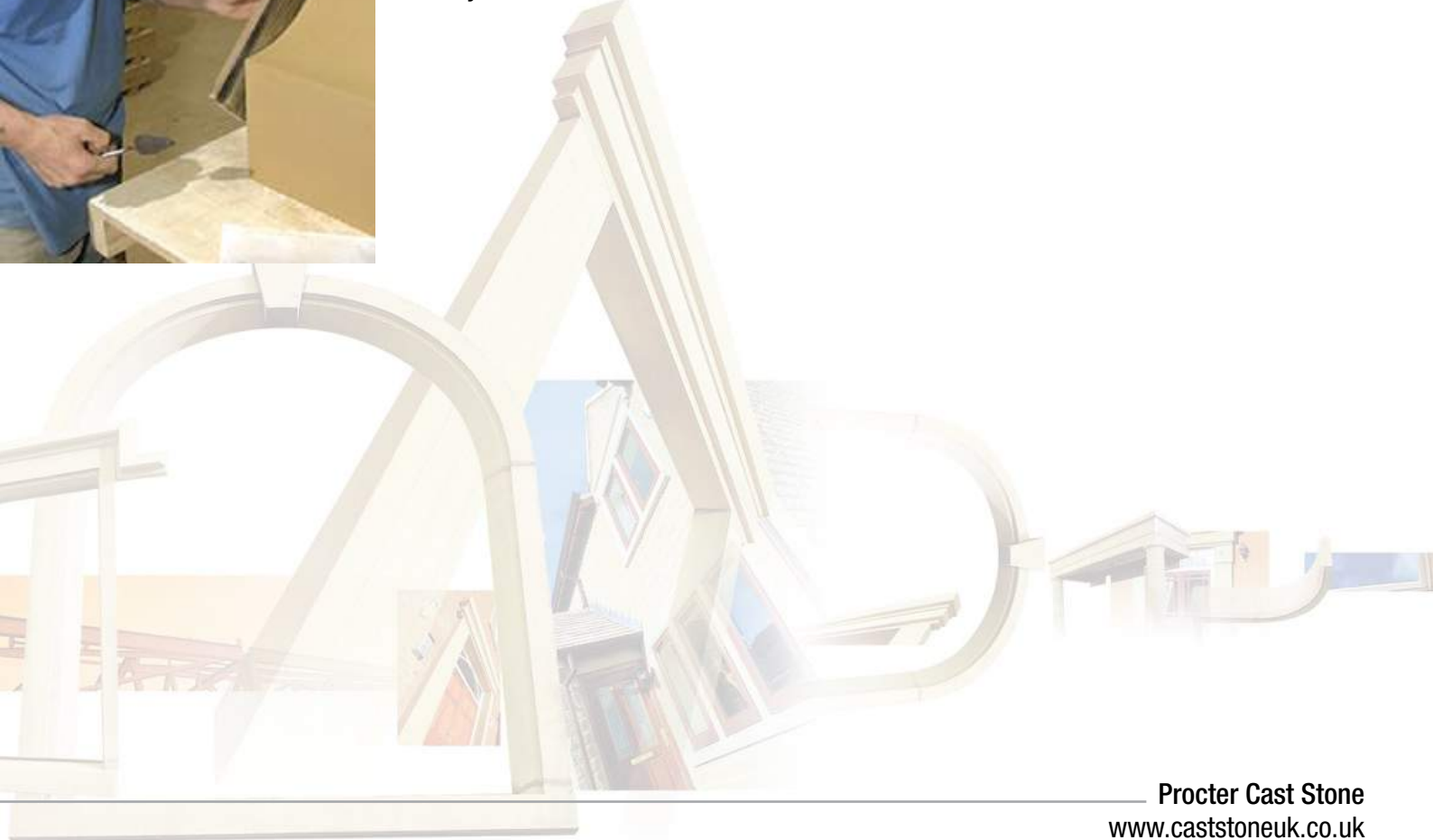


Cast stone is a versatile construction material that is straightforward to work with but, as with most specialist materials, discussing the project with a manufacturer as early as possible can help to minimise costs and avoid potential problems. The main considerations for cast stone relate to design-for-manufacture and design-for-installation.



For example, steel reinforcement can be designed-in, subtle design changes can make cast stone units easier and less costly to manufacture, and incorporating correctly dimensioned drip grooves helps cast stone units to maintain their good appearance over time. Advice can also be provided in relation to issues such as the bridging of large openings, the use of cast stone in compression, damp proofing, and making allowances for differential movement.

To assist lifting and positioning on site, larger components are often produced with integral threaded sockets for lifting hooks. These are normally located to suit the functional requirements and the production process, so it is important that unit drawings clearly show which faces will not be visible after installation.



## 5. Take advantage of the manufacturer's installation service



While contractors generally have the skills necessary to install cills, heads and other simple cast stone features, complex constructions such as porticos, steps and balustrade present more of a challenge. By using Procter Cast Stone's installation service, clients can be certain that the cast stone will be correctly installed, pointed and cleaned. Furthermore, the work will be carried out as quickly as possible, and with minimal risk because the cast stone remains Procter's responsibility until installation is complete. Of course, because the installation is likely to be carried out more quickly than if undertaken by the main contractor, and will also be 'right first time', the cost is usually lower.

Procter Cast Stone believes it is unique in the industry because its installers are employed directly, rather than being sub-contractors. This helps to ensure that a very high standard of workmanship is achieved every time and the client receives an immediate response to any questions. In addition, preparatory work is carried out at the factory, which minimises the time spent on site and ensures that any issues are resolved prior to delivery.

Throughout all stages of the project, including the specification, design, manufacture and installation, Procter Cast Stone liaises with the relevant people to ensure that everything runs as smoothly as possible, making life as simple as possible for the client, architect, structural engineer, quantity surveyor and site manager. Even the hire of cranes or other lifting equipment is organised by Procter Cast Stone, so there are no 'hidden costs' on top of the quoted price.



## Gallery

There is an extensive gallery on the Procter Cast Stone website, but the following images illustrate the versatility of cast stone.







## Further Information

Procter Cast Stone has published a number of guides to help architects, specifiers and contractors make the most of this versatile and cost-effective construction material. The following are all available as free downloads from the company's website:

- Cast Stone: A Guide for Architects
- Understanding Cast Stone: A Guide for Specifiers
- Cast Stone Installation Guide

In addition there is a leaflet illustrating the standard colour shades available, and architects can also request colour sample packs.

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The information contained in this publication is intended as a guide only and is believed to be correct at the time of going to press. However, it is the reader's responsibility to ensure that all necessary standards and regulations are complied with when working with cast stone.

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