

Ok Birim Tailings Storage Facility Project

Environmental and Social Impact Assessment

Chapter 19

Glossary and abbreviations



19. GLOSSARY AND ABBREVIATIONS

Table 19.1 Glossary

Terms	Definition
abraded	scrape or wear away by friction or erosion.
acidic	having the properties of an acid or containing acid; having a pH below 7.
acid generation	the process whereby acid is generated by the oxidation of minerals (particularly sulfides) exposed to air and water.
agroforestry	agroforestry is a sustainable land management system that integrates trees, crops, and livestock, enhancing productivity, biodiversity, and environmental health.
agglomerate	collect or form into a mass or group.
aggradation	the deposition of material by a river, stream or current.
alkaline	having the properties of an alkali or containing alkali; having a pH greater than 7.
alkalinity	derivative of alkaline.
alluvial material	mainly sand and silt material, that a river has carried in suspension and then deposited.
alluvium	a deposit of clay, silt, sand and gravel left by flowing streams in a river valley or delta, typically producing fertile soil.
anthropogenic	originating from human activity.
aquatic	living in or on water or concerning water.
aquifer	a body of permeable rock which can contain or transmit groundwater.
arboreal	relating to trees.
avulsion	rapid abandonment of a river channel and the formation of a new channel.
Awin Formation	significant ancient deposits of fluvial origin, having a comprehensive record of the geomorphic and sediment history that occurred during its deposition.
bathymetry	the measurement of depth of water in oceans, seas, lakes, rivers and other water bodies.
barrier/edge effect	refers to the impact of physical or behavioural obstacles on the movement, health and distribution of organisms.
bedrock	solid rock underlying loose deposits such as soil or alluvium.
berm	a predetermined width of bench left behind at intervals on open-pit walls; 2. dirt and rock piled alongside a haul road or similar.
bioavailability	the extent to which a substance is available for uptake by organisms.
biodiversity	the variety of life in the world or in a particular habitat or ecosystem.
biomagnification	the process by which toxic substances become increasingly concentrated in organisms at higher levels of a food chain.
biomass	the total weight of all biota in a natural system (such as a lake).
bioremediation	uses living organisms particularly microbes such as bacteria, algae, yeast, fungi or plants and their enzymes, to break down pollutants in soil, water, sediments and air.
biosolids	nutrient-rich organic materials resulting from the treatment of sewage.
biota	all living organisms; plants and animals.
borrow area	a designated excavation site supplying soil, sand, or gravel for construction works (e.g., embankments).
boulder	a large rock, typically one that has been worn smooth by erosion.
braidplains	relating to sedimentation in riverbeds, dynamic landscapes that are characterised by gravel-bed plains formed by braided rivers.

Terms	Definition
buffering capacity	describes the measure of a solutions ability to resist changes in pH when small amounts of acids or bases are added.
buttress	roots of a tree that are large and plank-like, they provide structural support and stability in shallow or nutrient-poor soils.
capillary fringe	the subsurface zone of rock or soil immediately above the water table where water rises from the saturated zone into the pores by capillary action, filling them with water.
catchment	the collection of rainfall over a natural drainage area.
cation	ion that has a net positive charge.
camera trap	automated device triggered by motion or heat used to capture images or videos of wildlife with minimal human interference.
cauliflorous	refers to plants that produce flowers directly on their main stems, trunks or older branches rather than from new growth.
centrifuge	a machine that rapidly rotates that applies centrifugal force to its contents to separate things of differing densities, e.g., water and rock.
circumneutral	refers to soils or water with a pH close to neutral, typically between 6.5 and 7.5.
cobbles	a clast of rock with a diameter between 64 and 256 millimetres.
colluvium	material that accumulates at the foot of a steep slope.
complexation	the process of making an atom or compound form a complex with another.
confluence	junction of two streams.
conglomerate	relating to soil, an aggregate of minerals particles and organic matter that group together naturally or through biological activity, wetting/drying cycles and freeze/thaw processes.
convection	the movement caused within a fluid by the tendency of hotter and therefore less dense material to rise, and colder, denser material to sink under the influence of gravity, which consequently results in transfer of heat.
Coriolis effect	an effect whereby a mass moving in a rotating system experiences a force (the Coriolis force) acting perpendicular to the direction of motion and to the axis of rotation.
craton	a large stable block of the earth's crust forming a nucleus of a continent.
cross section	a two-dimensional diagram of an object presented as if the object had been cut along its length.
cuesta	a hill or ridge with a steep face on one side and a gentle slope on the other.
culvert	large pipe or channel carrying water underneath a structure (e.g., a road or railway track) or underneath the ground.
cyclone	a device that generates a vortex to clear particulate matter from air or water.
decant water	water separated from tailings slurry in the TSF and returned for reuse or treatment.
deposit	minerals in the ground, but not necessarily commercially extractable.
deposition	laying down of particulate material (e.g., sediment in a lake).
detritus	organic matter produced by the decomposition of organisms.
dewater	to pump or drain water from an excavation, pit, aquifer or material.
dewatering	the process of pumping or draining water from an excavation, pit, aquifer or material.
dieback	plant stress or death caused by changes in the duration, frequency and depth of inundation.
dispersive subsoils	soils characterised by their instability when wet, leading to the collapse of soil aggregates and dispersion of clay particles into solution.
dredging	the process of removing accumulated sediment and debris from the bottom of water bodies.
dystropepts	moderately well drained soils with relatively high bulk densities and low proportions of clay minerals. Dystropepts have less than 12 kg/m of organic carbon up to 1 m depth.

