

Appendix A – Abbreviations

AADT annual average daily traffic

AAQ ambient air quality

AARD Aboriginal Affairs and Reconciliation Division, Department of the Premier and

Cabinet

ABS Australian Bureau of Statistics

AGL above ground level

ARI average recurrence intervals
ARTC Australian Rail Track Corporation

BaP benzo(a)pyrene
BC Box culvert

BDBSA Biological Database of South Australia

BTEX benzene, toluene, ethylbenzene and xylenes

CBD central business district

CEMP Construction Environmental Management Plan

CO carbon monoxide CO₂ carbon dioxide

CO₂–e carbon dioxide equivalent

CoRTN Calculation of Road Traffic Noise (UK 1988)

CSIRO Commonwealth Scientific and Industrial Research Organisation

dB decibel

dBA decibel 'A' weighted

DECC Department of Environment and Climate Change (NSW)

DEH Department for Environment and Heritage (SA)

DGAC dense graded asphaltic content

DITRDLG Department of Infrastructure, Transport, Regional Development and

Local Government

DRAINS stormwater drainage system design and analysis program
DTEI Department for Transport, Energy and Infrastructure (SA)

EIA environmental impact assessment

EMS estuarine muds and sands

EPA Environment Protection Authority (SA)
EBS Environmental Biodiversity Services

EPBC Act Environment Protection and Biodiversity Conservation Act 1999

GHG greenhouse gas

GIS geographic information system

GTP Gould Thorpe Planning

ha hectares

HEP Hindmarsh Enfield Prospect

Hz hertz

ITS intelligent transport system

kg/yr kilograms per year

Kt Kilotonnes

km/hr kilometres per hour LED light emitting diode

L_{eq, 15h} equivalent (energy averaged) continuous noise level measured over the 15 hour

daytime period (7am to 10pm)

LGA local government area

LOS level of service
LPG liquid petroleum gas

MASTEM Metropolitan Adelaide Strategic Transport Evaluation Model

m/s metres per second

m³/s cubic metres per second mbgs metres below ground surface

MERV 13 minimum efficiency rating value of 13

mm millimetres

MOSS Metropolitan Open Space System

MTBE methyl tertiary butyl ether

MUSIC Model for Urban Stormwater Improvement and Conceptualisation

Mt megatonnes

NAW North Arm West (South Road)
NAW5 North Arm West 5 (Dunstan Road)

NCA noise catchment area

NEPM National Environment Protection Measure

NO₂ nitrogen dioxide NO_x nitrogen oxides

NPI National Pollutant Inventory
NRM natural resources management

OEMP Operational Environmental Management Plan

OLM ozone limiting method

PAE City of Port Adelaide Enfield
PAH polycyclic aromatic hydrocarbons
PDC principles of development control

PEMP preliminary environmental management plan
PIRSA Primary Industries and Resources, South Australia

PM₁₀ particulate matter, fine particles less than 10 microns in diameter PM_{2.5} particulate matter, fine particles less than 2.5 microns in diameter

ppb parts per billion

PPD Policy and Planning Division

ppm parts per million QED QED Aurecon

QMR Queensland Main Roads
RAA Royal Automobile Association
RAAF Royal Australian Air Force

RBL rating background level RE Walls reinforced earth walls

RGCW Regency Golf Course: Wetlands

RL reduced level

RTNG Road Traffic Noise Guidelines
SAHT South Australian Housing Trust
SASP South Australia's Strategic Plan

SEDMP soil erosion and drainage management plan

SEIFA socioeconomic indexes for areas

SEW South Eastern Wetland SMA stone mastic asphalt

SPRG Senior Project Review Group SWW South Western Wetland

TAFE Technical and Further Education
TAPM The Air Pollution Model (CSIRO)

TDS total dissolved solids

TPH total petroleum hydrocarbon
TSD Transport Services Division
TSP total suspended particulate

US EPA United States Environmental Protection Agency

v/d vehicles per day v/h vehicles per hour

WoNS weed of national significance WSUD water sensitive urban design $\mu g/m^3$ micrograms per cubic metre $\mu S/cm$ microsiemens per centimetre

Appendix B – Glossary

acid sulfate soils naturally occurring soils, sediments or organic substrates (e.g. peat)

that are formed under waterlogged conditions and can release

sulfuric acid on drying out

A-double a combination road vehicle consisting of a prime mover towing two

semitrailers, with the second trailer connected by a drawbar

'A' weighted frequency filter applied to measured noise levels to represent how

humans hear sounds

arterial road a road that carries large volumes of traffic, as classified by DTEI

at-grade on the ground surface

average recurrence likelih

interval

likelihood of a flood occurring in a given year e.g. a 100-year ARI

flood occurs or is exceeded on average once every 100 years

averaging period the period over which the average is taken (e.g. 1-hour averaging

period is the average of all readings over 1 hour)

batter the uniform side slopes of walls, banks, cuttings, etc.

