

31. GLOSSARY AND ABBREVIATIONS

The following words and abbreviations are defined in the context of their use in this report. A table of conversions is located at the end of the glossary.

A

abiotic *adj.* physical rather than biological; not derived from living organisms.

absorption *n.* a process in which a substance diffuses into a liquid or solid to form a solution.

acid gas *n.* a gas that can form acidic solutions when mixed with water, the most common acid gases being hydrogen sulfide (H₂S) and carbon dioxide (CO₂) gases; both gases cause corrosion, and hydrogen sulfide is extremely poisonous.

accretion *n.* the process whereby the size of a mass of sediment (e.g., a delta) is increased due to continual sediment deposition.

acoustic *adj.* pertaining to sound. Acoustic instruments use soundwaves to record measurements.

actuator *n.* a mechanical device for moving or controlling a mechanism or system.

adsorption *n.* a process in which a gas or liquid solute accumulates on the surface of a solid or a liquid (the adsorbent), forming a film of molecules or atoms (the adsorbate).

adventitious *adj.* occurring in an advantageous position or place (often by chance).

aero-derivative *adj.* aviation technology that has been modified for industrial or marine use; for example, an aero-derivative turbine is a modified jet engine.

agnatic *adj.* *see* patrilineal.

AGO *abbr.* Australian Greenhouse Office.

allochthonous *adj.* found in a place other than where it and its constituents were formed.

alluvial fan *n.* a fan-shaped mass of material deposited at a point along a river or stream where a sudden decrease in the gradient occurs.

alluvial material *n.* material, mainly sand and silt, that a river has carried in suspension and then deposited.

alluvial plain *n.* a plain formed by the deposition of alluvial material over a long period of time.

altitudinal belt *n.* a geographic distribution area delimited by climactic constraints of elevation.

amine absorber *n.* unit used in gas sweetening, in which downflowing amine solution absorbs hydrogen sulfide and carbon dioxide from the upflowing sour gas to produce a sweetened gas stream.

andesite *n.* a grey, fine-grained volcanic rock.

ANSI *abbr.* American National Standards Institute.

- anthropogenic** *adj.* originated by humans or from human activity.
- anticline** *n.* a fold in the earth that is upwardly convex.
- apron** *n.* an extensive, spread-out deposit of sediment, typically at the foot of a mountain.
- arboreal** *adj.* of or relating to trees; of or relating to an animal that lives in trees.
- archaeological site** *n.* a cultural heritage site with physical evidence of past cultural activity visible on or in the ground.
- argillite** *n.* a fine-grained sedimentary rock that contains clay.
- artefact** *n.* anything made by human workmanship, particularly by previous cultures.
- artisanal** *adj.* agricultural or fishing practice that produces sufficient quantity for commercial trade, rather than for subsistence.
- AS** *abbr.* Australian Standard.
- ASL** *abbr.* above sea level.
- asphyxiant** *n.* an agent or substance capable of causing asphyxiation.
- associated gas** *n.* natural gas found in association with crude oil in a reservoir, either dissolved in the oil or as a cap above the oil.
- ASME** *abbr.* American Society of Mechanical Engineers.
- AusAID** *abbr.* Australian Agency for International Development.
- autochthonous** *adj.* formed or originating in the place where found.
- avifauna** *n.* the bird species found in a particular geographic region.
- AWS** *abbr.* automatic weather station.

B

- bachelor cult** *n.* traditional coming-of-age ritual, practiced in groups by Huli warriors.
- backfill** *v.* 1. to refill an excavation with the material previously removed from that excavation. *n.* 2. the material used in that backfilling.
- backlimb** *n.* the less steep of the two limbs of an asymmetrical anticlinal fold.
- backwater** *n.* a section of a stream or river, usually close to a bank, that is almost still or flows in the opposite direction to the main current due to localised conditions.
- ballast** *n.* liquid or solid material placed in a ship for stability at sea when it is not carrying a full cargo.
- basalt** *n.* a dark, fine-grained volcanic rock that sometimes displays a columnar structure.
- base flow** *n.* water flow in a river or stream that does not arise directly from rainfall runoff.
- bathymetry** *n.* the science of measuring the depths of marine waters.
- batter** *n.* the backwards slope in the face of a wall.

Bbbl *abbr.* billion US petroleum barrels.

bbbl *abbr.* US petroleum barrel; 42 US (liquid) gallons.

