

## **DIOCESE OF ROCHESTER**

### **A BRIEF GUIDE TO ROCK AND STONES TYPES**

#### **TYPES OF ROCK**

*Igneous Rocks* have been formed by solidification of molten material from the earth's crust. Granite is the most familiar stone from this category.

*Sedimentary Rocks* were formed when the original rocks disintegrated due to weathering and became reconsolidated over millions of years by the settling of their grains, usually in water, and through enormous compression. These stones include the sandstones and limestones.

*Metamorphic Rocks* are sedimentary or igneous rocks which were subjected to great heat and pressure, as during volcanic eruption. In this way were produced what we know as marble and slate.

#### **How to choose a stone**

A stone should be chosen for colour, suitability to the design of the memorial, texture and for its ability to blend and harmonise with its setting. A coarse stone will need large lettering whilst a fine one may take tiny detail. The surface need not always be smooth. It can be rough-hewn, riven, rasped, tooled or any combination of these. Nothing lasts for ever, and attempts to create indestructible headstones often result in ugliness, whilst an understanding of how stone weathers will produce a memorial that improves with age, taking on the natural characteristics of its environment. It is often thought that the hardest stones are the most durable, but this is not always the case. Stones deteriorate more or less quickly according to their ability to shed water from the surface. Some slates for instance are the least porous, and although relatively soft to carve, are among the longest lasting.

All memorials should be of natural stone with no reflecting finish, or of hardwood. Stones traditionally used in local buildings, or stones closely similar to them in colour and texture, are to be preferred. (Churchyards Handbook).

#### **SANDSTONE**

Sandstone is literally sand grains bonded together by a mineral cement, either lime or silica, the strength of which determines the toughness of the stone. The grain size varies, as it would on a beach, producing a coarse or a fine texture. Well cemented sands produce a compact, dense stone; weakly cemented sands are by contrast porous in texture. Sandstones seldom contain fossil shells but may be marked by burrows of animals which lived within the sand before the stone hardened.

## Sandstone types

### Copp crag mottled/Copp Crag yellow

Blends well with Wealden sandstone. High durability and good weathering properties.

### Serena stone (blue/green)

Blueish sandstone, hard wearing. Carvings and lettering remain clear and crisp for decades.

### Stainton (pale buff) from Durham.

### York stone (yellow/brown)

Varies in colour between brown, beige and cream and has a fine grained texture which works very well and clearly.

## LIMESTONE

This group is chiefly composed of calcium carbonate and/or magnesium. Many limestones contain fossilised sea creatures which can add to their attractiveness. The durability of these stones can vary enormously, and advice should always be sought from the supplier. Limestone mellows beautifully in the British climate.

### Limestone types

#### Celtic stone (blue/green)

Hard, long lasting limestone. When honed, the stone takes on a darker hue.

#### Hopton Wood (Derbyshire limestone)

Fine grained and speckled fawn colour.

#### Horton

Can be blue, brown or a mixture of the two. One of Britain's most attractive stones.

#### Indiana (imported)

Fairly uniformly grey appearance which blends well with ragstone.

Also Indiana grey buff and Indiana crown. Excellent durability qualities (cream to buff).

#### Nabresina (Crown stone) (imported)

Has been quarried in Trieste since Roman times. Masons and sculptors have valued its fine

qualities as a stone which is pleasing to work with and one which stands the test of time. It is a gentle cream colour with occasional orange markings.

### Portland stone

Buff/cream coloured stone. Blends well with many church buildings and their burial grounds. In some areas it is not as long lasting as other stones.

### Purbeck

Full of fossil shells, varies from creamy-white to a rich brownish or greenish-grey finish.

## SLATE

This is one of the easiest rocks to identify and represents a typical metamorphic rock (i.e. a mud rock which has been changed from its original character by pressure). This results in the platy clay minerals aligning themselves, leaving cleavages which allow the rock to be split into thin plates or slabs without difficulty. Slate surfaces allow for very fine lettering and these are the kind of inscriptions which survive best of all in a churchyard.

### Slate types

#### Cumbrian slate

Many shades of green and grey. Outlasts most other materials and can take very small lettering.

#### Welsh slate

Dark blue/grey.

## MARBLE

This is a limestone in which the lime has been altered by heat and the minerals re-formed (i.e. another metamorphic rock). The best known example is the white Carrara marble imported from Italy and found in almost all burial grounds and particularly popular in Victorian times for the ease with which it could be carved into three-dimensional sculptured monuments. The pure white colour never mellows or blends into the natural tones of an English churchyard, and does not react well to the British climate. Churchyard regulations do not allow for its use.

*(dac: stone.types)*

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