Terms	Definition
ecology	the science dealing with the relationships between organisms and their environments.
ecosystem	a biological community of interacting organisms and their physical environment.
ecosystem services	are benefits that people, including businesses, derive from ecosystems. Ecosystem services arise from biophysical processes in the environment; however, they are only considered an ecosystem service when they provide benefits to people.
effluent	a complex waste material (e.g., liquid industrial discharge or sewage) that may be discharged into the environment.
electrical conductivity	a material's ability to conduct electric current, representing how easily electric charge can flow through it.
El Niño	an irregularly occurring and complex series of climatic changes affecting the equatorial Pacific region and beyond every few years, characterised by the appearance of unusually warm, nutrient-poor water off northern Peru and Ecuador, typically in late December. The effects of El Niño include reversal of wind patterns across the Pacific, drought in Australasia, and unseasonal heavy rain in South America.
emergent	relating to vegetation, a towering tree whose crown rises above the surrounding forest canopy, forming the uppermost layer of a forest.
Emerson aggregate test	laboratory based method used to classify the structural stability of soil aggregates when immersed in water.
endemic	of a plant or animal, native or restricted to a certain place.
Environment Act	<i>Environment Act 2000.</i>
epiphyte	a plant or plant-like organism that grows on the surface of another plant or plant-like organism.
ephemeral	refers to something lasting a short time or being temporary.
erosion	the wearing away of the land surface (whether natural or artificial) by the action of water, wind and ice.
fan	in relation to landform and hydrology, a fan-shaped deposit of sediment that forms when fast-flowing river or stream exits a narrow valley or spreads onto a flatter area.
fault	fracture zone or fracture in the earth's crust along which blocks of rock have moved relative to each other.
fauna	the animals of a particular region, habitat, or geological period.
final tailings	residual material left after ore processing at the Tailings Processing Plant, which is to be managed in the TSF.
fine-fraction	small particles in various contexts.
floodplain	a low-lying plain adjacent to a river subject to occasional or frequent flooding and formed by sediment deposition during flooding episodes.
flora	the plants of a particular region, habitat, or geological period.
flow meter	device used to monitor, measure, or record the flow of fluids in a system.
fluvaquents	poorly to very poorly drained alluvial soils with relatively high organic carbon content, mostly found on river floodplains.
fluvial	of or found in a river.
fracture	discontinuity in a rock or mineral that occurs when it breaks or deforms under stress.
fragmentation	the process of habitats getting divided into smaller, disconnected patches often driven by human developments.
fugitive	sediment, noise, dust or light that has escaped into the environment (e.g., from a mine site).
geomorphology	the study of the form of the earth.
geosynthetics	synthetic materials used in civil engineering to stabilise terrain, manage water and improve soil properties.

