BOWES

AUSTRALIA - WEST COAST

WESTERN AUSTRALIA

SCALE 1 : 25 000

DEPTHS

Depths are shown in metres and decimetres, reduced to Sounding Datum, which is approximately lowest water level.

HEIGHTS

Heights are shown in metres. Underlined figures are drying heights above Sounding Datum. Overhead clearance heights are above Highest Astronomical Tide. All other heights are above Mean Higher High Water.

POSITIONS

Positions on this chart are related to the Map Grid of Australia, Zone 50, based on GDA 94. For GPS use, this approximates WGS 84.

PROJECTION

Transverse Mercator.

SOURCES

From the latest information available to Transport, including Royal Australian Navy surveys of 1978 and Transport surveys of 1972 and 1990.

NAVIGATION MARKS

IALA Maritime Buoyage System - Region A (Red to Port).

NOTICES TO MARINERS

The information provided on this chart is subject to change. All such changes of a safety or navigational nature will be promulgated. Ensure that the latest edition of the chart is used at all times, and kept corrected with the relevant Notice to Mariners. Current Transport Notices to Mariners are available from Transport Chart Sales Offices, on the Internet at http://www.coastaldata.transport.wa.gov.au/, or Transport Approved Chart Agents.

TIDAL INFORMATION AND SOUNDING DATUM

Place	Lat °S	Long °E	Heights in metres above datum							Sounding and Tidal Datum
			HAT	MHHW	MLHW	MSL	MHLW	MLLW	LAT	
BOWES	28°47'	114°35'	1.40	1.02	0.74	0.75	0.68	0.51	0.14	0.421m below PWD BM "TIDAL BM"

LOGARITHMIC NOMOGRAM SPEED - DISTANCE - TIME

To find Speed, Distance or Time Interval, draw a line through any two factors, then interpolate for the unknown factor. eg. A distance of 10 nautical miles in 120 minutes means a speed of 5 knots.

SPEED (Knots) 1.0 1.5 2 3 4 5 6 7 8 9 10 15 20 30

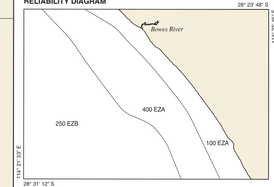
DISTANCE (Nautical Miles) 0.1 0.2 0.4 0.6 1.0 2 4 6 8 10 15 20 30 40 50

TIME INTERVAL (Minutes) 6 10 15 20 30 40 50 60 90 120 180

Example

The location of points on this chart are referenced to the Geocentric Datum of Australia 1994 (GDA94) and will differ by approx 200m to the same points shown on charts referenced to the Australian Geodetic Datum 1984 (AGD84). All heights remain the same.
For further information, contact Department of Land Administration on (08) 9273 7111.

RELIABILITY DIAGRAM



KEY TO SYMBOLS

400 Distance apart of main sounding lines in metres
L Lead Line depths
E Echo Sounder depths
O Optical position fixing
Z Electronic position fixing
S Sonar swept
R Reconnaissance or incomplete survey

Authorities

A Transport
B Royal Australian Navy
C AUSLIG
D Other

NATIONAL PARKS AND NATURE RESERVES

National Parks are reserved for conservation of flora, fauna, rocks and landscape. Firearms, pets, ground fires and driving off established tracks are not permitted.
Within Nature Reserves, firearms, camping, lighting of fires, removal of soil and timber, dumping of rubbish, disturbance of flora and fauna are prohibited. Refer to Conservation and Land Management publications for further information on National Parks and Nature Reserves.

LEEUWIN CURRENT

The Leeuwin Current is most predominant during May - August with a surface current generally less than 1.0kn.
It has an average width of 30 nautical miles and extends to a depth of approximately 200 metres, carrying warm, low salinity water from the North West Shelf area along the continental shelf south to Cape Leeuwin and then east into the Great Australian Bight. For details of currents generally refer to R.A.N. Australia Pilot Vol 1.

WESTERN ROCK LOBSTER FISHERY

Between November and June, extensive lobster fishing takes place between latitude 24°S and 34°S. Mariners are advised to keep well clear of lobster pot floats and submerged lines.

FISHING

Fishing regulations apply throughout Western Australia. Refer to Fisheries WA publications for further information.

ROADS AND TRACKS

The representation on this chart of any road or track is not necessarily evidence of a Public Right of Way.

HISTORIC SHIPWRECKS

All wrecks, 75 years old or more, are protected under an Act which prohibits the removal of artefacts or wilful damage of any sort. By this means, the sites will remain better preserved for divers in the future. Refer to WA Maritime Museum for further information.

LEGEND

Marshes and swampland
Nature Reserve / National Park
Railway, Bridge, Clearance height
Hospital or medical facility, River
Bicycle path, Major road
Building, Minor road
Post Office, Caravan Park
Track
High water mark
Low water mark
Datum mark
Cliff
Rock shoreline
Sand drift, Anchoring prohibited
Picnic site, Groyne
Heliport, Car Parking
Boat ramp
Parking for boats/trailers
Marine farm
Water, Fuel, Jetty, Safe anchorage
Telephone, Public Toilet
Exposed wreck, Submerged wreck
Hazardous submerged reef
Reef which covers and uncovers
Breakers
Rock awash, Underwater rock
2m contour
5m contour
10m contour
Depth in metres and decimetres
Approximate contour
Submarine cable
Anchorage area
No Fishing, Pilot boarding location
Speed limit boundary
Water skiing boundary
Prohibited Area boundary
Various limits
Port Authority / Harbour boundary
Recommended route
Outfall line
Dredged area boundary
Restricted area
Marine Park boundary

NAVIGATION MARKS

Major light, minor light
Beacon, port, starboard
Safe water, isolated danger
Spar buoy, port, starboard
Pillar buoy, port, starboard
Mooring buoy, yachting buoy
Lead, front, rear

CARDINAL MARKS

Indicates safe water to the North
Indicates safe water to the South
Indicates safe water to the East
Indicates safe water to the West

LIGHT CHARACTERISTICS

Colour of light is white unless otherwise stated

F = Fixed
Fl = Flashing
Fl( ) = Group-flash
Q = Quick-flash
LFl = Long-flash
Oc = Occulting
Iso = Isophase
indicates lit navigation mark
G = Green
Y = Yellow
R = Red
Bu = Blue
s = Period in seconds
m = Focal plane height above MHHW
M = Luminous range in nautical miles

CAUTION
During moderate swell seas may break over depths of about 6m.

See Transport Chart Horrocks WA 978

See Transport Chart Oakajee WA 940

Wola Wola Spring

Bowes River

Teakle Hill

Jackson Hole

Weedawar Gully

Geraldton Port Authority Limits

I N D I A N O C E A N

MAGNETIC
Variation 2°00'W 2000 (1'E)

114° 26' E

28° 23' 48" S

114° 35' 30" E

28° 31' 12" S

114° 27' 29" E

E=244 000 E=248 000 E=252 000 E=256 000 E=260 000

N=6456 000 N=6452 000 N=6448 000 N=6444 000

5 000 METRES 4 000 3 000 2 000 1 000 0 1 000 METRES

For additional symbols and abbreviations, refer to Admiralty Chart 5011.
For surveys beyond this Chart, see R.A.N. Chart AUS 751 and 332.
Notices to Mariners.

TRANSPORT

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DEPTHS IN METRES