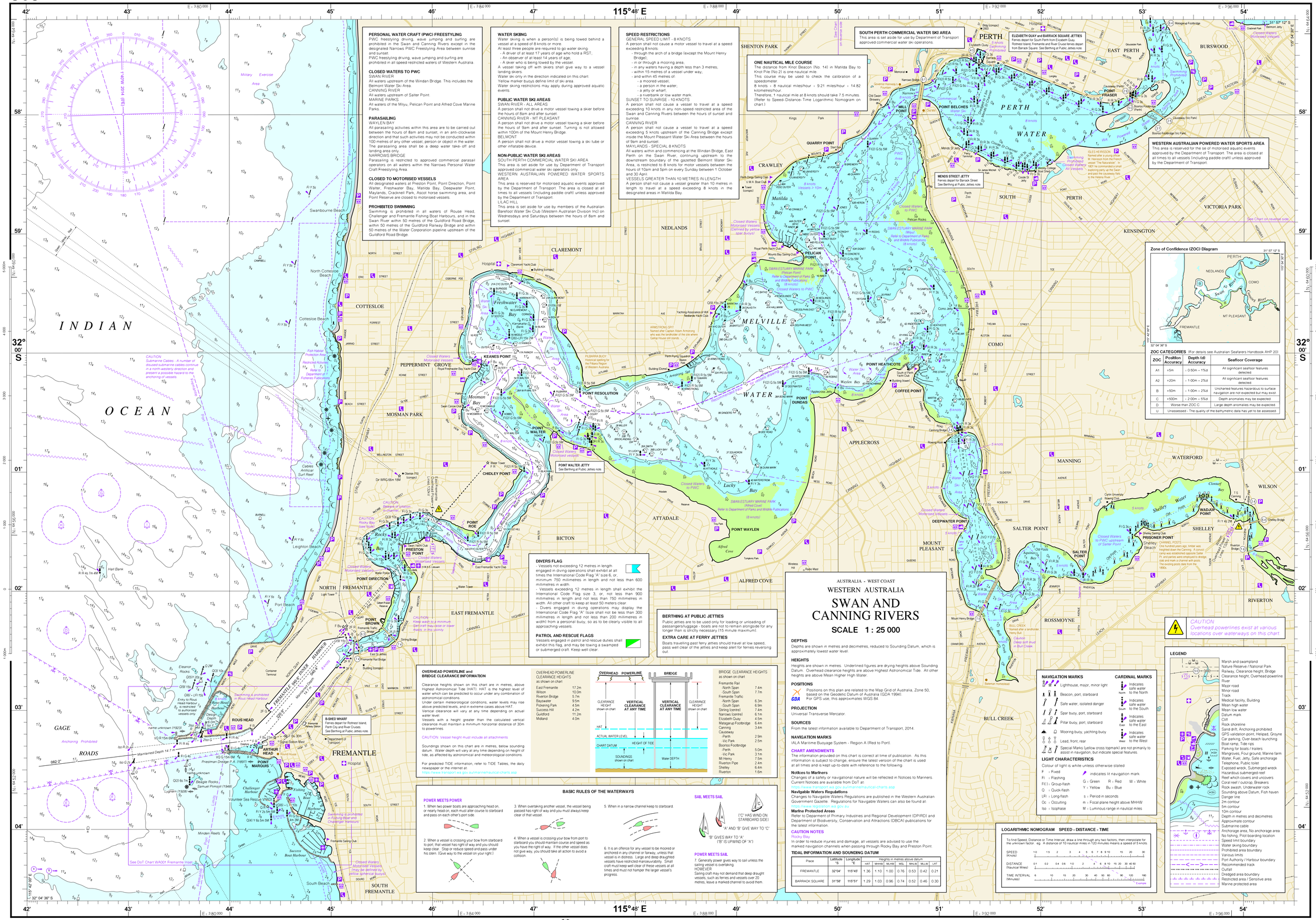
DEPTHS IN METRES

SEE RELATED PUBLICATIONS: Notice to Mariners (https://www.transport.wa.gov.au/marine/nautical-charts.asp), Symbols, Abbreviations and Terms (INT 1), Tide Tables, Sailing Directions. For surveys beyond this chart refer to RAN Charts AUS 112, 117 and DPI WA 001.