Terms	Definition
groundwater	all waters occurring below the land surface; the upper surface of the soils saturated by groundwater in any particular area is called the water table.
headwater	a tributary stream of a river close to or forming part of its source
heavy metals	generally used to describe the following metals and metalloids: arsenic, iron, manganese, silver, mercury, chromium, lead, zinc, copper, nickel, selenium and cadmium.
herbaceous	relating to plants that do not have a woody stem and die down to the ground after flowering.
Holocene	of, relating to, or denoting the present epoch, which is the second epoch in the Quaternary period, after the Pleistocene and the system of deposits laid down during this time.
homoclinal ridges	geological formation characterised by a consistent slope in one direction, formed by the differential erosion of tilted sedimentary rock layers.
hydraulic loading (in terms of groundwater)	change in volume available for input to a groundwater flow system.
hydrocarbons	a compound of hydrogen and carbon, such as any of those which are the chief components of petroleum and natural gas.
hydrology	the branch of science concerned with the properties of the earth's water, especially movement in relation to land.
hydrometeorology	a branch of meteorology and hydrology concerned with rainfall and other aspects of the movement of water on, above, and below the surface of the earth.
hydropower	process of using the kinetic and potential energy of water to produce electricity or mechanical power.
hydrostatic	relating to or denoting the equilibrium of liquids and pressure exerted by liquid at rest.
hydro-stratigraphic	field in geology and hydrogeology that focuses on categorising rock layers based on their water-bearing properties.
humitropepts	soils that are moderately well draining with relatively high bulk densities and low proportions of clay minerals. Humitropepts have over 12 kg/m of organic carbon up to 1 m depth.
inclinometers	instrument used for measuring angles of slope, elevation, or depression of an object with respect to gravity.
inter-annual	variations that occur between different years, comparing fluctuations across multiple years.
interstitial	the living spaces between individual sand grains in the soil or aquatic sediments.
invertebrate	an animal lacking a backbone, such as an arthropod, mollusc, annelid, coelenterate.
kinetic	relating to or resulting from motion.
Kjeldahl nitrogen	is a measure of the total nitrogen content in a sample.
La Niña	a cooling of the water in the equatorial Pacific, which occurs at irregular intervals, and is associated with widespread changes in weather patterns complimentary to those of El Niño, but less extensive and damaging in their effects.
laydown area	a designated, levelled area for temporary storage of construction materials and equipment.
leachate	contaminated liquid formed when water passes through waste or other materials, extracting soluble and suspended.
levee	a natural or artificial embankment constructed along the banks of a river or water body to prevent flooding to adjacent land.
LiDAR	light detection and ranging; a detection system that works on the principle of radar but uses light from a laser.
lithostratigraphic	lithostratigraphy is a branch of geology that focuses on the physical and chemical characteristics of rock layers, classifying and mapping them based on their lithologic properties.
lithogy	study of the general physical characteristics of rocks.

