Section 7

Glossary of Acronyms, Symbols and Terms

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GLOSSARY OF ACRONYMS

AADT	Annual Average Daily Traffic
ABS	Australian Bureau of Statistics
ADO	Automotive Diesel Oil
AEMR	Annual Environmental Management Report
AHD	Australian Height Datum; generally equivalent to mean sea level
ANZECC	Australia and New Zealand Environment and Conservation Council
AS	Australian Standard
CD	Collection District (Australian Bureau of Statistics)
Council	Oberon Council
DEC	Department of Environment and Conservation
DECC	Department of Environment and Climate Change
DECCW	Department of Environment, Climate Change & Water
DIPNR	Department of Infrastructure, Planning and Natural Resources
I&I NSW	Industry & Investment NSW
DoP	Department of Planning
DP	Deposited Plan
EC	Electrical Conductivity
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
INP	Industrial Noise Policy
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
MIC	Maximum Instantaneous Charge
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NOW	NSW Office of Water
NPWS	National Parks and Wildlife Service
NSESD	National Strategy for Ecologically Sustainable Development
PFM	Planning Focus Meeting

PM_{10} particulate matter <10μm in diameter

PVS Peak Vector Sum

RBL Rating Background Level

RH Relative Humidity

RTA Roads and Traffic Authority

SCSC Specialist Consultant Studies Compendium

SEPP State Environmental Planning Policy

SWMP Solid and Water Management Plan

TAPM The Air Pollution Model

TSC Act *Threatened Species Conservation Act 1995*

TSP Total Suspended Particulates

TSS Total Suspended Solids

V:H Vertical to Horizontal

GLOSSARY OF SYMBOLS AND UNITS

% percentage.

'000 t multiples of one thousand tonnes.

< less than.

> greater than.

Av average.

^{o}C degrees Celsius.

cm centimetre (unit of length).

dB decibel, unit used to express sound intensity.

dB(A) the unit of measurement of sound pressure level typically heard by the human ear, expressed in "A" scale.

ha hectare (10 0000m^2).

hr hour.

g/m^2/month grams per metre squared per month.

km kilometre (= 1 000 metres).

km^2 square kilometres.

km/hr kilometres per hour.

kV thousand volts (unit of electrical potential).

L litre (=1 000 mL).

L_{A1} sound level exceeded 1 per cent of the sampling time.

L_{A10} sound level exceeded 10 per cent of the sampling time.

L_{A90} sound level exceeded 90 per cent of the sampling time.

L_{Aeq} the L_{Aeq} is the "equal energy" average noise levels.

$L_{Aeq\ 1\ hour}$ the "equal energy" average noise level over 60 minutes – used for assessing impacts of motor vehicles.

m metre.

m AHD metres of elevation relative to the Australian Height Datum.

m^2 square metre.

m^3 cubic metre.

ML megalitres.

Mg/L Milligrams per litre

mm millimetres (= 0.001 metres).

Mm/s millimetre per second.

m/s metres per second.

pH a measure of the degree of acidity or alkalinity of a solution; expressed numerically (logarithmically) on a scale of 1 to 14, on which 1 is most acidic, 7 is neutral, and 14 is most basic (alkaline).

t tonnes.

tpa tonnes per annum.

tph tonnes per hour.

tsp total suspended particulate.

µg/m/L micrograms per litre.

µg/m^3 micrograms per cubic metre.

µm micron, one millionth of a metre (one thousandth of a millimetre).

vkt vehicle kilometres travelled.

vph vehicles per hour.

GLOSSARY OF TERMS

PROJECT SPECIFIC

Proponent – Mudgee Stone Company Pty Ltd

Project Site – Oberon White Granite Quarry, Lot 2 DP 1089826, covering an area of approximately 40ha (see **Figure 2.1**)