PERSONAL WATER CRAFT (PWC) FREESTYLING
PWC freestyling driving, wave jumping and surfing are prohibited in the Swan and Canning Rivers except in the designated Narrows PWC Freestyling Area between sunrise and sunset.
PWC freestyling driving, wave jumping and surfing are prohibited in all speed restricted waters of Western Australia.

CLOSED WATERS TO PWC
SWAN RIVER
All waters upstream of the Windan Bridge. This includes the Belmont Water Ski Area.
CANNING RIVER
All waters upstream of Salter Point.
MARINE PARKS
All waters of the Milyu, Pelican Point and Alfred Cove Marine Parks.

PARASAILING
WAYLEN BAY
All parasailing activities within this area are to be carried out between the hours of 8am and sunset, in an anti-clockwise direction and that such activities may not be conducted within 100 metres of any other vessel, person or object in the water. The parasailing area shall be a deep water take-off and landing area only.
NARROWS BRIDGE
Parasailing is restricted to approved commercial parasail operators on all waters within the Narrows Personal Water Craft Freestyling Area.

CLOSED TO MOTORISED VESSELS
All designated waters at Preston Point, Point Direction, Point Walter, Freshwater Bay, Matilda Bay, Deepwater Point, Maylands, Cracknell Park, Ascot horse swimming area, and Point Reserve are closed to motorised vessels.

PROHIBITED SWIMMING
Swimming is prohibited in all waters of Rouse Head, Challenger and Fremantle Fishing Boat Harbours, and in the Swan River within 50 metres of the Guildford Road Bridge, within 50 metres of the Guildford Railway Bridge and within 50 metres of the Water Corporation pipeline upstream of the Guildford Road Bridge.

WATER SKIING
Water skiing is when a person(s) is being towed behind a vessel at a speed of 8 knots or more.
At least three people are required to go water skiing:
- A driver of at least 17 years of age who hold a RST;
- An observer of at least 14 years of age;
- A skier who is being towed by the vessel.

A vessel taking off with skiers shall give way to a vessel landing skiers.
Water ski only in the direction indicated on this chart.
Yellow marker buoys define limit of ski area.
Water skiing restrictions may apply during approved aquatic events.

PUBLIC WATER SKI AREAS
SWAN RIVER - ALL AREAS
A person shall not drive a motor vessel towing a skier before the hours of 8am and after sunset.
CANNING RIVER - MT PLEASANT
A person shall not drive a motor vessel towing a skier before the hours of 8am and after sunset. Turning is not allowed within 100m of the Mount Henry Bridge.
BELMONT
A person shall not drive a motor vessel towing a ski tube or other inflatable device.

NON-PUBLIC WATER SKI AREAS
SOUTH PERTH COMMERCIAL WATER SKI AREA
This area is set aside for use by Department of Transport approved commercial water ski operators only.
WESTERN AUSTRALIAN POWERED WATER SPORTS AREA
This area is reserved for motorised aquatic events approved by the Department of Transport. The area is closed at all times to all vessels (including paddle craft) unless approved by the Department of Transport.
LILAC HILL
This area is set aside for use by members of the Australian Barefoot Water Ski Club (Western Australian Division Inc) on Wednesdays and Saturdays between the hours of 8am and sunset.

SPEED RESTRICTIONS
GENERAL SPEED LIMIT - 8 KNOTS
A person shall not cause a motor vessel to travel at a speed exceeding 8 knots:
- through the arch of a bridge (except the Mount Henry Bridge);
- in or through a mooring area;
- in any waters having a depth less than 3 metres;
- within 15 metres of a vessel under way;
- and within 45 metres of:
  - a moored vessel;
  - a person in the water;
  - a jetty or wharf;
  - a riverbank or low water mark.

SUNSET TO SUNRISE - 10 KNOTS
A person shall not cause a vessel to travel at a speed exceeding 10 knots in any non-speed restricted area of the Swan and Canning Rivers between the hours of sunset and sunrise.
CANNING RIVER
A person shall not cause a vessel to travel at a speed exceeding 5 knots upstream of the Canning Bridge except inside the Mount Pleasant Water Ski Area between the hours of 9am and sunset.
MAYLANDS - SPECIAL 8 KNOTS
All waters within and commencing at the Windan Bridge, East Perth on the Swan River, continuing upstream to the downstream boundary of the gazetted Belmont Water Ski Area, is restricted to 8 knots for motor vessels between the hours of 10am and 5pm on every Sunday between 1 October and 30 April.
VESSELS GREATER THAN 10 METRES IN LENGTH
A person shall not cause a vessel greater than 10 metres in length to travel at a speed exceeding 8 knots in the designated areas in Matilda Bay.