Bcf *abbr.* billion cubic feet.

bedding plane *n.* any of the division planes that separate the individual strata or beds in sedimentary or stratified rock.

bell hole *n.* a hole or excavation, larger in diameter at the bottom than at the top, dug beneath a pipeline for the purpose of repairs, to provide room for the use of tools by workers.

benthos *n.* animals and plants that live on or in association with the bed of a sea, lake or river.

berm *n.* 1. a low mound built over a pipeline to improve its structural stability and protect it from damage. 2. a mound or kerb made of earth, concrete, or some other material that provides containment for an area; also called a bund.

biocide *n.* a chemical that can kill animals or plants.

biofuel *n.* a fuel derived directly from living matter.

biomass *n.* the total mass of organisms in a given area or volume.

bioregion *n.* a region defined by characteristics of the natural environment rather than by geopolitical divisions.

biota *n.* the animal and plant life of a particular region, habitat or geological period.

bit *n.* tip of a drilling rig; the tool used to crush or cut rock.

blanket gas *n.* a gas phase maintained above a liquid in a vessel to protect the liquid against air contamination, to reduce the hazard of detonation, or to pressurise the liquid; the gas source is located outside the vessel.

blasting *n.* the controlled use of explosives to excavate or remove rock.

blowcase *n.* a pumping device used to transfer crude oil and water mixtures without agitation in order to prevent emulsions.

blowdown *n.* the removal of solids or liquids from a container or pipe using pressure.

boiling point *n.* the temperature of a liquid at which it begins to evaporate into a gas.

bommie *n.* rounded, massive, often knobby or mushroom-shaped protuberance or growth of coral, usually forming on the submerged part of a coral reef and frequently large enough to be dangerous to navigation.

breasting dolphin *n.* a pile or other structure against which a moored watercraft rests.

bride-price *n.* money, property or wealth given to a bride's family by the family of the groom.

brine *n.* water saturated or strongly impregnated with salt.

brownfield *adj.* relating to or denoting land that has been previously developed.

BSA *abbr.* benefit sharing agreement.

BTEX *abbr.* benzene, toluene, ethylbenzene and xylene.

Btu *abbr.* British thermal unit.

Btu/scf *abbr.* British thermal unit per standard cubic foot.

bund *n.* an embankment constructed around an area to prevent the inflow or outflow of liquids.

butane *n.* see hydrocarbon.

BVG *abbr.* Broad Vegetation Group.

C

calcarenite *n.* a rock formed by the percolation of water through a mixture of shell fragments and sands in calcareous rock causing the dissolved lime to cement the mass together.

calcareous *adj.* resembling or containing calcium carbonate or limestone; chalky.

catchpit *n.* a sump to which the floor slopes gently; spillage gravitates or is hosed toward this area.

cathodic protection *n.* a method of protecting a metal structure from corrosion by making its surfaces cathodic and controlling the location of anodic areas so that corrosion damage can be reduced.

causeway *n.* a raised road or track across low or wet ground.

cay *n.* a low, sandy island or low, exposed coral reef.

CDI *abbr.* Community Development Initiatives.

CH₄ *abbr.* methane.

check valve *n.* a mechanical device that automatically prevents the contents of a pipeline from flowing backwards.

chert *n.* a hard, dark, opaque rock composed of silica with a microscopically fine-grained texture.

choke *n.* a device incorporating an orifice that is used to control fluid flow rate or system pressure.

Christmas tree *n.* an assembly of valves, spools and fittings for use with wells (oil, gas, water injection, water disposal, gas injection, condensate and other types of wells).

clear-felling *n.* a forestry practice in which most or all trees in a harvest area are cut down.

climax community *n.* a biological community that has reached a steady state through ecological succession.

CO₂ *abbr.* carbon dioxide.

coalescence *n.* the process of creating a continuous liquid through promoting droplet merger and growth, such that emulsions break and form two distinct liquid phases that then separate.

coalescer *n.* a technological device used to perform coalescence.

cockpit karst *n.* a variety of karst landscape, dominated by steep or vertical-sided limestone towers called cones.

colluvium *n.* material that accumulates at the foot of a steep slope.

compressor *n.* any machine, as a pump, in which gas is pressed into less space.

condensate *n.* a hydrocarbon fluid consisting of pentane and heavier components; sometimes referred to as C5+.

consolidated sediment *n.* sediment that has been converted into rock by compaction, by deposition of cement into pore spaces or by physical and chemical changes in the constituents.

construction disturbance area *n.* see pipeline construction area.

cordillera *n.* a chain of mountains or mountain ranges that runs along a coastline.

CPM *abbr.* Central Papuan Mountains.

crawler crane *n.* a type of crane mounted on an undercarriage of tracks that provide both mobility and stability.

cultural heritage *n.* the cultural history of a region or of a people; the engagement of people with their customary practices (particularly through specific sites) in the past and in the present; divided into two non-mutually exclusive types: archaeological sites and oral tradition sites.

culvert *n.* a large pipe or channel carrying water underneath a structure (such as a road or railway track) or underneath the ground.

cryogenic *adj.* of or relating to low temperatures.

D

dBA *abbr.* decibels, A-weighted scale; unit used for most measurements of environmental noise; the scale is based upon typical responses of the human ear to sounds of different frequencies.

dbh *abbr.* diameter at breast height.

debitage *n.* the waste material produced during the production of chipped stone tools.