Terms	Definition
limestone karst	landscape underlain by limestone which has been eroded by dissolution, producing ridges, towers, fissures, sinkholes and other characteristic landform.
lineaments	a linear feature of the earth's surface, such as a fault.
loamy clay	denoting or relating to a fertile soil of clay and sand containing humus.
macroinvertebrate	animals without a backbone that are large enough to be seen with the naked eye, often playing key roles in aquatic ecosystems.
macrophyte	an aquatic plant large enough to be seen by the naked eye.
magmatic arc	linear region of volcanic activity formed above a subduction zone where an oceanic plate descends beneath another plate, generating magma that rises to create a chain of volcanoes,
marl	sedimentary material composed of clay and calcium carbonate forming marlstone when lithified.
mean	average; sum of the data divided by the number of data points.
meander cutoff	geological process where a river creates a new, shorter channel, bypassing a long meander loop and leaving behind an isolated water body.
metal speciation	describes how a metal exists in various chemical forms.
microhabitat	a habitat peculiar to a small area, particularly an area distinct from that surrounding it.
minimum operational freeboard	describes the vertical distance between the crest of the dam and the maximum reservoir water surface.
micronutrient	vitamins and minerals, which can be divided into macrominerals, trace minerals and water- and fat-soluble vitamins.
microtopography	small-scale variations in land surface features including minor mounds, depressions, ridges and other subtle terrain.
micro-siting	localised placement of infrastructure based on optimisation and impacts.
monsoon	rainy period in PNG typically between May and September.
morphological	relating to the form and structure of things.
mudstone	a dark sedimentary rock formed from consolidated mud, but without distinct layers.
non-volant mammal	the group of mammals that are not capable of powered flight, i.e., all mammals apart from bats.
nutrient cycling	cyclic process through which essential nutrients move from the physical environment to living organisms and back again.
odonate	an order of predatory flying insects such as damselfly or dragonflies.
Ok Tedi Agreement	<i>Mining (Ok Tedi Agreement) Act 1976</i>
ore	a mineral or mixture of minerals containing a metal in sufficient amounts for its extraction to be profitable.
organic carbon	carbon bound in organic compounds.
orographic lift	describes a meteorological process where air masses encounter elevated landforms, such as mountains, and are forced upward.
oxbow lake	a U-shaped bend in a river or stream forming a separate body of water when cut off from the main channel.
oxidation	the process by which an element or compound undergoes a chemical reaction involving the removal of electrons; often involves reaction with oxygen to form an oxide (e.g., the rusting of iron).
Pacific Ring of Fire	tectonic belt that surrounds the Pacific Ocean, characterised by high levels of seismic activity and volcanic eruptions.
paleudults	moderately well-drained soils found in humid climates with warm temperatures. They have fairly uniform subsoils where the clay content changes very little with depth.

Terms	Definition
particulate	of, relating to, or in the form of minute separate particles.
physico-chemical	refers to the combination of physical and chemical properties or processes of a substance.
phreatic surface	relating to the underground water in the zone of saturation, beneath the water table.
plasticity	relating to soil refers to the ability of soil to deform or change without significant volume change, particularly when moisture content varies.
piezometers	a sensor used to measure water pressure beneath the ground surface.
pioneer tree	the first tree species to colonise disturbed or barred areas, initiating forest succession.
plateau	an area of highland consisting of flat terrain that is raised sharply above the surrounding area.
Pliocene	relating to or denoting the last epoch of the Tertiary period, between the Miocene and Pleistocene epochs.
pluvial	surface flooding.
point bar	depositional feature in geology that forms on the inner bend of meandering rivers.
polygonal karst	type of karst terrain characterised by a surface that is completely pitted with closed depressions such as dolines or sinkholes.
propagule	a vegetative structure that can become detached from a plant and give rise to a new plant, e.g., a bud, sucker, or spore.
pyrolysis	decomposition brought about by high temperatures.
polymict	a conglomerate consisting of fragments of several different rock types.
potable water	water of quality suitable for human consumption.
porphyry	hard igneous rock containing crystals of feldspar in a fine-grained groundmass.
qualitative	refers to research or analysis that focuses on understanding the meaning, experiences, and perceptions of people using non-numerical data.
quaternary	relating to or denoting the most recent period in the Cenozoic era, following the Tertiary period and comprising the Pleistocene and Holocene epochs.
rainy day failure	describes a failure that occurs when a dam or tailings storage facility breaches due to extreme precipitation or flood conditions.
rarity	a thing that is rare, especially if having particular value as a result of this.
refugia	an area in which a population of organisms can survive through a period of unfavourable conditions, especially glaciation.
recharge	the addition of water to an aquifer, directly from the surface, indirectly from the unsaturated zone, or by discharge from overlying or underlying aquifer systems.
regolith	layer of loose, unconsolidated material that covers solid rock, including dust, broken rocks, and other debris, found on Earth, the Moon, Mars, and other planetary bodies.
rehabilitation	the return of a landscape and especially the vegetation following its disturbance to an agreed state.
reno mattress	type of gabion structure used primarily for erosion control and slope stabilisation.
rendolls	shallow, dark-coloured soils formed from calcareous parent material in humid regions. They have a thin surface later that lies directly on overlying rock or partly decomposed, disintegrating material.
ring-dyke	an impoundment built for storing tailings on flat or level ground with raised embankments on a ring around all sides of the pond.
ripping	ripping soil, or deep ripping, is a soil management practice that breaks up compacted layers to improve root growth, water infiltration, and germination.
riprap	human-placed rock or other hard, heavy, unconsolidated material used to stabilise surfaces and prevent erosion along shorelines, riverbanks, slopes and embankments.