ONE NAUTICAL MILE COURSE
The distance from Knot Beacon (No. 14) in Matilda Bay to Knot Pile (No 2) is one nautical mile.
This course may be used to check the calibration of a speedometer.
8 knots = 8 nautical miles/hour = 9.21 miles/hour = 14.82 kilometres/hour.
Therefore, 1 nautical mile at 8 knots should take 7.5 minutes.
(Refer to Speed-Distance-Time Logarithmic Nomogram on chart.)

SOUTH PERTH COMMERCIAL WATER SKI AREA
This area is set aside for use by Department of Transport approved commercial water ski operations.

ELIZABETH QUAY and BARRACK SQUARE JETTIES
Ferries depart for South Perth from Elizabeth Quay.
Rottnest Island, Fremantle and River Cruise ferries depart from Barrack Square. See Berthing at Public Jetties note.

MENDS STREET JETTY
Ferries depart for Barrack Street.
See Berthing at Public Jetties note.

WESTERN AUSTRALIAN POWERED WATER SPORTS AREA
This area is reserved for the se of motorised aquatic events approved by the Department of Transport. The area is closed at all times to all vessels (including paddle craft) unless approved by the Department of Transport.

POINT WALTER JETTY
See Berthing at Public Jetties note

B-SHED WHARF
Ferries depart for Rottnest Island, Perth City and River Cruises.
See Berthing at Public Jetties note.

DIVERS FLAG
- Vessels not exceeding 12 metres in length engaged in diving operations shall exhibit at all times the International Code Flag "A" size 6, or, minimum 750 millimetres in length and not less than 600 millimetres in width.
- Vessels exceeding 12 metres in length shall exhibit the International Code Flag size 3, or, not less than 900 millimetres in length and not less than 750 millimetres in width. All other craft to keep at least 50 meters clear.
- Divers engaged in diving operations may display the International Code Flag "A" (size shall not be less than 300 millimetres in length and not less than 200 millimetres in width) from a personal buoy, so as to be clearly visible to all approaching vessels.

PATROL AND RESCUE FLAGS
Vessels engaged in patrol and rescue duties shall exhibit this flag, and may be towing a swamped or submerged craft. Keep well clear.

BERTHING AT PUBLIC JETTIES
Public jetties are to be used only for loading or unloading of passengers/luggage - boats are not to remain alongside for any longer than is strictly necessary (15 minute maximum).

EXTRA CARE AT FERRY JETTIES
Boats travelling past ferry jetties should travel at low speed, pass well clear of the jetties and keep alert for ferries reversing out.

OVERHEAD POWERLINE and BRIDGE CLEARANCE INFORMATION
Clearance heights shown on this chart are in metres, above Highest Astronomical Tide (HAT). HAT is the highest level of water which can be predicted to occur under any combination of astronomical conditions.
Under certain meteorological conditions, water levels may rise above predicted levels, and in extreme cases above HAT.
Vertical clearance will vary at any time depending on actual water level.
Vessels with a height greater than the calculated vertical clearance must maintain a minimum horizontal distance of 30m to powerlines.

CAUTION: Vessel height must include all attachments

Soundings shown on this chart are in metres, below sounding datum. Water depth will vary at any time depending on height of tide, as affected by astronomical and meteorological conditions.

For predicted TIDE information, refer to TIDE Tables, the daily newspaper or the internet at:
https://www.transport.wa.gov.au/marine/nautical-charts.asp

OVERHEAD POWERLINE CLEARANCE HEIGHTS as shown on chart

East Fremantle	17.2m
Wilson	10.0m
Riverton Bridge	5.7m
Bayswater	9.5m
Pickering Park	4.5m
Success Hill	4.2m
Guildford	11.2m
Midland	4.0m