DEC *abbr.* Department of Environment and Conservation, PNG Government.

de-isopentaniser *n.* a fractionation column used to separate isopentane from condensate.

delta *n.* landform created at the mouth of a river when decreased flow velocity causes the expansive deposit of sediment.

deltaic *adj.* of or pertaining to the deposits of sediments formed at the mouth of a river where it enters a lake or the sea.

de-oil *v.* to remove oil from a material or from a surface.

depauperate *adj.* scarce, lacking.

derrick *n.* a lifting device composed of one mast or pole that is hinged freely at the bottom.

descaling *n.* the application of chemicals to prevent or remove the accumulation of unwanted material on solid surfaces.

desiccate *v.* to remove the moisture from.

detritus *n.* waste or debris of any kind.

dewpoint *n.* the temperature (at a given pressure) at which a vapour will condense into a liquid.

diatom *n.* a single-cell alga that has a cell wall of silica.

dieback *n.* the progressive death of a plant due to such causes as drought, salination, and insect or fungal attack.

diurnal *adj.* occurring daily.

doline *n.* a closed depression in an area of karst topography; sinkhole.

DPE *abbr.* Department of Petroleum and Energy, PNG Government.

drainage wind *n.* a wind that is produced when air in contact with land surfaces is cooled and flows down a slope or valley.

dredge *n.* or *v.* apparatus for, or action of, removing sediment from the bottom of a sea, river or lake (typically to increase water depth to allow shipping to pass).

drilling fluid *n.* any of a number of liquid and gaseous fluids and mixtures of fluids and solids used in operations to drill boreholes into the earth.

drilling mud *n.* see drilling fluid.

drillstring *n.* a combination of drillpipe and any other tools used to make the bit drill effectively.

DRIZO *abbr.* a proprietary enhanced glycol concentration process.

DWT *abbr.* dead weight tonne.

E

EBA *abbr.* endemic bird area.

ecotone *n.* a transition area between two adjacent ecological communities or ecosystems.

endemism *n.* 1. a disease or condition regularly found among particular people or in a certain area. 2. describes species that are native to a particular geographic area or continent and usually isolated in some way.

ephemeral *adj.* having an intermittent flow, especially said of a watercourse.

epibenthos *n.* plants and animals that are fixed to or crawl upon the seafloor.

epiphyte *n.* a non-parasitic plant that grows on another plant.

ethane *n.* see hydrocarbon.

F

facies *n.* the characteristics of a rock body or part of a rock body that differentiate it from others, as in appearance, composition, etc.

FEED *abbr.* front-end engineering and design.

FIMS *abbr.* Forest Inventory Management System.

flaring *v.* burning off unwanted flammable gas and liquids through a gas flare.

flash *v.* to cause a partial vaporisation of a saturated liquid stream by passing it through a valve or other device to reduce the pressure to which the stream is subjected.

flowline *n.* a pipeline that takes oil from a single well or a series of wells to a gathering centre.

fluid *n.* a substance that can flow, such as a vapour or liquid.

fluvial *adj.* of, or found in, a river.

fly camp *n.* basic outdoor temporary accommodation.

FMA *abbr.* forest management area.

foci *n.* plural of focus.

fold belt *n.* a large-scale geological feature made up of folded rock layers caused by regional geological compression and uplifting (e.g., a mountain range).

fractionation *n.* the separation of a mixture into its component fractions, often by distillation, which relies on the different boiling points of the components to separate them.

fringing reef *n.* a coral reef located near the shoreline.

frugivorous *adj.* fruit-eating.

fuel cycle *n.* the combination of fuels used in a chain of production processes, such as primary energy recovery; primary energy transportation and storage; fuel production; fuel transportation, storage, and distribution; and vehicular fuel combustion.

G

gabbro *n.* a dark, coarse-grained plutonic rock of crystalline texture.

galvanic anode *n.* see sacrificial anode.

gas flare *n.* an elevated vertical chimney found on oil rigs, wells and refineries and used for burning unwanted flammable gas and liquids released during unplanned over-pressuring of plant equipment. See flaring.

gas sweetening *n.* a process that removes contaminants from natural gas streams, making the gas suitable for further processing, transportation and use.

gathering system *n.* a network of pipelines used to gather fluids from wells and transport them to a processing facility.

Gcf *abbr.* billion cubic feet.

GDP *abbr.* gross domestic product.

geomorphology *n.* the study of the form of the earth.

geotechnical *adj.* of or relating to the fields of soil mechanics, rock mechanics and engineering geology.

GHG *abbr.* greenhouse gas.

GIS *abbr.* geographic information system.

GJ *abbr.* gigajoule.

glycol *n.* a colourless liquid used, among other things, as an antifreeze and as a coolant.

GPS *abbr.* global positioning system.

greenfield *adj.* relating to or denoting a site not previously developed for commercial purposes.

gross domestic product *n.* the total market value of all final goods and services produced in a country in a given year, equal to total consumer, investment and government spending, plus the value of exports, minus the value of imports.

gubas *n.* short lived squall of about one hour duration.

GVM *abbr.* gross vehicle mass.

GW *abbr.* gigawatt.

GWh *abbr.* gigawatt-hour.

gyre *n.* a circular pattern of currents in an ocean basin.

H

herpetofauna *n.* the reptiles and amphibians of a particular region, habitat or geological period.

HDD *abbr.* horizontal directional drilling.

heat exchanger *n.* any device for transferring the heat of one fluid to another, without allowing them to mix.

