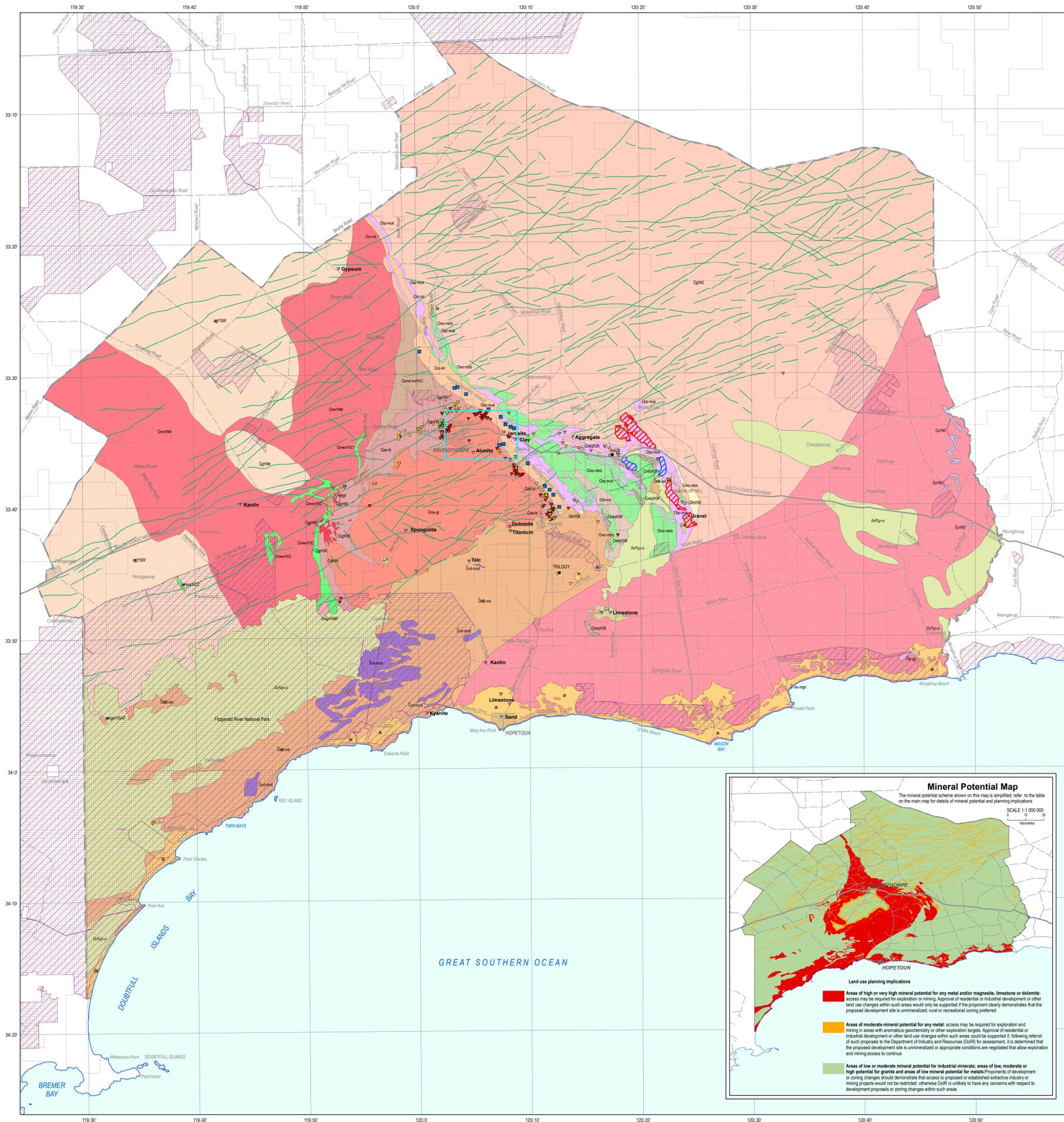


**RESOURCE POTENTIAL FOR LAND USE PLANNING
SHIRE OF RAVENSTHORPE**



Rock Units (excluding unconsolidated regolith)