Terms	Definition
riverine	describes the features, habitats or communities associated with rivers or their banks.
rupture disc	non-reclosing pressure relief devices designed to burst at a predetermined pressure to protect equipment and personnel from overpressure or vacuum conditions.
salvage	to recover or save property (including archaeological and cultural heritage artefacts or sites) from destruction.
scansorial	used in zoology to describe an animal that is specialised or capable of climbing.
Secondary forest	areas of forest that regenerates after disturbances, primarily caused by human activities such as logging or agriculture.
sediment load	the solid material that is transported through a channel by stream flow.
sedimentary	of rocks formed from the consolidation of deposits by water or air.
sedimentation	particulate matter that is carried by water or wind and deposited on the surface of the land or the bed of a waterbody.
seismicity	the occurrence or frequency of earthquakes in a region.
sensitivity (significance assessment)	susceptibility of the environment to change, including its capacity to adapt to, or accommodate, the kinds of changes that the project may bring about.
shale	soft, finely, stratified sedimentary rock that formed from consolidated mud or clay and can be split easily into fragile plates.
shotcreting	process of spraying concrete or mortar at high velocity onto a surface, allowing it to bond and consolidate instantly, ideal for vertical, overhead, or complex structures.
siltstone	fine-grained sedimentary rock consisting of consolidated silt.
slurry	mixture of fluid and solid (e.g., tailings water and solids).
South Pacific Convergence Zone	a zone of high pressure and rainfall that migrates across the Pacific south of the equator.
spigot	a device to control the flow of liquid in a tap.
spillway	a controlled overflow channel or conduit allowing excess water to exit the TSF without causing structural damage.
spores	microscopic, single-celled structure that can develop into a new organism without the need for fusion with another cell.
stacked gabions	modular units filled with rocks used in various construction applications, including soil retention, erosion control, and retaining walls.
stamen	the male fertilizing organ of a flower, typically consisting of a pollen-containing anther and a filament.
starter embankment	the initial base structure built to support subsequent embankment raises.
stratigraphic	of or relating to the arrangement and succession of strata.
subaqueous	below the surface of water.
subsistence	hunting, gardening or similar where produce is consumed by hunter and family leaving no surplus for marketing.
subspecies	a taxonomic category that ranks below species and is a fairly permanent geographically isolated race.
substrate	the surface or material that underlies something on which some process occurs.
sulfide minerals	Compounds of sulfur with metals, forming dense, metallic ores that are key sources of metals like copper, lead, zinc, and nickel.
sunny day failure	a term to describe a breach or dam failure that occurs during fair weather (i.e., non-hydrologic or non-precipitation) conditions.
supra-ocular	something that is situated above the eye.

Terms	Definition
supernatant	liquid lying above a solid residue after crystallisation, precipitation, centrifugation or other processes.
survey prisms	specialized retro- reflectors used in surveying to measure distances and angles accurately.
Tailings storage facility/TSF	an engineered structure used to store the waste material (tailings) generated from mineral processing operations.
talus	the large bone in the ankle, which articulates with the tibia of the leg and the calcaneus and navicular bone of the foot.
taxa	a taxonomic group of any rank, such as a species, family, or class.
taxonomic	of or relating to taxonomy, the branch of science concerned with classification, especially organisms.
tectonic	of or relating to the structure of the earth's crust and the large-scale processes that take place within it.
tepal	a floral structure found in the non-reproductive part of the flower which surrounds and protects the reproductive organs.
terrestrial	pertaining to land.
tie-channel	narrow, leveed channels that connect rivers to floodplain lakes.
titrate	ascertain the amount of a constituent in (a solution) by measuring the volume of a known concentration of reagent required to complete a reaction with it, typically using an indicator.
the Code	Ok Tedi Closure and Decommissioning Code 2001.
the Constitution	Constitution of the Independent State of Papua New Guinea.
the project	Ok Birim Tailings Storage Facility Project.
thoracic	relating to the thorax of an animal.
topography	physical relief and contour of a region.
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).
trade winds	persistent east-to-west winds that blow from the northeast in the Northern Hemisphere and from the southeast in the Southern Hemisphere towards the equator in the tropics.
tributary	a stream or river that flows into a larger river or lake.
trophic	the feeding relationships and nutritional levels of organisms within an ecosystem.
tropetps	moderately well drained soils with relatively high bulk densities and low proportions of clay minerals, including humitropepts and dystropepts.
tropothernts	young, shallow soils found on steep or rocky slopes in warm, humid areas. They stay moist most of the year and lack distinct soil layers.
tsunami	an ocean wave generated by a submarine earthquake, volcano or landslide.
tuff	rock formed from volcanic ash and debris that has been compacted and cemented into solid material.
tuffaceous	refers to rock that contains 25 to 75% volcanic ash, making them partially composed of tuff.
turbidity	muddiness created by stirring up sediment or having foreign particles suspended.
vascular plant	those land plants that have rigid tissues for conducting water and minerals upward from the roots, and the products of photosynthesis downwards from the leaves.
velocity	speed in a given direction.
vertebrate	an animal distinguished by the possession of a backbone or spinal column, including mammals, birds, reptiles, amphibians, and fishes.
volant	an animal able to fly or glide.