HIA *abbr.* health impact assessment.

Hides Gas Plant *n.* another names for the existing Hides Gas to Electricity Plant on Hides Ridge.

hot oil system *n.* a system that heats the gas at various stages using thermal-fluid-based oil heated by turbine exhaust.

hPa *abbr.* hectopascals.

hummock *n.* a low mound or ridge of earth.

hydrate *n.* a compound formed by the union of water with other substances; if allowed to form in pipelines or in gas gathering, compression, transmission or processing facilities at reduced temperatures or high pressures, hydrates can form ice and block plug pipelines, valves, process piping and other equipment and significantly hinder their operation.

hydrocarbon *n.* 1. in chemistry, an organic compound consisting entirely of hydrogen and carbon; in this report, hydrocarbon is sometimes used to refer to compounds consisting mainly of hydrogen and carbon. Hydrocarbons can be gases (e.g., methane and propane), liquids (e.g., hexane and benzene), waxes or low melting solids (e.g., paraffin wax and naphthalene) or polymers (e.g., polyethylene, polypropylene and polystyrene). They are sometimes referred to by the number of carbon atoms in the molecule, for example, C1 (methane), C2 (ethane), C3 (propane), C4 (butane), and C5 (pentane). As the number of carbon atoms increases, so do the number of hydrogen atoms and thus the weight of the molecule, meaning that C1 has a lower molecular weight than C5; thus, light and heavy are also used to describe groups of hydrocarbons. *adj.* 2. of or relating to hydrocarbons.

hydrocarbon dewpoint *n.* the temperature (at a given pressure) at which the hydrocarbon components of any hydrocarbon-rich gas mixture, such as natural gas, will start to condense out of the gaseous phase; universally used in the natural gas industry as an important quality parameter.

hydromyine *adj.* of or relating to a rat-like rodent of the family *Muridae*.

hydrostatic testing *n.* a test to verify the strength of vessels intended to contain fluid under pressure; the item is filled with liquid, subjected to suitable pressure, and then shut in, and the pressure is monitored to ensure it does not fall during the test period.

hydrotest *abbr.* see hydrostatic testing.

Hz *abbr.* hertz.

I

iduhu *n.* a Motu word for the social unit within a village consisting of one or more lines of houses built on piles over the sea at an angle to the coastline inhabited by people who give themselves an *iduhu* name. The basis of the *iduhu* is patrilineal (descendants of common ancestor, plus unmarried females). Women normally join the *iduhu* of their husband, living with his group.

IFC *abbr.* International Finance Corporation.

ILG *abbr.* incorporated land group.

infauna *n.* aquatic animals that live within the sediment on the seafloor.

infill *n.* material that fills or is used to fill a space or hole.

insectivorous *adj.* insect-eating.

ISQG *abbr.* interim sediment quality guidelines.

IUCN *abbr.* International Union for the Conservation of Nature.

J

jack-up barge *n.* a self-contained combination of a drilling rig and a floating barge, fitted with long support legs that are dropped to the sea floor once the barge reaches the desired drilling location. Once the support legs are driven into the seafloor to ensure stability, a preloaded

jacking mechanism raises the barge above the water so that drilling is unencumbered by wave, tidal or current conditions.

K

K *abbr.* kina.

karst *n.* the characteristic landform of limestone regions, typically including underground streams, sinkholes, and steep-sided gorges. *See also* sinkhole.

katabatic *adj.* of or relating to a drainage wind, caused by the downward movement of cool air.

kg *abbr.* kilogram.

KICDP area *n.* the 2.3 million ha area designated by the World Wildlife Fund as the Kikori Integrated Conservation and Development Program (KICDP) and that covers the Kikori River catchment.

kina *n.* the national currency of Papua New Guinea, to which an exchange rate of US\$1:K3.6 applies in this EIS.

kL *abbr.* kilolitre.

km *abbr.* kilometre.

knock-out *n.* 1. a liquid condensed in a vessel following a compression and cooling process. *adj.* 2. having the ability to produce knock-out liquids.

kPa *abbr.* kilopascal.

kPaa *abbr.* kilopascals atmosphere.

kPag *abbr.* kilopascals gauge.

KRP *abbr.* Kikori River Programme.

kSm³/h *abbr.* thousand standard cubic metres per hour.

kV *abbr.* kilovolt.

kW *abbr.* kilowatt.

kWh *abbr.* kilowatt-hour.

kW/m² *abbr.* kilowatt per square metre, the unit of measurement for thermal flux.

L

L *abbr.* litre.

L/m³ *abbr.* litre per cubic metre.

lacustrine *adj.* of or relating to a lake.

lagatoi *n.* a Motu word for a large, multi-hulled sailing canoe; also *lakatoi*.

lagging *n.* insulation used to prevent heat diffusion.

LANCO *abbr.* landowner company.

landfall *n.* the point at which a pipeline leaves or returns to shore.

landscape fragmentation *n.* the division of the natural environment by human activity leading to a loss in biodiversity.

