

What is Metagreywacke

Metagreywacke is the predominant rock type quarried at Oxenford. It forms in thick bands with meta siltstone and quartzite. Earth movements have fractured the rock through faulting and jointing, and in order to handle the rock it must be further fragmented by blasting.

Blasted rock is hauled to the crushing and screening plant where the rock is crushed and screened into various products depending on what is required.

Metagreywacke has a dark, steely grey angular appearance and is sometimes known as blue metal.

More than half a million tonnes of metagreywacke is extracted from the Nucrush quarry each year.

Where to quarry

Careful consideration must be given to a number of factors before the location of a quarry is decided. Some of these include issues such as quality and the size of the rock deposit. This is assessed by a geologist who has expertise in the field and is someone who understands rock deposits and formations. A geologist can predict size and quantity of deposits. Exploration may include core drilling, bulk sampling and laboratory testing.

The proximity of housing and future developments and the suitability of roadways (to be able to cope with truck movements and distances that the materials will have to be carted) are vital considerations in choosing a suitable location.

Carting rock is an expensive exercise and the further the deposit is away from its end location, the more expensive the cartage is.



A useful rock

Metagreywacke is a hard, high strength durable rock suitable for manufacturing a wide range of quarried products. It can be progressively crushed to be as fine as sand, called manufactured sand, or not crushed at all to be left as boulders.

Some of our quarry products and their uses include:

- ◆ **Coarse and fine aggregates** are the major ingredients required in manufacturing concrete and concrete products. The majority of our concrete is used for building houses and house surrounds.
- ◆ **Manufactured sand** is also another major ingredient of concrete.

- ◆ **Pre coat** is a quarried product which is used to surface roads.
- ◆ **Road base** is used to create a stable base for building roads and for paving areas.
- ◆ **Retaining walls** are used to create flat areas and restrain steep slopes on residential and industrial lots.
- ◆ **Revetment rock** is used on canal walls to prevent erosion.
- ◆ **Drainage materials** are used to bed and fill around pipes and used as erosion control around constructions sites so dirt is not carried onto roads and into our waterways.



At home at Oxenford and on the Gold Coast

Nucrush is a family owned business that is part of the Neumann Family group of Companies. The Neumann family first came to the Gold Coast in 1915. The family has a great appreciation for the Gold Coast and most of the Neumann family still reside here today. Other Neumann Family businesses include Neumann Petroleum, Neumann Steel and Neumann Contractors.

Nucrush has been operating in the Oxenford / Upper Coomera region since around 1972 and began its Oxenford Quarry in 1991.

The first Nucrush operation was located where Warner Bros. Movie World currently operates, followed by Hart Street, Upper Coomera and now to its present position at Maudsland Road, Oxenford.



Many of the homes in the Oxenford / Upper Coomera area have a house foundation slab, concrete footpaths, pools, landscaping or drainage materials that include products from the Nucrush quarry.

Nucrush is one of the major suppliers of these building materials in the Oxenford / Upper Coomera area and has been for over 15 years.

An interesting past

Metagreywacke is a special type of sedimentary rock. About 290 to 360 million years ago, large volumes of sediments were eroded from a volcanic mountain chain. These were deposited initially on the continental shelf and some remained there.

However, the shelf edge was steep and from time to time the accumulated sediments became unstable and avalanched down the slope into deep canyons. These formed thick beds of sands, silts and muds. In some cases lava flows were an additional component in the formation of these beds.

Beginning about 300 million years ago, the deep-water sediments that lay in the canyons were compressed by major movements of the earth's plates. The canyons were actually in between two of these plates. The force of the plates pushed against each other forcing them to buckle and fold.

The material was slightly recrystallised to become one type of material thus forming a deposit of what is called 'meta-sedimentary' rocks. Eventually, they were thrust up above sea level, forming mountainous terrain. Few fossils can be found as recrystallisation has destroyed most of them and there was little life in such deep waters.

It is difficult to imagine that the Oxenford / Upper Coomera area was once a very deep ocean floor.



This information was produced by Nucrush Pty Ltd, part of the Neumann Family Group of Companies.

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