BRIDGE CLEARANCE HEIGHTS as shown on chart

Fremantle Rail	
-North Span	7.4m
-South Span	7.7m
Fremantle Traffic	
-North Span	6.3m
-South Span	6.9m
Stirling (centre)	7.4m
Narrows (centre)	6.1m
Elizabeth Quay	4.5m
Matagarup Footbridge	6.4m
Canning	3.4m
Causeway	
-Perth	2.9m
-Vic Park	2.5m
Bicton Footbridge	
-Perth	5.0m
-Vic Park	3.1m
Mt Henry	7.5m
Riverton Pipe	2.4m
Shelley	6.4m
Riverton	1.6m

BASIC RULES OF THE WATERWAYS

POWER MEETS POWER

1. When two power boats are approaching head on, or nearly head on, each must alter course to starboard and pass on each other's port side.
2. When a vessel is crossing your bow from starboard to port, that vessel has right of way and you should keep clear. Stop or reduce speed and pass under his stern. (Give way to the vessel on your right.)
3. When overtaking another vessel, the vessel being passed has right of way and you must always keep clear of that vessel.
4. When a vessel is crossing your bow from port to starboard you should maintain course and speed as you have the right of way. If the other vessel does not give way, you should take all action to avoid a collision.
5. When in a narrow channel keep to starboard.
6. It is an offence for any vessel to be moored or anchored in any channel or fairway, unless that vessel is in distress. Large and deep draughted vessels have restricted manoeuvrability. Small craft must keep well clear of these vessels at all times and must not hamper the larger vessel's progress.

SAIL MEETS SAIL

("C" HAS WIND ON STARBOARD SIDE)
"A" AND "B" GIVE WAY TO "C"
"B" GIVES WAY TO "A"
("B" IS UPWIND OF "A")

POWER MEETS SAIL

7. Generally power gives way to sail unless the sailing vessel is overtaking.
HOWEVER
Sailing craft may not demand that deep draught vessels, such as ferries and vessels over 20 metres, leave a marked channel to avoid them.

AUSTRALIA - WEST COAST
WESTERN AUSTRALIA

SWAN AND CANNING RIVERS

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 plan are related to the Map Grid of Australia, Zone 50, based on the Geodetic Datum of Australia (GDA 1994).
For GPS use, this approximates WGS 84.

PROJECTION
Universal Transverse Mercator.

SOURCES
From the latest information available to Department of Transport, 2014.

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

CHART AMENDMENTS
The information provided on this chart is correct at time of publication. As this information is subject to change, ensure the latest version of the chart is used at all times and is kept up-to-date with reference to the following:

Notices to Mariners
Changes of a safety or navigational nature will be reflected in Notices to Mariners. Current Notices are available from DoT at:
https://www.transport.wa.gov.au/marine/nautical-charts.asp

Navigable Waters Regulations
Changes to Navigable Waters Regulations are published in the Western Australian Government Gazette. Regulations for Navigable Waters can also be found at:
http://www.legislation.wa.gov.au

Marine Protected Areas
Refer to Department of Primary Industries and Regional Development (DPIRD) and Department of Biodiversity, Conservation and Attractions (DBCA) publications for the latest information.

CAUTION NOTES
Rocky Bay
In order to reduce injuries and damage, all vessels are advised to use the marked navigation channels when passing through Rocky Bay and Preston Point.

TIDAL INFORMATION AND SOUNDING DATUM

Place	Latitude °S	Longitude °E	Heights in metres above datum						
			HAT	MHWS	MLHW	MSL	MHLW	MLLW	LAT
FREMANTLE	32°04'	115°45'	1.36	1.10	1.00	0.76	0.53	0.42	0.21
BARRACK SQUARE	31°58'	115°51'	1.29	1.03	0.96	0.74	0.52	0.46	0.30

Zone of Confidence (ZOC) Diagram

ZOC CATEGORIES (For details see Australian Seafarers Handbook AHP 20)

ZOC	Position Accuracy	Depth (d) Accuracy	Seafloor Coverage
A1	±5m	± 0.50m + 1%d	All significant seafloor features detected.
A2	±20m	± 1.00m + 2%d	All significant seafloor features detected.
B	±50m	± 1.00m + 2%d	Unchanted features hazardous to surface navigation are not expected but may exist.
C	±500m	± 2.00m + 5%d	Depth anomalies may be expected.
D	Worse than ZOC C		Large depth anomalies may be expected.
U	Unassessed - The quality of the bathymetric data has yet to be assessed.		