LAT *abbr.* lowest astronomical tide.

laybarge *n.* a barge used for pipelaying.

laydown area *n.* sites at which pipe and other equipment and supplies may be stored prior to delivery to a right of way or other construction site.

lekking area *n.* a communal area where male birds-of-paradise display to compete for the attention of females.

liana *n.* a long-stemmed woody vine, rooted at ground level, that uses trees and other vertical support to climb towards the light of the forest canopy.

lighter *n.* 1. a vessel, commonly a flat-bottomed unpowered barge, used in unloading or loading ships. *v.* 2. to convey goods in a lighter.

liquefied natural gas *n.* the state of natural gas when it is refrigerated to below -160°C. Liquefied natural gas (LNG) is typically transported by special tankers to overseas markets, where it is regasified and transported by pipeline to industrial and domestic customers.

liquefied petroleum gas *n.* a liquid mixture of heavier, gaseous, paraffinic hydrocarbons, principally butane and propane, which are easily liquefied at moderate pressure, transported as a liquid and then converted to gas on release of the pressure.

LLG *abbr.* local-level government.

LNG *abbr.* liquefied natural gas.

LNG Facilities site *n.* depending on the context, refers to the onshore portion of the site or both the onshore and offshore portions of the site.

L_{max} *abbr.* maximum A-weighted sound level. *See also* dBa.

LPG *abbr.* liquefied petroleum gas.

M

macrobenthos *n.* large organisms that live on or in the seafloor.

macrophyte *n.* an aquatic plant that grows in or near water.

magnetometry *n.* the act of measuring the magnitude and direction of a magnetic field.

mainline valve *n.* a valve used to enable sections of a pipeline to be isolated for maintenance or to limit the amount of fluid released if a leak occurs.

Malesia *n.* a biogeographical region straddling the boundary of the Indomalaya and Australasia ecozones; a floristic province that includes the Malay Peninsula, Indonesia, the Philippines and New Guinea, based on a shared tropical flora derived mostly from Asia but also with numerous

elements of Antarctic flora, including many species in the southern conifer families Podocarpaceae and Araucariaceae.

masalai *n.* a Tok Pisin word meaning spirits.

Mbbl *abbr.* million US petroleum barrels.

MCFD *abbr.* million cubic feet per day.

meander *n.* a bend in a sinuous watercourse; an oxbow.

MEG *abbr.* mono-ethylene glycol.

MesoLAPS *abbr.* Mesoscale Limited Area Protection System.

metocean *adj.* of or relating to the combined sciences of meteorology and oceanography.

mg *abbr.* milligram.

mg/Sm³ *abbr.* milligram per standard cubic metre.

microclimate *n.* a climate that is peculiar to a small area, particularly an area within a plant community that is sheltered from normal climatic conditions.

microhabitat *n.* a habitat specific to a small area that differs in character from some surrounding, more extensive habitat.

Microhylidae *n.* geographically widespread family of frogs; the largest frog family.

midden *n.* archaeological term for a place in which everyday waste is deposited.

mixing zone *n.* an area of water into which waste is discharged and within which the prescribed water quality guidelines are not required to be met and beneficial values need not be protected.

MJ/Nm³ *abbr.* megajoule per normal cubic metre.

MOA *abbr.* memorandum of agreement.

molar concentration *n.* the concentration of the substance dissolved in a solution or of any molecular, ionic or atomic species in a given volume.

molecular sieve *n.* a filter that operates on a molecular level made up of material containing tiny pores of a precise and uniform size, used as an adsorbent for gases and liquids; often used to remove water from a substance as water molecules may be small enough to pass through the filter while larger molecules may not.

montane *adj.* of or relating to highland areas located below the subalpine zone.

mooring dolphin *n.* a fixed, man-made structure that is not connected to the shore and is used to moor watercraft.

morbidity *n.* a diseased state, disability or general poor health.

mortality *n.* death, especially on a large scale.

MRDC *abbr.* Mineral Resources Development Company.

Mscfd *abbr.* thousand standard cubic feet per day.

MSL *abbr.* mean sea level.

Mt *abbr.* million tonnes.

Mtpa *abbr.* million tonnes per annum.

mudflat *n.* an area of muddy, intertidal shoreline that on evaporation of seawater, dries to a salt-crusted surface (a saltflat).

mudstone *n.* a fine-grained sedimentary rock whose original constituents were clays or muds.

MW *abbr.* megawatt.

MWh *abbr.* megawatt-hour.

N

N₂O *abbr.* nitrous oxide.

natural gas liquids *n.* a collective term for the heavier gaseous hydrocarbons: ethane (C₂H₆), propane (C₃H₈), normal butane (n-C₄H₁₀), isobutane (i-C₄H₁₀), pentanes and heavier molecular-weight hydrocarbons.

nectarivorous *adj.* nectar-eating.

NFA *abbr.* National Fisheries Authority, PNG Government.

ng/Nm³ *abbr.* nanogram per normal square metre.

NGO *abbr.* non-government organisation.

Nm³ *abbr.* normal cubic metre.

