

# Sourcing Stone Responsibly

We look at stone from the point of view of its sustainability, environmental impact and effect on human health and well-being.

## The characteristics of stone

### *No embedded carbon*

Unlike many other building materials, the quarrying and fabrication of stone releases no embedded carbon, the only greenhouse gases released during quarrying are those used by the fuel to power the quarrying equipment.

### *Longevity*

Stone is the ultimate long term building material as the plethora of historical buildings still standing after millennia attests. Used both internally and externally stone will last for as long as the building with very little maintenance.

### *No chemical treatment*

Stone does not require treatment with chemicals to render it waterproof and in itself does not pollute or contribute to sick building syndrome, although care must be taken in the choice of fixing materials.

### *Recyclable*

Stone can be recycled at the end of the building's life. Building stone is reusable in another building, and any stone fittings that are broken or damaged in removal can be used for mosaics or construction ballast and so on.



© Steve Swayne

*The Parthenon in Athens  
Proof of the longevity of stone buildings*



*Carrara Quarry In Italy*



Bespoke Fabrication

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## Quarrying stone

To ensure maximum sustainability, specifiers should take care to choose a stone which comes from a plentiful resource rather than a rare or scarce one, and to pick a quarry that is responsibly managed from an environmental point of view as well as a human one.

The Stone Federation has established the **Ethical Stone Register** which allows you to verify whether the stone contractor that you are using is taking measures to ensure that the stone it buys has been sourced responsibly and ethically.

## Transportation

Choosing stones from local quarries minimises the greenhouse gas emissions involved in transporting a heavy material. It also allows you to verify easily that the quarry is responsibly managed. Likewise the choice of a stonemason close to the installation site ensures that CO<sub>2</sub> emissions during transportation of the finished material are minimised.

## Fabrication

Select a stonemason that has an environmentally-friendly factory to ensure minimum harm to the environment. The fabrication of finished items from stone involves cutting and in some cases polishing which require power and water. Modern factories, such as stoneCIRCLE's in Basingstoke will have taken steps to ensure that the majority of power needs are met by renewable sources and that rainwater harvesting and recycling of grey water makes them self-sufficient rather than using up precious resources. Recycling of the waste material by the stonemason is also a factor that should be taken into account.



*Recycling Water from the Fabrication Process Minimises Environmental Impact*



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## Installation

As noted above the use of a fabricator close to the site will minimise CO<sub>2</sub> emissions during transportation, and the method of installation should also be chosen with care to guarantee that it uses techniques and materials that cause the least harm to the environment and human health possible.

## stoneCIRCLE

stoneCIRCLE has been fabricating stone since 1969 and has the largest stonemasonry factory in southern England. The company uses solar power, rainwater harvesting, grey water recycling and recycling of waste materials to minimise its environmental footprint. Contact them using the details below for specification advice.

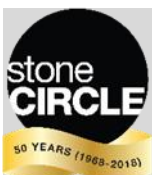


*stoneCIRCLE's Basingstoke Factory Makes Use of Solar Power, Rainwater Harvesting, Grey Water Recycling & Waste Material Recycling*



*© Susanna Heron*

*Installing Stone Drawing, an artwork by Susanna Heron in Clipsham stone in St John's College, Oxford*



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