B-double a combination road vehicle consisting of a prime mover towing two

semitrailers

biodiversity the variety of all life forms: different plants, animals and micro-

organisms, the genes they contain, and the ecosystems of which they

form part

box culvert pre-manufactured reinforced concrete drainage structure

brackish slightly saline water containing dissolved salts of 0.5–30 ppm (less

salty than sea water at 35 ppm)

brine line pipeline conveying hyper-saline water (brine) between Dry Creek and

Largs North to a processing factory

calcrete a conglomerate of surficial (relating to the surface) gravel and sand

cemented by calcium carbonate

concept (design) initial functional layout of a concept to provide a level of

understanding to later establish detailed design parameters

decibel unit of sound level measurement

dBA 'A-weighted' scale for measuring noise, which attempts to closely

approximate the frequency response of the human ear at low sound

pressure levels; the most commonly used scale

deposition the process of laying down a deposit of something

dense grade an asphalt produced with aggregate that produces a continual

grading to deduce voids

employment lands lands zoned to provide employment opportunities

facies a distinctive rock unit that forms under certain conditions of

sedimentation, reflecting a particular process or environment

feedback loop a circuit that feeds back some of the output to the input of a system

fill material placed in an embankment

flyovers bridge formed by the upper level of a crossing of two highways at

different levels

freeboard the height between a given water level and the underside of a bridge

or top of an embankment

gantry an overhead structure spanning road or rail carriageways for

displaying signals and/or signs

geometric design parameters

requirements that need to be met in road design

geopolymer concrete concrete that can use 100% recycled industrial waste as the

manufacturing inputs, resulting in up to 80% lower carbon dioxide

emissions

grade-separated separation of road, rail or other traffic so that crossing movements,

which would otherwise conflict, are at different elevations

habitat locality or environment where a plant, animal, population or

community of interest lives; each living organism has a preferred habitat with the physical surroundings having a direct bearing on the

organism's function and survival

Holocene age a period in geological time, approximately 11,000 years ago

illuminance level of brightness emitted by a light on to any surface exposed to the

light source

indigenous originating and living or occurring naturally in an area or environment a grade separation of two or more roads with one or more

interconnecting carriageways

intermodal terminal where freight (generally containers) is transferred from one

mode (e.g. rail) to another (e.g. road)

introduced species an animal or plant that has been introduced to an area where it

normally does not occur

LAeq, T A-weighted equivalent continuous sound pressure level over T

measurement period, used to quantify the average noise level over a

time period

LA10 A-weighted sound pressure level exceeded for 10% of the

measurement period; usually used as descriptor for intrusive noise

level

LA90 A-weighted sound pressure level exceeded for 90% of the

measurement period; usually used as descriptor for background

noise level

LA10, 15min A-weighted sound pressure level exceeded for 10% of the time when

measured over a 15 minute period; usually used as descriptor for

intrusive noise level

LAmax maximum A-weighted sound pressure level for measurement period

level of service description of the traffic operation of a particular section of road

L_{eq} energy average noise from a source; equivalent continuous sound

pressure level over a given period

longitudinal culvert a culvert that runs parallel to the road

luminance a measure of brightness at a given distance from a light source

Manning Manning roughness coefficient is the resistance of the bed of a

channel to the flow of water in it

migratory species a mobile organism that changes habitat according to season, climate,

food supply, etc. often across vast distances and along defined paths

monetised cost in dollars

National estate those places, being components of the natural or cultural

environment of Australia, that have aesthetic, historic, scientific or social significance, or other special value for future generations and

for the present community

native animals or plants that originate in the region in which they are found,

are not introduced and naturally occurring in the area

noise log a record of the sound given at different positions

non-monetised costs which are tangible but not easily defined in dollar terms

outwash plain a broad, outspread flat or gently sloping alluvial deposit of outwash

over-dimension vehicle vehicle, due to its mass or dimensions, precluded by legislation from

using public roads without following a prescribed route or obtaining a

special permit from the relevant traffic authority

overpass a grade separation where the subject carriageway passes over an

intersecting carriageway or railway

perched watertable groundwater separated from an underlying body of groundwater by

unsaturated rock or soil

phreatic surface the groundwater table

plasticity a condition of a material when it can be easily remoulded, e.g. moist

to wet clay soils

pre-European before European settlement (1836 in South Australia)

rating background level overall single figure background level representing each assessment

period (day/night)

recent geological time period from the present day to 10,000 years BP

(before present)

remnant a small surviving component of an original extent; includes all intact

and predominantly intact indigenous vegetation communities

road train a combination road vehicle, other than a B-double, consisting of a

prime mover towing two or more trailers

sensitive receptors residences, schools and other non-commercial places that are

permanently occupied by people

significant tree (under Development Act

1993)

all exotic and native trees with a trunk circumference of 2 m or greater, or in the case of trees with multiple trunks, those with trunks with a total circumference of 3 m or more and an average circumference of 625 mm or more (measurements taken at 1 m

above natural ground level)

South Eastern ephemeral wetland at southeastern corner of Port River Expressway

Wetlands and South Road

South Western ephemeral wetland at southwestern corner of Port River Expressway

Wetlands and South Road

stone mastic asphalt asphalt with special grading and binders to produce a high level of

resistance to road deformations

study area within the area defined by Churchill Road, Regency Road, Hansen

Road and the Port River Expressway

subjective response (to changes in noise levels): a 3 dBA change in sound pressure level

is just noticeable or perceptible to the average human ear; a 5 dBA increase is quite noticeable and a 10 dBA increase is typically

perceived as a doubling in loudness

surficial fill soil and other material used as a foundation for the road pavement

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swale (drainage) a wide surface water channel, usually 5–10 m wide

vegetation make-up of the vegetation according to the plant species present and

communities the relative cover of each

visual catchment extent to which a roadway can be viewed from nearby areas or other

areas viewed by the travelling public

voided box a design element within a bridge deck structure

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Appendix D - Acknowledgements

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Imagery supplied by DTEI under licence from AEROmetrex.

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