NO_x *abbr.* nitrous oxides.

non-associated gas *n.* gas to be produced from the Hides, Angore, and Juha gas fields.

non-consolidated *adj.* of or relating to sediment that remains separate and mobile from the river or ocean bed.

non-volant *adj.* not capable of flight.

NTU *abbr.* nephelometric turbidity unit.

O

offsites *n.* equipment and facilities that support the LNG processing trains and the plant utilities.

oral tradition site *n.* a cultural site known by people through their oral traditions, irrespective of whether those sites exhibit physical traces of past human presence.

ordnance *n.* military weapons, ammunition and equipment.

Organic Law *n.* a law or system of laws that form the foundation of a government.

OSL *abbr.* Oil Search Limited.

ossuary *n.* a container, room or area in which the bones of the deceased are placed.

oxbow *n.* see meander.

oxygen-scavenger *n.* a chemical that reacts with dissolved oxygen (O₂) to reduce corrosion.

P

particulate matter *n.* material 10 microns or less in size and capable of being breathed deep into the lungs; the amount of particulate matter in the air is used as an indicator of health risk.

passerine *n.* a bird of the order Passeriformes, which includes more than half of all bird species; a perching bird.

patrilineal *adj.* based on relationship to the father; descent through the male line.

PDL *abbr.* petroleum development licence.

pelagic *adj.* of or relating to the open sea.

pentane *n.* see hydrocarbon.

periphyton *n.* an organism that lives attached to underwater surfaces.

phase *n.* the state of a hydrocarbon; a single-phase hydrocarbon fluid is a vapour or a liquid only; a two-phase hydrocarbon fluid has both vapour and liquid components.

phylogenesis *n.* the study of evolutionary relatedness among various groups or organisms, which is discovered through molecular sequencing data.

PIA *abbr.* project impact area.

pig *n.* see scraper pig.

pile driver *n.* a mechanical device used in piling.

piling *v.* the process of driving foundations into soil to support a building or other structure.

pipeline construction area *n.* the total area of land disturbed by pipeline construction, including the pipeline ROW, cut and fill slopes, and areas affected by sidecast material.

pipeline construction ROW *n.* see right of way.

pipeline spread *n.* the equipment and people needed to build a pipeline.

piperrack *n.* a set of framed structures on which drill pipe is stacked for storage or along which piping or a pipeline is laid to keep it above the ground or to allow multiple layers of piping or pipelines to occupy the same horizontal space.

pipestring *n.* a series of line pipe lengths welded together into a single length, prior to lowering the string into a trench or onto the seafloor.

PJ *abbr.* petajoule.

PJ/a *abbr.* petajoule per annum.

PL *abbr.* pipeline licence.

play *n.* a set of discovered or undiscovered oil and gas accumulations or prospects that exhibit nearly identical geological characteristics. A play is defined by the geological properties (such as trapping style, type of reservoir, nature of the seal) that are responsible for the accumulations or prospects.

pluviograph *n.* a self-registering rain gauge.

PM₁₀ *abbr.* particulate matter less than 10 micrometres in diameter.

PNG *abbr.* Papua New Guinean.

PNGFA *abbr.* Papua New Guinea Forest Authority.

polygonal karst *n.* karst terrain completely pitted by closed depressions, leaving a pattern of domed hills.

portion *n.* a defined and surveyed piece of land, designated as a portion by the PNG Surveyor General.

Portion 152 *n.* depending on context, refers to the LNG Facilities site or to the original lease area, which is now divided into four new lease areas: onshore (Portion 2456), coastal strip (Portion 2457), offshore (Portion 2458) and the remaining area of Portion 152 (Portion 2459).

PPFL *abbr.* petroleum processing facility licence.

PPL *abbr.* petroleum prospecting licence.

ppm(v) *abbr.* parts per million by volume; also ppmv.

practical salinity unit *n.* a unit of measurement of salinity similar to part per thousand.

primary tropical forest *n.* a tropical forest that has reached its climax-succession stage of growth.

PRL *abbr.* petroleum retention licence.

prodelta *n.* the part of a delta lying beyond the delta front.

production *n.* 1. an activity of the petroleum industry that deals with bringing well fluids to the surface and separating them and with storing, gauging, and otherwise preparing the product for transport by pipeline. 2. the amount of oil or gas produced in a given period.

prograding *n.* seaward building of a delta, beach or fan due to deposition of waterborne sediments.

propane *n.* see hydrocarbon.

propwash *n.* the disturbed mass of water in a current caused by a propellor or rotor.

psu *abbr.* practical salinity unit.

pyroclastic *adj.* composed chiefly of rock fragments of volcanic origin.

R

raskol *n.* a Tok Pisin word meaning a petty criminal or gang member.

rectifier *n.* an electrical device that converts alternating current to direct current.

regeneration *n.* the sustainable natural process by which plants either replace themselves or give way to other species in a process of succession.

regrowth forest *n.* a forest that has been disturbed recently enough by natural events or human activities that the disturbance is still evident.

