

## Extraction of Natural Stone in Finland - The Best Environmental Practices (BEP)

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The extraction of natural stone differs considerably from mining and aggregate operations due to its geological environment, processes, and the volumes of quarried stone.

For granitic rocks, precision drilling, smooth blasting, diamond wire sawing, and wedging are used. Soapstone is quarried with chain saws and wheel loaders with forks. Schist is extracted with an excavator, sometimes equipped with a hydraulic hammer. For marble extraction, diamond wire saws are commonly employed.

The environmental issues in natural stone quarrying entails noise impact, dust, and vibration. Localised effects on the natural environment, surface waters and ground-water may also occur. While managing the environmental impacts of the quarry actions, careful planning of the plant, together with utilisation of high-quality, emission-preventing techniques is crucial. Ensuring the cleanliness of the plant and continuous maintenance of machinery (such as vehicles, drilling equipment, and chain saws) are also of great importance. The methods for reducing the spread of noise and dust include emission-preventing actions, such as constructing noise barriers, and watering areas in places where dust is generated. The water discharged from the quarry should be treated in sediment ponds to remove suspended solids and nutrients. The fuels, lubricants, and other chemicals, should be handled with care and in accordance with regulations.

Effective planning including high-quality and comprehensive studies of the environmental impacts and their management for quarry operations benefit both the operators and the environment.

### References:

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