PHANEROZOIC	Emerald Group	as Coastal limestone (calcareous) and derived beach sand and dune sand	Mineral potential¹ (see inset map)
		llk Calcrite	Very high for limestone, lime sand and fill sand; low for other minerals
		spg PALLINUP FORMATION : spongolite, spicule-rich siltstone and sandstone	Very high for limestone; low for other minerals
		gdt Diorite and gabbro dykes; four separate suites have been interpreted, mainly from aeromagnetic data	High for nickel and copper in mafic dykes in granitic terrain in the area north of Cheadrup; moderate elsewhere
	Mount Barrow Group	lms COWERDUP HILL : metadiorite and mafic schist	Low for all minerals
		lms-mh Quartz mica and quartzite schist; quartzite and dolomite	Very high for gold, silver, base metals, dolomite and talc
		lps-ty FITZGERALD PEAKS SYENITE: syenite and quartz syenite	Low for all minerals
		mg Monzogranite; metamorphosed	Low for all minerals
		gms GRANITIC GNEISS	Low for all minerals
		mg MUNGLINUP GNEISS : granitic gneiss; metamorphosed	High for graphite and vermiculite; low for all other minerals
		gms pegmatite	Very high for lithium, tin, tantalum and beryllium
		gms granitic rocks, undivided	High for granite aggregate; moderate for gypsum; low for other minerals
		gms Komatiite; metamorphosed	Moderate for nickel and gold
		gms Quartzofeldspathic schist and quartz mica schist interfolded with ultramafic rocks and amphibolite; minor banded iron formation	High for gold and base metals
		gms Amphibolite and mafic gneiss	High for gold and base metals
		gms MANYUTUP TONALITE : tonalite; minor phases of diorite and granodiorite; metamorphosed	Very high for gold, silver and copper within 2 km of the contact with the ANNABELLE VOLCANICS; low elsewhere
		gms ANNABELLE VOLCANICS : metamorphosed felsic volcanics and volcanic; minor basalt and rhyolite	Very high for gold, silver and copper within 2 km of the contact with the MANYUTUP TONALITE; high for gold and base metals elsewhere
		gms Conglomerate, quartzite, feldspathic sandstone; metamorphosed	High for magnetite; moderate for nickel, gold and base metals
		gms Felsic volcanic rock, undivided; metamorphosed	Moderate for gold and base metals
		gms HATFIELD FORMATION : shale and sandstone and minor felsic volcanic and volcanoclastic rocks	High for gold and base metals
		gms MAYDON BASALT : metabasalt with minor sedimentary rocks; diorite, amphibolite	High for magnetite, gold and base metals; moderate for nickel
		gms BANDALLUP ULTRAMAFICS : metamorphosed komatiitic basalt and pyroxenite; minor high Mg basalt and talc-rich schist	Ravensthorpe Range : High for gold, nickel and magnetite Bandallup Hill area : Very high for nickel and magnetite
		gms CHESTER FORMATION : shale and massive bedded pyrite units with minor sandstone and conglomerate; minor felsic volcanics and volcanoclastics	Very high for iron, sulphur and manganese; high for base metals
		gms Granitic rocks, undivided	High for granite aggregate; moderate for gypsum and dolomite; low for other minerals
		gms Granitic and mafic gneiss, undivided	Moderate-high for kaolin; low for other minerals
	ARCHAIC		

Mineral potential¹ (see inset map)

Very high for limestone, lime sand and fill sand; low for other minerals

Very high for limestone; low for other minerals

High for nickel and copper in mafic dykes in granitic terrain in the area north of Cheadrup; moderate elsewhere

Low for all minerals

Very high for gold, silver, base metals, dolomite and talc

Low for all minerals

Low for all minerals

High for graphite and vermiculite; low for all other minerals

Very high for lithium, tin, tantalum and beryllium

High for granite aggregate; moderate for gypsum; low for other minerals

Moderate for nickel and gold

High for gold and base metals

High for gold and base metals

Very high for gold, silver and copper within 2 km of the contact with the ANNABELLE VOLCANICS; low elsewhere