GENERAL

adverse weather conditions (with respect of dust) – conditions, such as high wind, that assist the movement of dust from the Project Site towards receptors

adverse weather conditions (with respect of noise) – conditions, such as temperature inversions or gentle winds (<3m/s) from the Project Site towards receptors

air contaminant – a substance in ambient atmosphere, resulting from the activity of man or from natural processes, causing adverse effects to man and the environment (also called "air pollution")

alkaline – having a pH greater than 7.0

alkalinity – in water analysis a measure of the carbonates, bicarbonates, hydroxides and occasionally the borates, silicates and phosphates in the water

alluvial – pertaining to material, such as sand or silt, deposited by running water (e.g. a creek or river)

aquifer - a layer of water-bearing material which is permeable and can transmit significant quantities of water

aquitard - a layer of water-bearing material which is relatively impermeable and cannot transmit significant quantities of water

amenity – the desirability of an area

ambient – relating to conditions outside the active Project Site

arboreal – pertaining to tree habitats

archaeology – the scientific study of human history, particularly the relics and cultural remains of the distant past

attenuation – reduction in sound pressure levels between two locations

average annual rainfall – the average amount of rain to fall at a specific location over the period of 1 year (measured in millimetres)

background dust level – dust level in the absence of Project-related activities

background noise level – the level of the ambient sound indicated on a sound level meter in the absence of the sound under investigation (eg sound from a particular noise source; or sound generated for test purposes)

batter – an engineered slope of soil or rock fill on either side upslope or downslope of a road or embankment

biodiversity – the full range of living things and the ecosystem in which they live

biophysical – relating to the biological and physical attributes of the environment

buffer – a physical barrier / structure or width of land that encloses, partially encloses, or defines a particular environment. A buffer serves to minimise the impacts of non-desirable external influences on the adjoining environment

bulldozer – an item of tracked mobile earth moving equipment fitted with a front blade and with rear rippers used for pushing and ripping soil and rock

catch drain – drain used to intercept and redirect runoff

catchment area – the area determined by topographic features within which rainfall will contribute to runoff at a particular point

clay – a size term denoting particles, regardless of mineral composition, with diameter less than 0.004mm

concentration – the amount of a substance, expressed as mass or volume, in a unit volume of air

conductivity – the measurement of the ability of a substance (either a measure of solid, liquid or gas) to transmit electricity; a measure of the salt content

conservation – the management of resources in a way that will benefit both present and future generations

contour bank – an earth bank constructed across a slope parallel to contours

contractor – specialist brought in to perform a specific task, such as the construction of site infrastructure

ecology – the relationship between living things and their environment

decibel – unit expressing difference in power between acoustic signals

deposition – laying down of particulate material (e.g. sediment in a lake)

dispersibility – a characteristic of soils relating to their structural breakdown in water into individual particles

diversion bank – an earth bank constructed to divert water away from disturbed areas

drainage line – a passage along which water concentrates and flows towards a stream, drainage plain or swamp intermittently during or following rain

drawdown – the difference between the water level observed during pumping and the non-pumping water level (static water level or static head)

dust – particles of mostly mineral origin generated by erosion of surfaces and the extraction and handling of materials

Ecologically Sustainable Development (ESD) – using, conserving and enhancing the community's resources so that the ecological processes on which life depends, are maintained, and the total quality of life now and in the future, can be increased (Commonwealth of Australia 1992)

ecosystem – a functional unit of energy transfer and nutrient cycling in a given place. It includes all the relationships within the biotic community and between the biotic components of the system

emission – a discharge of a substance (e.g. dust) into the environment

emission factor – an expression for the rate at which a pollutant is generated as a result of some activity, divided by the level of that activity

environment – a general term for all the conditions (physical, chemical, biological and social) in which an organism or group of organisms (including human beings) exists

Environmental Assessment (EA) – a report required to accompany a planning application for a major project – covering the project description, assessment of impacts and proposed safeguards and commitments

environmental constraint – limitation on a project by components of the existing environment

ephemeral – lasting only a short time e.g. creek flow

erosion – the wearing away of the land surface (whether natural or artificial) by the action of water, wind and ice

evaporation – the loss of water as vapour from the dam surface of a liquid

excavate – to dig into material using an excavator or other machinery

excavator – item of earth-moving equipment fitted with a bucket on an articulated boom used for digging material

exotic – introduced or foreign, not native

fauna – a general term for animals such as birds, reptiles, marsupials, fish etc.

