

DORSET BLOCKSTONE



What is Blockstone?

Blockstone is the term used to describe natural stone quarried in blocks or slabs for building purposes. It covers a wide range of types including monumental stone, accurately sawn and profiled blocks (generally referred to as dimension stone), and rough hewn random stone for walling. Massive blocks generally of lower grade material, with dimensions of several metres, are also used for sea defences (rock armour).

Virtually all of the current blockstone workings are in Jurassic Limestones which have an extensive outcrop in Dorset, but workings are concentrated on the Island of Portland and in Purbeck, where different and distinct horizons are exploited. In addition there are a few scattered quarries producing blockstone from different strata in North and West Dorset.

Annual production of Dorset blockstone is in the region of 50,000 tonnes, but it can fluctuate considerably. For instance, a specific contract for rock armour for sea defence works could significantly boost output.

Portland Stone

Portland Stone is of national importance. It was used extensively by Sir Christopher Wren in the re-building of London following the Great Fire of 1666, and during post-Second World War reconstruction. Today much of it is still used for prestige buildings outside Dorset.

The stone is derived principally from a 9m thick bed known as the Freestone which occurs within the Portland Limestone Group. It is overlain in most places by several metres of thinly bedded limestones and clays ("the Caps") and is underlain by 20-30 metres of limestone known as the Cherty Series. This is unsuitable for building stone because of its high chert (a type of silica) content. However, the Cherty Series and the Caps can be crushed for use as aggregate. This occurs at two quarries on Portland.



There are currently six or seven quarries working blockstone on Portland, although some areas are not worked on a regular basis. These include Broadcroft, Bowers, Weston and Coombefield, Independent, Inmosthay and Perryfields. The total output of blockstone from these sites is in the region of 30,000 tonnes per annum, most of which is used for building and the remainder for rock armour. However, in terms of just output levels, the blockstone extraction is overshadowed by the associated crushed rock aggregate operations, which (including crushed Portland Limestone from Purbeck) was around 310,000 tonnes in 2003.

Almost two thirds of the top of Portland is covered by planning permission for quarrying. Nearly all this permitted area is the subject of two permissions granted in the late 1940's and early 1950's. These old permissions were not based on modern standards of environmental control and have led to very extensive quarrying with, to date little planned restoration. This has a major impact on the landscape, and has led to noise and blast vibration problems in the past. A substantial portion of the permitted area has SSSI (both geological and ecological) status.

More recently, permission was granted for the mining of building stone at Bowers Quarry. Production commenced in 2004, becoming Dorset's first operational mine since 1999.



Purbeck Stone

The quarrying of stone on Purbeck is a long-established industry. The material is used locally, nationally and to a limited degree, internationally, as a building and monumental stone, and for paving, walling, cladding and rockery.



Purbeck stone is confined largely to an area of about 10 square kilometres within the coastal zone south and west of Swanage. It geologically overlies the Portland Beds previously described. The valued stone is found in the "Middle Purbeck Beds" and consists of two sequences, the "Upper" and "Lower Building Stones", separated by the "Cinder Bed". A total of about a dozen different seams of stone have been worked at various times. There are currently around a dozen operational stone quarries on Purbeck, generally working on a small-scale traditional basis, some only involving one or two operatives.

These are located in four general areas: south of Swanage, north of the Kingston Road, to the west and south of Acton and at St Aldhelms Head (this last producing stone from Portland Beds). Total production in recent years has been in the order of 20,000 tonnes per annum.

The Purbeck area, as well as being renowned for its stone working is one of considerable environmental quality. The stone resource is wholly within the AONB and partially within the Heritage Coast. The latter highlights the importance of the area historically and culturally, as well as in landscape terms. The area is therefore of value to a wide variety of interests being well used for recreational and leisure activities by local people and tourists. Although the quarrying of stone on Purbeck enjoys wide acceptance, its operations are prominent in the open coastal landscape, particularly around Acton. There is also considerable nature conservation interest in the area.

Many local settlements are building conservation areas where Purbeck stone is the principal building material. Since much of the charm of Purbeck villages is their traditional construction in local stone and it follows that the continued supply of stone will be necessary for restoration and new building.

Possible Issues for discussion

- **Should stone crushing on Portland and Purbeck be encouraged or discouraged?**
- **Should mineral extraction be encouraged in the AONB or other sensitive locations?**
- **What are the correct uses for these minerals? Should we limit supply for certain uses?**