Terms	Definition
voucher specimens	a preserved sample of an organism collected during research to serve as a permanent, verifiable reference for species identification and scientific study.
watershed	an area or ridge of land that separates waters flowing to different river basins, or seas.
West Bank	refers to the west bank of the Ok Tedi River at Bige (location of PCon storage).
weathering	the process of wearing or being worn by long exposure to the atmosphere.
wetland	a low-lying area regularly inundated or permanently covered by shallow water.

Table 19.2 Abbreviations and acronyms

Abbreviations and acronyms	Definition
AEP	annual exceedance probability
AERMOD	atmospheric dispersion modelling system
AMD	acid and metalliferous drainage
AMSL	above mean sea level
ANC	acid neutralising capacity
ANCOLD	Australian National Committee on Large Dams
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	<i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i>
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
AOI	area of influence
ARI	average recurrence interval
BAP	Biodiversity Action Plan
BP	years before present
C	construction
CAPEX	capital expenditure
CCDA	PNG Climate Change and Development Authority
CCKP	Climate Change Knowledge Portal
CCon	copper concentrate
CCRA	climate change risk assessment
CDA	Canadian Dam Association
CEPA	PNG Conservation and Environment Protection Authority
CESMP	construction environmental and social management plan
CMCA	Community Mine Continuation Agreement
CONCAWE	Conservation of Clean Air and Water in Europe
CR	critically endangered
CRCEG	China Railway Construction Engineering Group
CRS	Community Relations and Sustainability Department
D	decommissioning and closure
dB(lin)	linear decibels
dB(A)	decibels A-weighted
DD	data deficient

Abbreviations and acronyms	Definition
DEC	Department of Environment and Conservation (former)
DGVs	default water quality guideline values
DNA	deoxyribonucleic acid
DOC	dissolved organic carbon
EHS	environmental, health and safety
EIR	environmental inception report
EIS	environmental impact statement
EM-DAT	the international disaster database
EN	endangered
EoR	engineer of record
EPA	Environmental Protection Agency
EP IV	<i>Equator Principles IV</i>
EPRP	emergency preparedness and response plan
ESIA	environmental and social impact assessment
ESMS	environmental and social management system
ESMP	environmental and social management plan
FBA	Freshwater Biological Association
FGDs	focus group discussions
FIMS	forest inventory management system
FPIC	free, prior and informed consent
FS	feasibility study
GDE	groundwater dependent ecosystems
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	greenhouse gas
GISTM	<i>Global Industry Standard on Tailings Management</i>
GTR	Global Tailings Review
GWh	gigawatt-hour
HDD	horizontal directional drilling
HDPE	high-density polyethylene
IAIA	International Association for Impact Assessment
ICMM	International Council on Mining and Metals
ICOLD	International Commission on Large Dams
IFC	International Finance Corporation
IFC PS	<i>International Finance Corporation Performance Standard</i>
IMS	integrated management system
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial Process and Product Use
ITCS	infrastructure tax credit scheme
ITCZ	Inter-Tropical Convergence Zone