flora – a general term for plants

front-end loader – machine generally used to lift and place soil, rocks, etc. or to load products into trucks

grader – an item of rubber tyred earthmoving equipment, fitted with a centrally mounted blade and rippers used to shape and trim the ground surface

gradient – rate of change of a given variable (such as temperature or elevation) with distance

greenhouse – the heating of the earth's surface because outgoing long-wavelength radiation from the earth is absorbed and re-emitted by the carbon dioxide, water vapour and other greenhouse gases in the lower atmosphere and eventually returns to the surface

groundwater – water contained in voids such as fractures and cavities in rocks and inter-particle spaces in sediments e.g. sand

groundwater dependent ecosystem – those parts of the environment, the species composition and natural ecological processes of which are determined by the permanent or temporary presence or influence of ground water

habitat – the place where an organism normally lives; habitats can be described by their floristic and physical characteristics

hydrogeology – the study of groundwater

hydraulic conductivity (k) – the rate of flow of water through the soil profile or in an aquifer through a cross section of unit area under a unit hydraulic gradient, at the prevailing temperature. Usually expressed in units of metres per second or metres per day

hydraulic gradient – the direction of flow of groundwaters

igneous – a rock or mineral that solidified from molten or partly molten material

impact – the effect of human induced action on the environment (modified from Westman, 1985)

In situ – a term used to distinguish material (e.g. rocks, minerals, fossils, etc.) found in its original position of formation, deposition, or growth, as opposed to transported material

infiltration – the process of surface water soaking into the soil or ground

infrastructure – the supporting installations and services that supply the needs of a project eg. road or rail

inter-generational equity – the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations

intra-generational equity – the present generation should ensure that improved well-being and welfare are accessible to all sectors of society within Australia and that improved welfare within Australia does not result in decreased welfare in other nations

inversion – a weather term for a surface defining the boundary between two layers of air or different temperatures; generally used in meteorology with respect to an increase of temperature with height in contrast with the usual decrease of temperature with height in the troposphere. An inversion layer is distinguished by its large stability, which limits the turbulence and therefore the dispersion of pollutants

jointing – planes of discontinuity in rockmass which exhibit no evidence of relative movement

landform – a specific feature of a landscape (such as a hill) or the general shape of the land

major project – an activity as defined under the *State Environmental Planning Policy (Major Projects) 2005*

migratory – passing, usually predictably (based on aquatic species), from one region or climate to another, for purposes of feeding, breeding, or other biological purposes

mitigation measures – measures implemented to reduce (mitigate) an impact (such as the construction of an amenity bund to reduce sound emissions)

mobile equipment – wheeled or tracked self propelled equipment such as trucks and front-end loaders

monitoring – the regular measurement of components of the environment to understand a feature of the environment and/or establish that environmental standards are being met

native – said of an organism or group of organisms that is restricted to a particular region or environment. A local inhabitant of a place

particle size distribution – the relative proportions of particles (e.g. in a sediment) that fall within specific size categories

particulate matter – small solid or liquid particles suspended in or falling through the atmosphere - sometimes expressed by the term particulates

pervious – permeability

pH – a measure of the degree of acidity or alkalinity of a solution; expressed numerically (logarithmically) on a scale of 1 to 14, on which 1 is most acid, 7 is neutral, and 14 is most basic (alkaline)

Project Application – an application to the Department of Planning for approval of a major project (see **Appendix 1**)

precautionary principle – where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

relative humidity – the ratio of actual moisture in the air to the amount the air could hold if saturated, at a given temperature

residence time – the time that inflowing water is retained in a wetland or basin before being discharged. The residence time is related to the volume of the inflow versus the total storage volume of the basin or wetland

runoff – that portion of the rainfall falling on a catchment area that flows across the land surface from the catchment past a specified point

silt – classic sediment, most of the particles of which are between 0.063mm and 0.004mm in diameter

social equity – embraces value concepts of justice and fairness so that the basic needs of all the sectors of society are met and there is a fairer distribution of costs and benefits to improve the well-being and welfare of the community, population or society

species – a taxonomic grouping of organisms that are able to interbreed with each other but not with members of other species

stockpile – a pile used to store material, such as products

stormwater – surface water runoff immediately after rainfall

stratigraphy – the succession and age of strata of rock and unconsolidated material. Also concerns the form, distribution and lithologic composition of the strata

suspended solids – analytical term applicable to water samples referring to material recoverable from the sample by filtration

sustainable development – development that meets the needs of the present without compromising the ability of future generations to meet their needs (World Commission on Environment and Development 1990)

temperature inversion – an atmospheric state where there is an increase in air temperature with height

topography – the physical relief and contour of an area

topsoil – the surface layer of a soil profile containing the main percentage of organic material and viable life forms and seeds

total suspended particulates – the mass of all particulate matter suspended in a solution

total suspended solids – a common measure used to determine suspended solids concentrations in a waterbody and expressed in terms of mass per unit of volume (e.g. milligrams per litre)

wind rose – diagrammatic representation of wind direction, strength, and frequency of occurrence over a specified period