NAVIGATION MARKS

Lighthouse, major, minor light
Beacon, port, starboard
Safe water, isolated danger
Spar buoy, port, starboard
Pilar buoy, port, starboard
Mooring buoy, yachting buoy
Lead, front, rear
Special Marks (yellow cross topmark) are not primarily to assist in navigation, but indicate special features.

CARDINAL MARKS

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

LIGHT CHARACTERISTICS

Colour of light is white unless otherwise stated

F = Fixed
Fl = Flashing
Fl(l) = Group-flash
Q = Quick-flash
LFl = Long-flash
Oc = Occulting
Iso = Isophase

indicates lit navigation mark

G = Green, R = Red, W = White
Y = Yellow, Bu = Blue

s = Period in seconds
m = Focal plane height above MHHW
M = Luminous range in nautical miles

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

CAUTION
Overhead powerlines exist at various locations over waterways on this chart.

LEGEND

Marsh and swampland
Nature Reserve / National Park
Railway, Clearance height, Bridge
Clearance height, Overhead powerline
River
Major road
Minor road
Track
Medical facility, Building
Mean high water
Mean low water
Datum mark
Cliff
Rock shoreline
Sand drift, Anchoring prohibited
GPS validation point, Helipad, Groyne
Car parking, Over-beach launching
Boat ramp, Tide rips
Parking for boats / trailers
Mangroves, Foul ground, Marine farm
Water, Fuel, Jetty, Safe anchorage
Telephone, Public toilet
Exposed wreck, Submerged wreck
Hazardous submerged reef
Reef which covers and uncovers
Coral reef / outcrop, Breakers
Rock awash, Underwater rock
Sounding above Datum, Fish haven
Danger line
2m contour
5m contour
10m contour
Depth in metres and decimetres
Approximate contour
Submarine cable
Anchorage area, No anchorage area
No fishing, Pilot boarding location
Speed limit boundary
Water skiing boundary
Prohibited area boundary
Various limits
Port Authority / Harbour boundary
Recommended track
Outfall
Dredged area boundary
Restricted area / Sensitive area
Marine protected area

Government of Western Australia
Department of Transport

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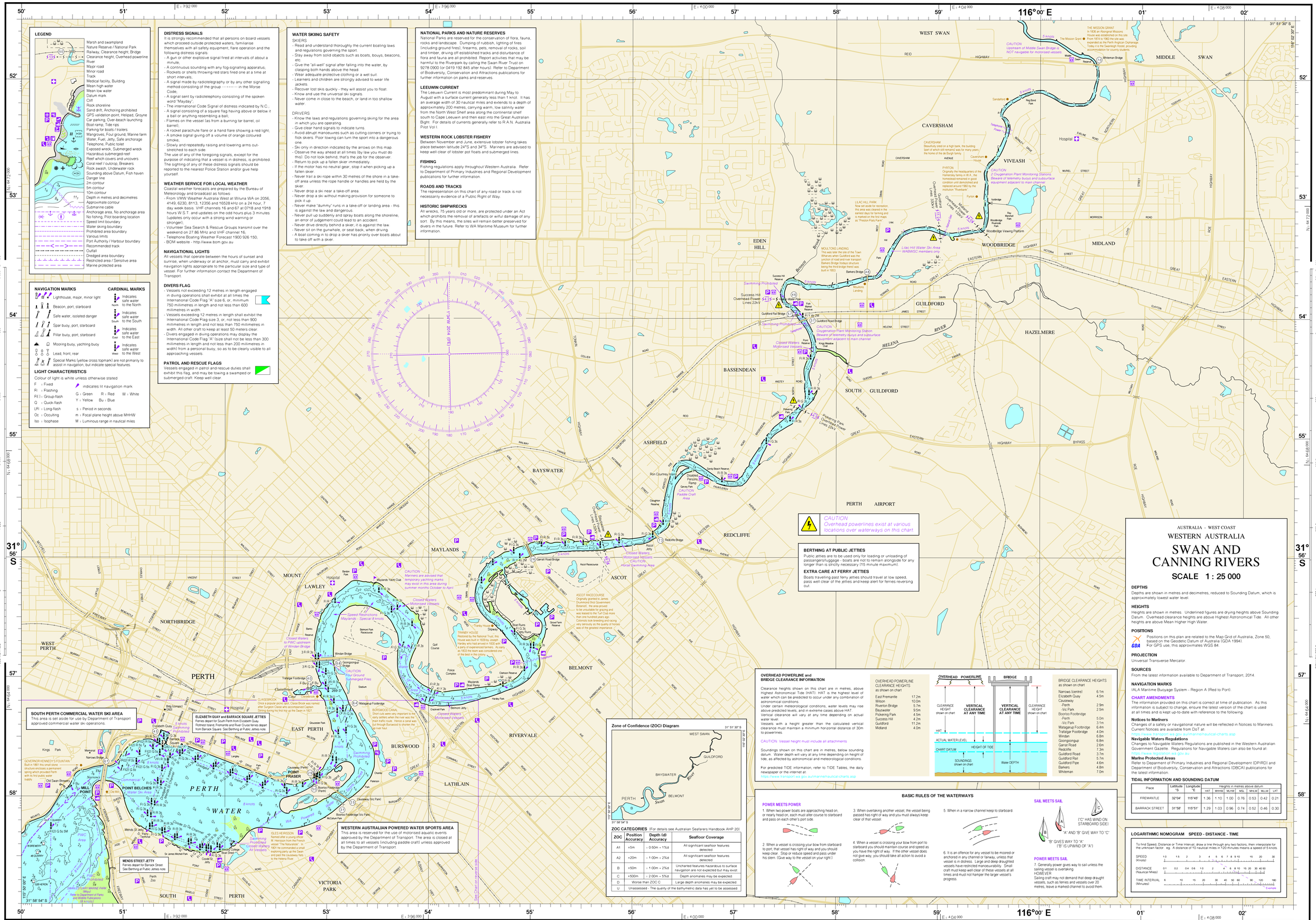
April 2014, Edition 7.

