Building rock types in nottingham city centre

Countries

The purpose of this investigation is to identify and visually examine the various rock types used in Nottingham city centre buildings.

Table 1. General information

Question

Answer

Briefly explain why the rock types used in the buildings are given specific, local names (e. g. “ Ancaster Stone”, “ Bulwell Stone” and “ Portland Stone” are three different types of limestone used in Nottingham buildings). Rock types used in buildings are given the local name of their origin. Rocks of the same type will have variations depending on their geographical background. Therefore by naming rocks after their origin, it is easy to confirm that they come from the same place and so have less variations.

Dolomitic limestone was the most common building stone in Nottingham from Victorian times onwards. Briefly explain what “ dolomitic limestone” is (as distinct from “ limestone”).

Dolomitic limestone is limestone that has up to 50% dolomite content. The Kentucky geological survey describes the stone often exhibiting a sugary texture and commonly weathering to a brown colour.

Table 2. Nottingham building information & observations

Building

Feature

Notes

(1) Arkwright Building

Describe the rock material (including the form of the blocks) for the limestone used in the building

The limestone used in the Arkwright Building is Ancaster stone. It is a sedimentary rock with a typical layered look. It is a pale yellow and has a medium grain size. The blocks of limestone are roughly 750mm x 250mm.

(2) St

Andrews Church

Describe the rock material (including the form of the blocks) for the limestone used in the building

There are mainly two types of limestone used in the church. The first is called Bulwell stone. It is a coarse dolomitic limestone with a honey-brown or red tint. The blocks of stone are approximately 200mm x 150mm. The other type of limestone is Barnstone. It is a grey, fine grained rock with a rough texture.

(4) Newton Building

Describe the contrasts in appearance of the limestone and sandstone used in the Newton building

The limestone (Portland stone) in the newton building is white in colour unlike the sandstone’s golden colour. The limestone has a smooth texture whereas the sandstone has a rough, grainy texture. Grain size is generally bigger in sandstone. Limestone blocks also contain shell debris unlike the sandstone.

(5) Guildhall

Describe the contrasts in the appearance of the sandstone used on the entrance steps to the sandstone used for the main building

The sandstone (Coal Measures Sandstone) used on the entrance steps is a bluish grey compared to the red-tinted sandstone (Millstone Grit) used on the main building. The Millstone Grit has medium grained rock whereas the Coal Measures Sandstone has a fine grain size and a smoother texture. (37) Express Chambers

What is the name of the architect who designed this building (and when was the building constructed?) The Watson Fothergill website states the architect who designed the Express Chambers was Watson Fothergill. The construction of the building began in 1875 and was completed in 1876. (30) Nottingham and Notts Bank

Describe the rock material (including the form of the blocks) for the larvikite used in the building

The Pelham Street frontage is made from Larvikite. It is bluish grey in colour. It has coarse inter-locking grains and a pearly lustre. The sheet used are roughly 1500mm x 1000mm. (29) Nottingham Journal Building

Not including the flooring, name the different types of rock used to clad the exterior of the ground floor of the building

The ground floor façade is clad with three different types of (Igneous) rock. The bottom layer course is a dark grey Gabbro. Next is a thin course of Rapakivi Granite. The main panels are a greenish grey Magmatite. (78) The former Gala Casino building

A partially resorbed xenolith can be seen in the right front, grey granite panel. What is a “ xenolith”?

The National Geographic states that a xenolith is a piece of rock embedded in a different type of rock. Xenoliths are usually trapped in cooling magma and so most commonly found in igneous rocks. (68) Enfield Chambers

Describe the rock material (including the form of the blocks) for the limestone used in the exterior of the ground floor of the building

The Cross-bedded limestone is a dark yellow colour. The rock consists of fine sized grains and small crystals. The blocks of limestone are approximately 1000mm x 450mm and have a smooth texture. (67) Prezzo

The front columns are a porphyritic type of igneous rock. What does “ porphyritic” mean, and can this feature be seen in the columns?

The Geology class website explains that porphyritic means an Igneous rock made up of both large and fine crystals. This texture can be seen in the columns. Larger silver crystals are embedded in the finer black crystals.