

RESOURCE POTENTIAL FOR LAND USE PLANNING
HOPE DOWNS RAILWAY

Geology

- Alluvial clay, sand, and gravel in rivers, creeks, and floodplain channels
- Alluvial sand, silt, and clay on floodplains; claypans
- Alluvial sand, silt, and clay in floodplains (with gilgai surface)
- Eluvial sand; overlying and derived from granitoid rock
- Alluvial gravel deposits unrelated to recent drainage; dissected
- Colluvium — clay, silt, ferruginous silt, sand, and gravel; dissected and variably consolidated
- Pisolithic limonite deposits; dissected by present-day drainage
- Calcrete and limestone; mainly silicified

Carlinde Granitoid Complex

- Pegmatite
- POOCATCHE MONZOGRANITE: muscovite–biotite monzogranite; locally abundant pegmatite
- MINNAMONICA MONZOGRANITE: porphyritic biotite(–muscovite) monzogranite
- Biotite monzogranite, diorite, granodiorite, and monzogranite

Pipingarra Granitoid Complex

- Biotite(–hornblende) granodiorite and monzogranite

DeGrey Group

- Interbedded shale, siltstone and wacke; minor chert layers, chlorite-rich laminated shale and siltstone, cordierite hornfels, local strong contact metamorphism; subarkose and wacke, abundant chert clast

CLEAVERVILLE FORMATION

- Chert
- Banded chert
- Banded iron-formation
- Feldspar-phyrlic microgranite
- Quartz–sericite(–feldspar–epidote–actinolite) schist
- Metagabbro
- Melanogabbro
- Plagioclase–hornblende–actinolite–epidote schist after gabbro; locally interleaved talc–serpentine–chlorite schist
- Plagioclase–hornblende–actinolite–epidote schist; includes abundant interleaved quartz–sericite–epidote schist
- Metabasalt
- Interleaved actinolite schist, talc–tremolite–chlorite schist, and quartz–sericite schist; locally mylonitized
- Serpentinite; serpentine–tremolite(–talc–chlorite) rock after peridotite
- Talc–serpentine–chlorite schist
- Interleaved talc–serpentine–chlorite schist

Existing and proposed railway routes

- BHP Billiton iron-ore railway
- Initial Hope Down railway corridor proposal
- Current Hope Downs railway route proposal

Mineral occurrences, deposits, and mines by group

- Precious metal
- Iron
- Construction material

Resource

- Gold (Au), platinum group elements (PGE)
- Iron (Fe)
- Granite used as aggregate (Gran)

Geological boundary

- Geological boundary
- Geological boundary; concealed, interpreted from aeromagnetic data
- Fault or shear exposed
- Fault or shear; concealed
- Fault or shear; concealed, interpreted from aeromagnetic data

Major road/Highway

- Major road/Highway
- Minor road
- Track
- Locality
- Watercourse
- Geographic feature

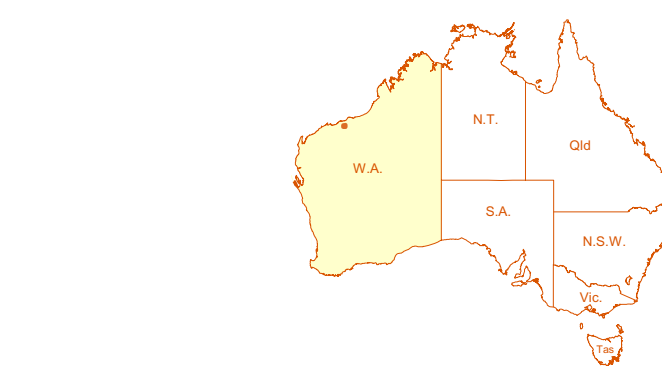
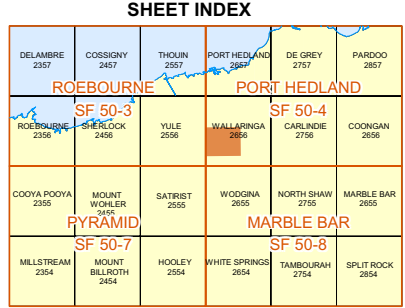
Mining Act tenement

- Mining Act tenement
- Mining Act tenement application

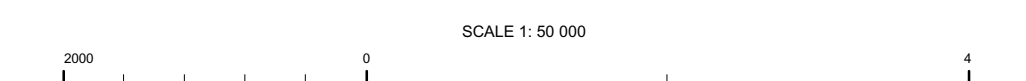
(E = Exploration Licence, P = Prospecting Licence, M = Mining Lease, L = Miscellaneous Licence)

DATA DIRECTORY			
Theme	Data Source	Data Currency	Agency
Geology	WALLARINGA 1:100 000 Geological Series map (GSWA)	2001	Dept of Industry and Resources
	WALLARINGA 1:100 000 Geological Series Explanatory Notes (GSWA)	2002	Dept of Industry and Resources
	The King Project regional geology and gold mineralisation map	2003	DeGrey Mining Ltd
	WAMIN	SEPT 2004	Dept of Industry and Resources
Mineral occurrences (non-confidential)	MINDEX	SEPT 2004	Dept of Industry and Resources
	WAMIN	SEPT 2004	Dept of Industry and Resources
Prospect names	TENGGRAPH	SEPT 2004	Dept of Industry and Resources
Mining Act tenements	TENGGRAPH	NOV 2002	Hope Downs Management Services
Hope Downs railway corridor proposal	TENGGRAPH	OCT 2003	Hope Downs Management Services
Topographic nomenclature	GEONOMA	AUG 2004	Dept of Land Information
Topography	TENGGRAPH	AUG 2004	Dept of Land Information

Compiled by C.J. Kogan, 2004
Geology by R.H. Smithies 1999; and D.C. Champion and R.S. Blewett (GA), 1998
Cartography by S. Mulligan and G.Hartley, 2004
The recommended reference for this map is:
KOGAN, C.J., 2004. Hope Downs railway, Resource potential for land use planning (scale 1:50 000); Western Australia Geological Survey.
Published by the Geological Survey of Western Australia. Available in digital format (PDF) online at www.doir.wa.gov.au/gis. Copies can be ordered from the Information Centre for the cost of printing.
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UNIVERSAL TRANSVERSE MERCATOR PROJECTION
Map Grid of Australia Zone 50
The Map Grid of Australia (MGA) is based on the Geocentric Datum of Australia 1984 (GDA84).
GDA84 positions are compatible with one metre of the datum (GDA84) positions.
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