Reid vapour pressure *n.* the absolute vapour pressure exerted by a liquid at 100°F (approximately 38°C); the higher the Reid vapour pressure value, the more volatile the liquid and the more readily it will evaporate.

rehabilitation *n.* the measures taken to stabilise disturbed land, such as recontouring, drainage and topsoil respreading.

revegetation *n.* the natural or active re-establishment and development of plant cover; natural revegetation (also called passive revegetation) takes place without intervention and active revegetation takes place with intervention using artificial means, such as ground preparation, fertilisation, seeding or seedling planting.

reverse osmosis *n.* the filtration process in which pressure is used to force a solution through a membrane, retaining the solute on one side and allowing the pure solvent to pass to the other.

rich amine *n.* an amine solution containing the absorbed acid gases and traces of hydrocarbons.

right of way *n.* the prepared surface from which the pipeline construction crew can carry out the pipeline installation work.

riparian *adj.* of or related to river banks.

rootstock *n.* the base or stump of a plant that has an established, healthy root system.

ROW *abbr.* right of way.

S

sacrificial anode *n.* metal electrode that protects the metal structure on which it is placed by corroding in preference to the structure; also called galvanic anode.

sago *n.* starch extracted from sago palm stems and used to make flour; staple food product in Papua New Guinea.

saltflat *n.* a mudflat that, on evaporation of seawater, dries to a salt-crust surface.

saturated pool *n.* a petroleum trap that has a free gas cap above the oil and occupying the upper part of the reservoir; a saturated pool forms when the oil in the reservoir has dissolved all the natural gas (solution gas) that can be held under the reservoir pressure and temperature. *See also* unsaturated pool.

scraper pig *n.* a maintenance tool used in normal pipeline operations to clean the internal wall of a pipeline.

scraper station *n.* a facility located at the end points and at certain mid-points along a pipeline to allow scraper pigs to be placed into the flowing fluid and to be recovered at the end of each section.

secchi disc *n.* a device used to measure water clarity by measuring the depth at which the disc disappears from view in the water column.

secondary porosity *n.* a subsequent or separate porosity system in a rock, often enhancing overall porosity of the rock.

seral *adj.* of or relating to an ecological sere.

sere *n.* an intermediate stage of ecological succession in which a plant or animal community advances towards its climax community.

sheetflow *n.* an overland flow or downslope movement of water taking the form of a thin, continuous film over relatively smooth soil or rock surfaces and not concentrated into channels.

sheet pile *n.* a long, structural section with a vertical interlocking system that creates a continuous wall.

shoal *n.* a ridge of rock, mud or sand lying below the water level in rivers or seas, especially a ridge that is exposed at low water.

shoo-fly road *n.* a temporary road that allows vehicles to bypass a construction site, such as a river crossing or a very steep slope.

SIA *abbr.* social impact assessment.

sidecast *v.* 1. to place surplus excavated material on slopes adjacent to the excavated area. *n.* 2. the material so placed.

side-scan sonar *n.* a category of sonar system that is used to create an image of large areas of seafloor.

silt *n.* sediment with particles finer than sand and coarser than clay (i.e., 2 to 63 microns).

single-phase *adj.* 1. *Elec.* producing, carrying or powered by a single alternating voltage. 2. *Fluids* of or relating to a fluid that is entirely liquid or entirely gas.

sinkhole *n.* a hollow or hole into which surface water drains, especially such a hole worn through rock and leading to an underground channel.

sinuosity *n.* having bends or curves, as in a stream or road.

sisal *n.* a variety of Mexican agave (*Agave tequilana*) with large, fleshy leaves, cultivated for fibre production.

slug catcher *n.* a piece of equipment designed to separate gas from any liquids that have accumulated in a pipeline.

Sm³ *abbr.* standard cubic metre.

SMLI *abbr.* social mapping and landowner identification.

solute *n.* the substance dissolved in a solvent.

solvent *n.* the component of a solution that dissolves the other component.

spanning *n.* the process in which a undersea pipeline becomes unsupported as lateral currents scour the seabed beneath.

spine *n.* a pipeline that transports well fluids from the wellheads to a processing facility.

SPL *abbr.* South Papuan Lowlands.

splay *n.* a minor fault at the extremity of a major fault.

spoil *n.* material removed during excavation (e.g., of a trench) or during site preparation.

spore *n.* a single-celled reproductive unit of a plant.

spud barge *n.* a vessel commonly used as a work barge or loading and unloading platform; it uses heavy timber or pipe located in a well at the bottom of the boat to moor by dropping the timber or pipe through the well and into the bed of the waterbody.

spud pile *n.* a vertical column that penetrates the hull and is used to moor a spud barge.

stabilise *v.* in the context of hydrocarbons, to use heat or pressure to separate and remove the volatile components of a hydrocarbon stream.

standard cubic metre *n.* a unit of measurement equal to a cubic metre at standard temperature and pressure conditions of 15°C and at 101.325 kPa.

STD *abbr.* sexually transmitted disease.

