RESOURCE POTENTIAL FOR LAND USE PLANNING
SAND RESOURCE SURVEY
KALGOORLIE REGION

Geology

- Granitic rocks — granite and granitic gneiss of the Yilgarn Craton
- Greenstone — metamorphosed mafic, ultramafic, metasedimentary, and felsic rocks of the Yilgarn Craton

Sand category

- Lakeside dune sand — yellow sand, typically of concrete sand quality but variable; depositional; found on the southern and eastern margins of Lake Lefroy
- Yellow sand — yellow-orange sand, reddish in part; typically of Type 1 construction sand quality but variable; residual; preferentially overlies higher topography in granite and gneiss terrain as thicker sandplain or dunes
- Brown sand — red-brown to brown silty sand, typically poor quality; depositional; marginal to playa lakes and associated with paleodrainage in areas of low topography; sand dunes and sandplain intermixed with kopi dunes

Sand pit

- Ubini — Operating
- Vettersburg — Shutdown or care and maintenance
- Abandoned

Sand sampling classification

	Class	Specification	Use
●	Concrete sand	0–5% passing -75 micron (AS1289.3.6.1)	Concrete
●	Type 1 construction sand	5–14% passing -75 micron (AS1289.3.6.1), with 0–7.5% silt/clay (AS1141.33)	Concrete, mortar, fill
●	Type 2 construction sand	5–14% passing -75 micron (AS1289.3.6.1), with 7.5–15% silt/clay (AS1141.33)	Gardens, fill
●	Silty sand	>14% passing -75 micron or 5–14% passing 75 micron (AS1289.3.6.1), with > 15% silt/clay (AS1141.33)	Gardens, fill
148187	GSWA sample number	Refer to associated GSWA Record (in prep.) for all sampling results and classification details. Note sampling is indicative only. Further investigation is required to define specific resource quality.	

Sand region

- Sand region boundary

Region name	Characteristics
WESTERN	Predominantly yellow sand, lesser brown sand — mainly Type 1 construction sand
SOUTHERN	Brown sand and lakeside dune sand — highly variable quality on regional scale
NORTHERN	Predominantly yellow sand, lesser brown sand — highly variable quality on regional scale
CENTRAL	Brown sand — mainly silty sand of poor quality

- Highway
- Road
- Track
- Railway
- Kalgoorlie–Boulder city
- Townsite, locality, or place name
- Local government area boundary
- Playa/salt lake
- Paleochannel
- Sand mining lease (granted and pending)
- Freehold land (basic raw material extraction administered by Local Government)
- Existing conservation reserves (national parks, nature reserves, timber reserves, and conservation parks)
- Proposed conservation reserves
- Other Crown reserves

DATA DIRECTORY

Theme	Data Source	Data Currency	Agency
Geology	East Yilgarn 1: 100 000 Geological Information Series 1:500 000 interpreted bedrock geology of Western Australia	JAN 2007	Dept of Industry and Resources
Sand mining lease	TENGRAPH*	JAN 2007	Dept of Industry and Resources
Sand pit	MINEDEX* WAMIN	2006	Dept of Industry and Resources
Existing townsite boundary	TENGRAPH*	JULY 2003	Dept of Industry and Resources
Freehold land	TENGRAPH*	2006	Dept of Industry and Resources
Crown reserve	TENGRAPH*	2006	Dept of Industry and Resources
Proposed conservation reserves	DEC	2007	Dept of Environment and Conservation
Existing conservation reserves	DEC	2007	Dept of Environment and Conservation
Local government area boundary	Landgate	2006	Landgate
Topography	Landgate/GA	2006	Landgate/Geoscience Australia
Relief shading	NASA SRTM 90m Digital Elevation Data	2000	CentralSrve Group for International Agriculture Research – International Center for Tropical Agriculture (CIAT)

* CDWA and DoIR databases can be viewed online (www.doir.wa.gov.au/dotcustt/geoview_launch.asp) or can be downloaded from the GSWA Data and Software Centre (www.doir.wa.gov.au/GSWA/downloadcentre)

Compiled by WR Ormsby and CJ Kujan 2007

Cartography by S Mulligan

Published by the Geological Survey of Western Australia. Digital and hard copies of this map are available from the Information Centre, Department of Industry and Resources, 100 Plain Street, East Perth, WA, 6004. Phone (08) 9222 3459, Fax (08) 9222 3444

Website www.doir.wa.gov.au. Email geological.survey@doir.wa.gov.au

The accommended reference for this map is:
ORMSBY, WR, and KUJAN, CJ, 2007, Sand resource survey, Kalgoorlie Region: Resource potential for land use planning (1:250 000 scale). Geological Survey of Western Australia.

SHEET INDEX

MOUNT MAGNET 2838	MULLAGI 3038	MELITA 3138	YERILLA 3238	LAKE CAREY 3338	MOUNT CELIA 3438
MEEKATHARRA SH 51-5				GOLDFIELDS SH 51-9	
MULLINE 2938	RIVERINA 3038	MENZIES 3138	BOYCE 3238	EDJUDINA 3338	YAMIDO 3438
MURCHISON				GOLDFIELDS	
NGARNGONG 3037	DARLINGHURST 3037	BARDOC 3137	GINDALBIE 3237	MULGABBIE 3337	PINJIN 3437
MURCHISON				GOLDFIELDS	
MOUNT MALCOLM 2936	EUNGELLA 3036	KALGOORLIE 3136	KANOWNA 3236	KORNUPAL 3336	ROE 3436
MURCHISON				GOLDFIELDS	
BOOMARRA 2935	MOOLIGANOO 3035	YILGAN 3135	LAKE LEFROY 3235	MOUNT MELVERD 3335	EMARINA 3435
MURCHISON				GOLDFIELDS	
LAKE PERCY 2934	DIAMOND ROCK 3034	CAVE HILL 3134	COWAN 3234	YARDINA 3334	YANDILLA 3434

1: 100 000 maps shown in black.
1: 250 000 maps shown in brown.

Search for current GSWA map products online (www.doir.wa.gov.au)

Department of Industry and Resources

FRANCIS LOGAN, M.L.C.
MINISTER FOR ENERGY, RESOURCES, INDUSTRY, AND EXPORTS

Geological Survey of Western Australia

TIM GRIFFIN
EXECUTIVE DIRECTOR

SCALE 1:250 000

5000 0 5 10 15 20 25
Metres Kilometres

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
HORIZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994

Grid lines indicate 50 000 metre interval of the Map Grid Australia Zone 51

The Map Grid Australia (MGA) is based on the Geocentric Datum of Australia 1994 (GDA94)
GDA positions are compatible within one metre of the datum WGS84 positions.

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA
SAND RESOURCE SURVEY
KALGOORLIE REGION
RESOURCE POTENTIAL FOR LAND USE PLANNING

FIRST EDITION 2007
Version 1.0 — October 2007

© Western Australia 2007

SandResources_Kalgoorlie.mxd