



# MARITIME, PORTS AND STEVEDORING CAREER PATHWAYS



visit our website at [www.logisticstc.asn.au](http://www.logisticstc.asn.au)



# acknowledgements

The Logistics Training Council would like to thank all those involved with the production of this resource.

Contributions from educators and industry representatives from different aspects of the maritime, ports and stevedoring industry have assisted with the formation of this guide to ensure that the information is accurate and that it addresses the needs of the intended audience. Thanks to all for your input.

There is a shared vision to see a greater level of workforce participation and engagement across all sectors in Transport and Logistics. This is further assisted by working partnerships with training providers and other government agencies.

We are grateful to local industry for its continued support in raising the profile of our growing industry sectors, by providing information and images, and allowing access to staff for case studies.

We especially acknowledge the following companies for their individual contribution.

AMSA

Australian Defence Forces

Captain Cook Cruises

Fremantle Ports

This is the fifth in a series of career pathways booklets which have been produced by the Logistics Training Council. "Supply Chain Career Pathways", "Road Transport Career Pathways", "Aviation Career Pathways" and "Rail Transport Career Pathways", can be found on our website.

**[www.logisticstc.asn.au](http://www.logisticstc.asn.au)**

Disclaimer: The information contained in this publication may change and should be used only as a guide.

**JAMES**

# contents

<b>INTRODUCTION .....</b>	<b>3</b>
<b>MARITIME .....</b>	<b>4</b>
Near Coastal Water Transport.....	5
Offshore Operations.....	5
International Blue Water Transport .....	5
Inland Water Transport.....	5
Shore Based Operations .....	6
Examples of Job Rules .....	6
Career Progression Opportunities .....	7
<b>PORTS AND STEVEDORING.....</b>	<b>10</b>
Stevedoring Services .....	11
Water Transport Terminals .....	12
Port Operations .....	12
Service and Water Transport .....	12
Categories of Ships.....	12
Examples of Job Roles .....	13
Career Progression Opportunities .....	14
<b>LICENSING REQUIREMENTS .....</b>	<b>17</b>
<b>OTHER MARITIME DIVISIONS.....</b>	<b>20</b>
<b>STUDY OPTIONS .....</b>	<b>21</b>
Traineeships.....	22
<b>CAREER PATHWAYS .....</b>	<b>24</b>
Engineer Officers.....	25
Master and Deck Officer .....	26
Integrated Rating Pathway .....	27
Able Seafarer Engine Pathway .....	28
Able Seafarer Deck (STCW Reg 11/5) .....	29
Able Seafarer Engine with Navigational Watch .....	30
Engine Room Watch with Navigational Watch .....	31
Navigational Room Watch with Engine Watch .....	31
<b>ADDITIONAL TRAINING.....</b>	<b>32</b>
<b>USEFUL LINKS.....</b>	<b>32</b>



**Phone:** (08) 9388 8781

**Fax:** (08) 9388 8784

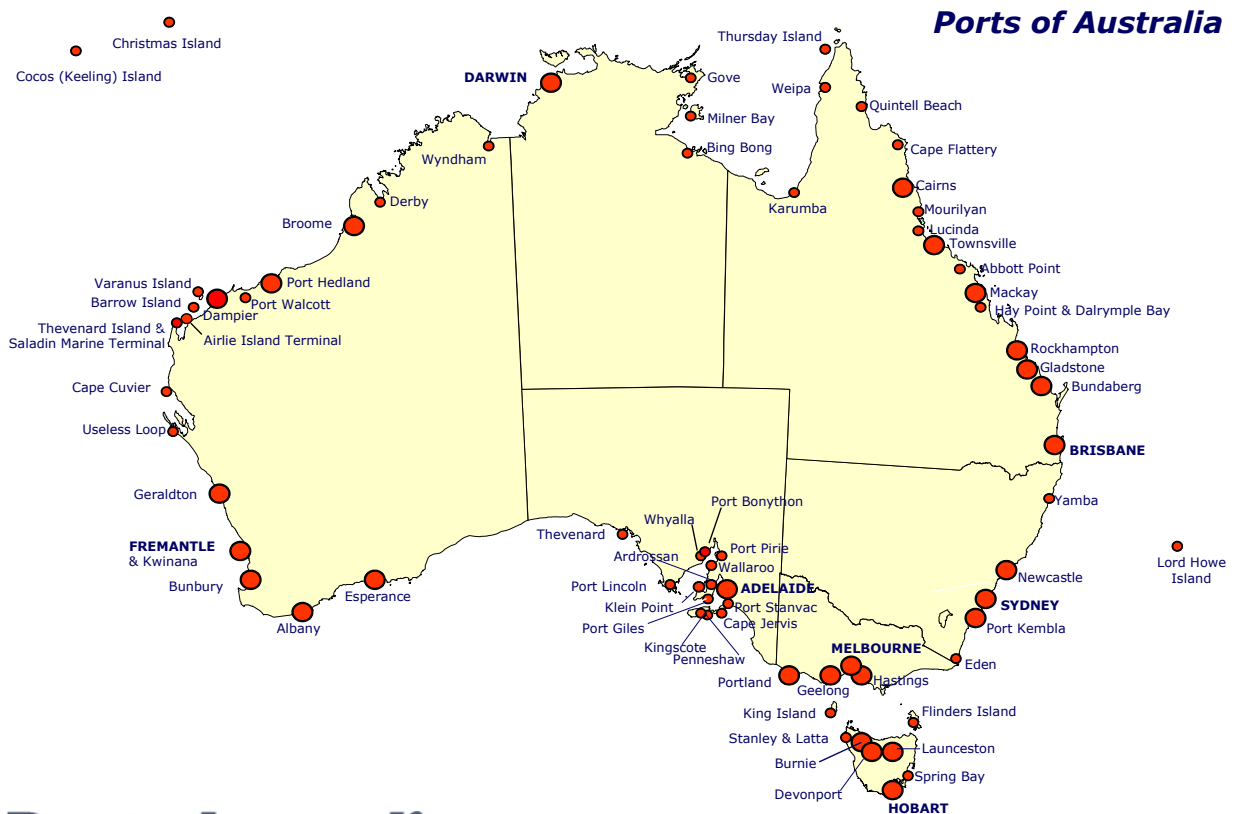
**E-mail:** [logistics@logisticstc.asn.au](mailto:logistics@logisticstc.asn.au)