DEPTHS IN METRES

DEPTHS IN METRES

SEE RELATED PUBLICATIONS. Notice to Mariners (https://www.transport.wa.gov.au/marine/nautical-charts.asp), Symbols, Abbreviations and Terms (INT 1), Tide Tables, Sailing Directions. For surveys beyond this chart refer to RAN Charts AUS 112, 117 and DPI WA 001



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Water, Fuel, Jetty, Safe anchorage
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Exposed wreck, Submerged wreck
Hazardous submerged reef
Reef which covers and uncovers
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Special Marks (yellow cross topmark) are not primarily to assist in navigation, but indicate special features.

CARDINAL MARKS

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

LIGHT CHARACTERISTICS

Colour of light is white unless otherwise stated

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indicates lit navigation mark
G : Green
R : Red
W : White
Y : Yellow
Bu : Blue
s : Period in seconds
m : Focal plane height above MHHW
M : Luminous range in nautical miles

DISTRESS SIGNALS

It is strongly recommended that all persons on board vessels which proceed outside protected waters, familiarise themselves with all safety equipment, flare operation and the following distress signals:

- A gun or other explosive signal fired at intervals of about a minute;
- A continuous sounding with any fog-signalling apparatus;
- Rockets or shells throwing red stars fired one at a time at short intervals;
- A signal made by radiotelegraphy or by any other signalling method consisting of the group ···———··· in the Morse Code;
- A signal sent by radiotelephony consisting of the spoken word "Mayday";
- The international Code Signal of distress indicated by N.C.;
- A signal consisting of a square flag having above or below it a ball or anything resembling a ball;
- Flames on the vessel (as from a burning tar barrel, oil barrell).
- A rocket parachute flare or a hand flare showing a red light;
- A smoke signal giving off a volume of orange coloured smoke;
- Slowly and repeatedly raising and lowering arms out-stretched to each side.

The use of any of the foregoing signals, except for the purpose of indicating that a vessel is in distress, is prohibited. The sighting of any of these distress signals should be reported to the nearest Police Station and/or give help yourself.

WEATHER SERVICE FOR LOCAL WEATHER

Coastal weather forecasts are prepared by the Bureau of Meteorology and broadcast as follows:

- From VMW Weather Australia West at Wiluna WA on 2056, 4149, 6230, 8113, 12356 and 16528 kHz on a 24 hour, 7 day week basis. VHF channels 16 and 67 at 0718 and 1918 hours W.S.T. and updates on the odd hours plus 3 minutes (updates only occur with a strong wind warning or stronger).
- Volunteer Sea Search & Rescue Groups transmit over the weekend on 27.86 MHz and VHF channel 16.
- Telephone Boating Weather Forecast 1900 926 150;
- BOM website - http://www.bom.gov.au

NAVIGATIONAL LIGHTS

All vessels that operate between the hours of sunset and sunrise, when underway or at anchor, must carry and exhibit navigation lights appropriate to the particular size and type of vessel. For further information contact the Department of Transport.

