

Determining stratigraphic unit



On 26 January 2020, updated regulations came into effect for the Victorian quarrying (extractive) industry. The *Mineral Resources (Sustainable Development) (Extractive Industries) Regulations 2019* introduced changes to annual reporting requirements for all Victorian extractive industry work authorities.

The new requirements apply to all annual reports submitted by work authorities from the 2020–21 financial year onward. For more information on the new regulations, visit earthresources.vic.gov.au/extractivesregs.

Guidance materials have been developed to explain the new reporting requirements and to assist the extractive industry in adjusting to the changes.

This fact sheet provides a brief outline of how to determine the stratigraphic unit for a quarry.

What is a stratigraphic unit?

A stratigraphic (or geological) unit is a discrete, large-scale body of rock (or sand), defined by its origin, age, physical characteristics, or any combination of these. They are one of the fundamental designations that geologists use when classifying and studying the Earth, particularly at scales larger than a single outcrop.

Stratigraphic units must be geologically mapped and formally recognised. They are not just a general rock or stone type, such as 'granite' or 'sand' or 'basalt', but a specific, named and mapped rock occurrence, such as the 'Tynong Granite', 'Loxton Sand' or 'Newer Volcanic Group Basalt'.

Knowing the stratigraphic unit that is being extracted provides benefits to work authorities and the Victorian Government. For example, this information might:

- provide evidence that other occurrences of the same rock are also viable for extraction
- emphasise the value of the rock where no alternative occurrence exists nearby
- help to identify potential for additional quarry product types.

How to determine the stratigraphic unit

It is recommended that all work authorities start by checking their work plan for any information relating to their stratigraphic unit (this has been a required component of work plans for some time). Work plan variations or any other core documents (reports, appraisals, feasibility studies) are also good starting points.

Another helpful resource is the list of suggested stratigraphic units prepared by the Geological Survey of Victoria. This matches Victorian Local Government Areas (LGAs) and the stratigraphic units deemed likely to be sources of quarry production within each LGA. This can be used as a crosschecking tool, in combination with the GeoVic method described below.