Abbreviations and acronyms	Definition
IUCN	International Union for the Conservation of Nature
JECFA	Joint Expert Committee on Food Additives
KBA	Key Biodiversity Area
KCB	KCB Australia Pty Ltd
kVA	kilovolt-amperes
LAeq	a weighted equivalent continuous sound level, measure of sound over a specific period
LAFU	low altitude forest on uplands
LLG	local level government
LC	least concern
LMP	Lease for Mining Purposes
LULUCF	the Land use, Land-Use Change and Forestry sector
LLG	local level government
LOM	life-of-mine
LRP	Livelihood Restoration Plans
MAA	multi-criteria alternatives assessment
MIMP	major incident management plan
MIMT	major incident management team
ML	megalitre
MPA	maximum potential acidity
MRA	Mineral Resources Authority
MTDP IV	Medium Term Development Plan IV
Mtpa	Metric Tonnes Per Annum
MWTP	Mine Waste and Tailings Project
NAF	non-acid forming
NAPP	net acid producing potential
NDCs	Nationally Determined Contributions
NE	not evaluated
NGO	non-governmental organisation
NMAG	National Museum and Art Gallery
NO ₂	nitrogen dioxide
NSOs	PNG National Statistics Office
NSW	New South Wales
NT	near threatened
O	operations
OMS	operations, maintenance and surveillance
OTDF	Ok Tedi Development Foundation
OTEMA	<i>Ok Tedi Environment Management Act 2019</i>
OTML	Ok Tedi Mining Ltd (project proponent)
ORWB	off-river water bodies

Abbreviations and acronyms	Definition
P	protected
PAF	potentially acid forming
PAR	population at risk
PASS	potential acid sulfate soils
PCon	pyrite concentrate
PFS	pre-feasibility study
PGK	Papua New Guinean Kina
PIIM	project-induced in-migration
PLL	potential loss of life
PM ₁₀	Grade of particulate matter with a diameter of 10 micrometres or less.
PM _{2.5}	Grade of particulate matter with a diameter of 2.5 micrometres or less.
PMF	probable maximum flood
PMP	probable maximum precipitation
PMV	public motor vehicle
PMTDI	provisional maximum tolerable daily intake
PNG	Papua New Guinea
PNGDSP	Papua New Guinea Development Strategic Plan
PNGRIS	Papua New Guinea Resource Information System
PS	performance standard
PSHA	probabilistic seismic hazard assessment
PTMI	provisional tolerable monthly intake
PTWI	provisional tolerable weekly intake
PVC	polyvinyl chloride
RDF	rainy day failure
ROW	right of way
RL	reduced level
SARV	sorcery accusation related violence
SDF	sunny day failure
SML	special mining lease
SMLLG	Star Mountain Local-Level Government
SPCZ	South Pacific Convergence Zone
SSP	Shared Socioeconomic Pathway
TDS	total dissolved solids
Tetra Tech Coffey	Tetra Tech Coffey Pty Ltd
TOC	total organic carbon
TPP	tailings processing plant
TSF	tailings storage facility
TSP	total suspended particulate
TSS	total suspended solids

Abbreviations and acronyms	Definition
TSS	total suspended sediment
TVET	tertiary training facility
UHMWPE	ultra-high molecular weight polyethylene
VU	vulnerable
VWP	vibrating wire piezometers
WASH	water, sanitation and hygiene
WHO	World Health Organisation
WHO JECFA	World Health Organization and the Food and Agriculture Organization of the United Nations Joint Expert Committee on Food Additives
WRM	Wetland Research and Management

Table 19.3 Units and symbols

Units and symbols	Definition
%	percent
°	degree (angle)
GI	gigalitre
g	gram
ha	hectare
kg	kilogram
kL	kilolitre
km	kilometre
kW	kilowatt
kWh	kilowatt-hour
L	litre
m	metres
m/s	metres per second
m ²	square metre
m ³	cubic metre
m ³ /s	cubic metres per second (flow rate)
ML	megalitres
mm	millimetre
Moz	million ounces
Mt	million tonnes
Mtpa	million tonnes per annum
MW	megawatt
t	metric tonne
t/m	tonnes per cubic metre
tpa	tonnes per annum
w/w	weight by weight ratio