DIVERS FLAG

- Vessels not exceeding 12 metres in length engaged in diving operations shall exhibit at all times the International Code Flag "A" size 6; or, minimum 750 millimetres in length and not less than 600 millimetres in width.
- Vessels exceeding 12 metres in length shall exhibit the International Code Flag size 3, or, not less than 900 millimetres in length and not less than 750 millimetres in width. All other craft to keep at least 50 meters clear.
- Divers engaged in diving operations may display the International Code Flag "A" (size shall not be less than 300 millimetres in length and not less than 200 millimetres in width) from a personal buoy, so as to be clearly visible to all approaching vessels.

PATROL AND RESCUE FLAGS

Vessels engaged in patrol and rescue duties shall exhibit this flag, and may be towing a swamped or submerged craft. Keep well clear.

WATER SKIING SAFETY

SKIERS

- Read and understand thoroughly the current boating laws and regulations governing the sport.
- Stay away from solid objects such as boats, bouys, beacons, etc.
- Give the "all-well" signal after falling into the water, by clasping both hands above the head.
- Wear adequate protective clothing or a wet suit.
- Learners and children are strongly advised to wear life jackets.
- Recover lost skis quickly - they will assist you to float.
- Know and use the universal ski signals.
- Never come in close to the beach, or land in too shallow water.

DRIVERS

- Know the laws and regulations governing skiing for the area in which you are operating.
- Give clear hand signals to indicate turns.
- Avoid abrupt manoeuvres such as cutting corners or trying to flick skiers. Poor towing can turn the sport into a dangerous one.
- Ski only in direction indicated by the arrows on this map.
- Observe the way ahead at all times (by law you must do this). Do not look behind, that's the job for the observer.
- Return to pick up a fallen skier immediately.
- If the motor has no neutral gear, stop it when picking up a fallen skier.
- Never trail a ski rope within 30 metres of the shore in a take-off area unless the rope handle or handles are held by the skier.
- Never drop a ski near a take-off area.
- Never drop a ski without making provision for someone to pick it up.
- Never make "dummy" runs in a take-off or landing area - this is against the law and dangerous.
- Never pull up suddenly and spray boats along the shoreline; an error of judgement could lead to an accident.
- Never drive directly behind a skier, it is against the law.
- Never sit on the gunwhale, or seat back, when driving.
- A boat coming in to drop a skier has priority over boats about to take off with a skier.

NATIONAL PARKS AND NATURE RESERVES

National Parks are reserved for the conservation of flora, fauna, rocks and landscape. Dumping of rubbish, lighting of fires (including ground fires), firearms, pets, removal of rocks, soil and timber, driving off established tracks and disturbance of flora and fauna are all prohibited. Report activities that may be harmful to the Riverpark by calling the Swan River Trust on 9278 0900 (or 0419 192 845 after hours). Refer to Department of Biodiversity, Conservation and Attractions publications for further information on parks and reserves.

LEEUWIN CURRENT

The Leeuwin Current is most predominant during May to August with a surface current generally less than 1 knot. 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.I.

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 Department of Primary Industries and Regional Development 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.

SOUTH PERTH COMMERCIAL WATER SKI AREA
This area is set aside for use by Department of Transport approved commercial water ski operations.

ELIZABETH QUAY and BARRACK SQUARE JETTIES
Ferries depart for South Perth from Elizabeth Quay. Rottnest Island, Fremantle and River Cruise ferries depart from Barrack Square. See Berthing at Public Jetties note.

WESTERN AUSTRALIAN POWERED WATER SPORTS AREA
This area is reserved for the use of motorised aquatic events approved by the Department of Transport. The area is closed at all times to all vessels (including paddle craft) unless approved by the Department of Transport.

MENDS STREET JETTY
Ferries depart for Barrack Street. See Berthing at Public Jetties note.

BERTHING AT PUBLIC JETTIES
Public jetties are to be used only for loading or unloading of passangers/luggage - boats are not to remain alongside for any longer than is strictly necessary (15 minute maximum).

EXTRA CARE AT FERRY JETTIES
Boats travelling past ferry jetties should travel at low speed, pass well clear of the jetties and keep alert for ferries reversing out.