STI *abbr.* sexually transmitted infection.

stick-built *adj.* constructed entirely or largely on the site that it is intended to occupy upon its completion rather than preassembled in a factory or similar facility.

subcool *v.* to reduce a liquid to a temperature lower than the boiling point at a given pressure.

subsistence *adj.* denoting or relating to production at a level sufficient only for consumption, with no surplus for trade.

substrate *n.* the material comprising a seafloor, river or lake bed (e.g., sand, mud, rock).

sump *n.* a low-lying pit that receives drainage.

superspecies *n.* a grouping of very closely related but geographically separated species of common ancestry that have developed into a true species over time due to their wider geographical isolation.

swidden horticulture *n.* a form of shifting field cultivation that necessitates clearing new planting fields every few years to access soil nutrients.

T

t *abbr.* metric tonne.

T-bar *n.* a device used to dissipate water flow at a discharge point to prevent soil erosion.

TA *abbr.* Timber Authority.

talus *n.* the accumulation of fragments resulting from the weathering of rocks.

taxa *n.* plural of taxon.

taxon *n.* a taxonomic group in biology of any rank, such as a species, family or class.

TBtu/a *abbr.* trillion British thermal units per annum.

TDS *abbr.* total dissolved solids.

TEG *abbr.* tri-ethylene glycol.

telemetry *n.* the remote measurement and reporting of information.

tene *n.* 'ground root' people; custodians of land and land-based resources.

terra rossa *n.* a reddish-brown soil overlying limestone bedrock.

terrigenous *adj.* of a marine deposit, made of material eroded from the land.

thermal flux *n.* the flow of energy per unit of area per unit of time; thus, a large thermal flux gives off more energy (heat, in the case of an LNG vapour fire) than a smaller one in the same area over the same amount of time.

thermocline *n.* a distinct layer in a body of water defined by a steep temperature gradient.

TKN *abbr.* total Kjeldahl nitrogen.

TNRCC *abbr.* Texas Natural Resources Conservation Commission.

TOC *abbr.* total organic carbon.

tpa *abbr.* tonne per annum.

train *n.* a production pathway and related infrastructure with its own process area.

trench spoil *n.* material excavated from a trench when constructing a pipeline.

tributary *n.* a river or stream flowing into a larger river or lake.

TSP *abbr.* total suspended particles.

TSS *abbr.* total suspended solids.

tubing hanger *n.* a component used in the completion of oil and gas production wells.

tuff *n.* a light, porous rock formed by consolidation of volcanic ash.

turbidity *n.* the optical property of water that prevents light from being transmitted through it; increased turbidity, or muddiness, is caused by the presence of very fine suspended material, such as clay or organic matter.

turbidity plume *n.* a section of water containing sufficient suspended sediment to differentiate it visually from surrounding waters.

U

unsaturated pool *n.* an oil reservoir that lacks a gas cap; the oil in the reservoir contains some dissolved gas, but it has the potential to contain more.

upstream *adj.* in the context of this EIS, of or relating to all elements of the PNG LNG Project that will be sited between Juha gas field and the point where the LNG Project Gas Pipeline enters the LNG Plant.

upwelling *n.* a rising of seawater or other liquid.

US EPA *abbr.* United States Environmental Protection Agency.

usufruct *n.* the legal right to use and derive profit or benefit from property that belongs to another person, as long as the property is not damaged.

UXO *abbr.* unexploded ordnance.

V

valve *n.* a device used to control the rate of flow in a pipeline, to open or shut off a pipeline completely, or to serve as an automatic or semi-automatic safety device in a pipeline.

vapour *n.* the gaseous form of materials that are normally liquids or solids at room temperature and pressure.

vertisol *n.* a black, cracking clay; soil with more than 35% clay content.

VOC *abbr.* volatile organic compound.

VREC *abbr.* Vaihua River Ecosystem Complex.

VSAT *abbr.* very small aperture terminal.

vugular *adj.* describing a cavity, void or large pore in a rock that is commonly lined with mineral precipitates.

W

wader *n.* a bird associated with a wetland or coastal environment.

wantok *n.* a Tok Pisin word that literally means 'someone who speaks my language', which by implication means someone from the same village or nearby.

waisted blade *n.* the flat cutting part of a knife etc. with an indent on both sides of the central or middle part.

walkabout sawmill *n.* a portable timber-cutting mill used for small-scale selective logging.

water dewpoint *n.* the temperature (at a given pressure) at which water vapour present in a gas mixture will condense out of the gas.

wellstream *adj.* of or relating to the flow from a well.

wet flare *n.* a low-pressure gas flare containing hot gas and water; see gas flare.

WHO *abbr.* World Health Organization.

winch *n.* a machine that pulls or hoists by winding a cable around a spool.

windthrow *n.* the uprooting and overthrowing of trees by wind.

WMA *abbr.* wildlife management area.

Wobbe index *n.* a measure of the amount of heat released by a gas burner with a constant orifice, equal to the gross calorific value of the gas in British thermal units per cubic foot at standard temperature and pressure divided by the square root of the specific gravity of the gas.

WWF *abbr.* WWF - World Wide Fund for Nature.

Table of conversions

1 barrel (US, petroleum) = 0.1590 cubic metre.

1 cubic foot = 0.0283 cubic metre.

1 Btu = 1,055.05585 joules.

Environmental Impact Statement
PNG LNG Project