Very high for gold, silver and copper within 2 km of the contact with the MANYUTUP TONALITE; high for gold and base metals elsewhere

High for magnetite; moderate for nickel, gold and base metals

Moderate for gold and base metals

High for gold and base metals

High for magnetite, gold and base metals; moderate for nickel

Ravensthorpe Range: High for gold, nickel and magnetite
Bandallup Hill area: Very high for nickel and magnetite

Very high for iron, sulphur and manganese; high for base metals

High for granite aggregate; moderate for gypsum and dolomite; low for other minerals

Moderate-high for kaolin; low for other minerals

¹ Mineral potential is based on current geological knowledge and economics of mineral demand and extraction technologies. This changes with time and consequently the information presented may be amended in future. (see Mineral Potential Map)

Refer to: Hassan, V.J. Ravensthorpe District, Resource Potential for land use planning, 1:150 000 scale, Geological Survey of Western Australia

Mineral occurrences, deposits and mines

	Precious metal	Gold and silver deposits and former mines in the Ravensthorpe, Desmond and Kundip areas; gold and silver deposits at Trilogy, south of Kundip
	Base metal	Copper deposits, former mines and prospects in the Ravensthorpe, Desmond and Kundip areas; copper mineralization at Trilogy in association with gold, silver, lead and zinc
	Steel alloy metal	Nickel, cobalt and manganese deposits, mines and former mines in the Clayup/Bandallup Hill area; nickel and copper mineralization north of Cheadrup; manganese mineralization in the Fitzgerald River National Park and east of Kundip; a tungsten occurrence north of Cowerdup
	Iron	Iron ore (ironite) and pyrite deposits in the Ravensthorpe Range
	Specialty metal	Lithium, tin, tantalum and beryllium deposits near Mt Cattin and west of Quagup; a titanium and zircon prospect near Kundip
	Industrial mineral	Magnetite deposits and former mines in the Clayup/Bandallup Hill area and northeast of Kundip; dolomite and talc deposits west of Kundip; limestone quarries east of Kuliba; a limestone quarry and a sand pit at Hopetoun; alunite, jarosite, gypsum, kyanite, kaolin and spongolite occurrences
	Construction material	Granite aggregate (road metal) quarry near Boatup; a clay occurrence near Clayup; a gravel pit near Bandallup Hill

Department of Environment & Conservation managed lands

Established conservation reserves (national park, nature reserve, conservation park)

Magnetite mining areas

Bandallup Hill and related lateritic nickel mining areas (Ravensthorpe Nickel Operation)

TRIOLOGY Mining locality

HOPETOON Locality

Shire boundary

Highway

Road, sealed

Road, unsealed

Mining tenements

Living/working

Data Directory

Theme	Data Source	Data Currency	Agency
Geology	1:500 000 South Yilgarn Interpretive bedrock geology polygons and linear units, 2007	2007	Dept of Industry and Resources
Limestone	1:500 000 South Yilgarn Regional geology, 2007	2007	Dept of Industry and Resources
Calcrite	1:100 000 Geology (GSWA) Ravensthorpe and Cockerup	1996	Dept of Industry and Resources
Pegmatite	1:500 000 State Geology (GSWA)	2008	Dept of Industry and Resources
Mineral deposits	WAMINI / MINEDEX * Teranga [†]	2008	Dept of Industry and Resources
Magnetite mining areas	GSWA Mineral Resources Bulletin 16	1996	Dept of Industry and Resources
Nickel mining areas	1:100 000 Mineral Potential and Mineral Deposits of portion of the Shire of Ravensthorpe	2003	Dept of Industry and Resources
Land use planning table	GSWA	2008	Dept of Industry and Resources
Conservation areas, towns and roads	Landgate	2007	Landgate

* GSWA and DoIR databases can be viewed online (www.doir.wa.gov.au/geoview/) or can be downloaded from the GSWA Data and Software Centre (www.doir.wa.gov.au/datacentre/)