OVERHEAD POWERLINE and BRIDGE CLEARANCE INFORMATION

Clearance heights shown on this chart are in metres, above Highest Astronomical Tide (HAT). HAT is the highest level of water which can be predicted to occur under any combination of astronomical conditions.
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CAUTION: Vessel height must include all attachments

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OVERHEAD POWERLINE CLEARANCE HEIGHTS as shown on chart

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Wilson	10.0m
Riverton Bridge	5.7m
Bayswater	9.5m
Pickering Park	4.5m
Success Hill	4.2m
Guildford	11.2m
Midland	4.0m

BRIDGE CLEARANCE HEIGHTS as shown on chart

Narrows (centre)	6.1m
Elizabeth Quay	4.5m
Causeway	
- Perth	2.9m
- Vic Park	2.5m
Boorloo Footbridge	
- Perth	5.0m
- Vic Park	3.1m
- Matagarup Footbridge	6.4m
Trafalgar Footbridge	4.0m
Windan	6.8m
Goongongup	6.8m
Garratt Road	2.6m
Redcliffe	7.3m
Guildford Road	3.7m
Guildford Rail	5.7m
Guildford Pipe	4.6m
Barkers	4.8m
Whiteman	7.0m

BASIC RULES OF THE WATERWAYS

POWER MEETS POWER

1. When two power boats are approaching head on, or nearly head on, each must alter course to starboard and pass on each other's port side.
2. When a vessel is crossing your bow from starboard to port, that vessel has right of way and you should keep clear. Stop or reduce speed and pass under his stern. (Give way to the vessel on your right.)
3. When overtaking another vessel, the vessel being passed has right of way and you must always keep clear of that vessel.
4. When a vessel is crossing your bow from port to starboard you should maintain course and speed as you have the right of way. If the other vessel does not give way, you should take all action to avoid a collision.
5. When in a narrow channel keep to starboard.
6. It is an offence for any vessel to be moored or anchored in any channel or fairway, unless that vessel is in distress. Large and deep draughted vessels have restricted manoeuvrability. Small craft must keep well clear of these vessels at all times and must not hamper the larger vessel's progress.

SAIL MEETS SAIL

"A" AND "B" GIVE WAY TO "C"
"C" HAS WIND ON STARBOARD SIDE)
"B" GIVES WAY TO "A"
("B" IS UPWIND OF "A")

POWER MEETS SAIL

7. Generally power gives way to sail unless the sailing vessel is overtaking.
HOWEVER
Sailing craft may not demand that deep draught vessels, such as ferries and vessels over 20 metres, leave a marked channel to avoid them.

AUSTRALIA - WEST COAST
WESTERN AUSTRALIA

SWAN AND CANNING RIVERS

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 plan are related to the Map Grid of Australia, Zone 50, based on the Geodetic Datum of Australia (GDA 1994).
GDA For GPS use, this approximates WGS 84.

PROJECTION
Universal Transverse Mercator.

SOURCES
From the latest information available to Department of Transport, 2014.

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

CHART AMENDMENTS
The information provided on this chart is correct at time of publication. As this information is subject to change, ensure the latest version of the chart is used at all times and is kept up-to-date with reference to the following:

Notices to Mariners
Changes of a safety or navigational nature will be reflected in Notices to Mariners. Current Notices are available from DoT at:
https://www.transport.wa.gov.au/marine/nautical-charts.asp

Navigable Waters Regulations
Changes to Navigable Waters Regulations are published in the Western Australian Government Gazette. Regulations for Navigable Waters can also be found at: https://www.legislation.wa.gov.au

Marine Protected Areas
Refer to Department of Primary Industries and Regional Development (DPIRD) and Department of Biodiversity, Conservation and Attractions (DBCA) publications for the latest information.

TIDAL INFORMATION AND SOUNDING DATUM

Place	Latitude °S	Longitude °E	Heights in metres above datum HAT	MHHW	MLHW	MSL	MHWI	MLWI	LAT
FREMANTLE	32°04'	115°45'	1.36	1.10	1.00	0.76	0.53	0.42	0.21
BARRACK STREET	31°58'	115°51'	1.29	1.03	0.96	0.74	0.52	0.46	0.30

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

Government of Western Australia
Department of Transport
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DEPTHS IN METRES