**Web:** [www.logisticstc.asn.au](http://www.logisticstc.asn.au)

PO Box 7033  
SHENTON PARK WA 6008

17 Lemnos Street  
SHENTON PARK WA 6008





**Ports Australia**



# introduction

The Australian Maritime, Ports and Stevedoring industry is vibrant and diverse and provides numerous career opportunities across a wide range of occupations. As Australia is an island nation, it is a vital link in the transport supply chain and plays an important role in the economic development of Australia.

Shipping has a significant role to play within the areas of research, exploration and trade. From offshore oil and gas operations, through to fishing, cruise liners and the shipment of bulk goods, there are a number of ways to get involved.

This guide covers the Maritime, Ports and Stevedoring Sectors, including:

- Near coastal – fishing boats, charter vessels, ferries
- Offshore operations – oil and gas
- Blue water – large international ships
- Inland water transport – ferries and water taxis on lakes and rivers
- Shore-based operations – ports and stevedoring

## Who can use this guide?

This guide will assist you in identifying some great career opportunities available in the Maritime, Ports and Stevedoring sectors. New entrants and job seekers, including senior school students, will be able to find useful information on job roles and requirements within the industry. Our objective is to give you a clear understanding of what takes place in Maritime, Ports and Stevedoring.

## Where can I end up?

There are many opportunities that a career in Maritime, Ports and Stevedoring can offer. How far you want to go is up to you. Many skills are transferrable from other industries, and can be applied in this sector. Similarly, skills gained in this sector can be applied to other sectors.

## How do I get there?

There are multiple entry points depending on your level of skills and experience. As career pathways are not always straightforward, this guide will feature the experiences of a range of people at various stages in their careers.









# maritime

Australia depends almost exclusively on shipping to move its exports and imports and has, in terms of tonnes of cargo shipped and kilometers travelled, the fifth largest shipping task in the world. Shipping accounts for 95% of Western Australia's imports and exports, making it an essential service that requires highly trained, professional people to ensure its needs are met. Because of its international involvement, it offers interesting and diverse career opportunities.

## Near Coastal Water Transport

This involves the operation of vessels for the movement of passengers or freight by sea between domestic ports. This includes the fishing and aquaculture industry, tourism and some of the offshore support vessels in the oil and gas industry.

Activities occur in coastal waters and can include:

- Crewed boat or ship charter, lease or rental
- Freight transport on coastal sea routes
- Island and/or vehicle ferry operation
- Ocean cruises between domestic ports
- Operation of ships on behalf of owners
- Tugs & Pilot Vessels
- Line Boats

## Offshore Operations

Offshore ships are marine vessels which are specially designed to support the offshore oil and gas industry. They form the primary mode of transportation for carrying goods and workforce to oil facilities far out at sea.

These include drill ships which are used as offshore platforms for oil and gas exploration and production. Offshore ships can broadly be classified into Platform Supply Vessels (PSV), Anchor Handling Towing Supply (AHTS), Seismic, Geotechnical and Construction Vessels. These form most of the offshore Fleet of Vessels.

Offshore operations include:

- Oil and gas production
- Marine cargo handling

## International Blue Water Transport

This sector operates vessels for the transportation of passengers or freight by sea between domestic and foreign ports.

Blue water is a term used to distinguish ocean-going vessels from vessels used on inland or coastal. Blue water vessels are generally larger and more strongly built to endure the open ocean without the benefit of shelter, unlike brown water vessels that can seek a safe harbour when a storm is forecast.

International activities include:

- Freight transport
- Ocean cruise services between domestic and foreign ports
- Passenger transport
- Operation of ships on behalf of owners

## Inland water transport

Organisations in this industry operate vessels which transport freight or passengers in harbours or inland waters (except tug boats or lighters).

Their activities on rivers, harbours and lakes include:

- Cruise operation with or without restaurant facilities
- Freight transport
- Island and/or vehicle ferry operation
- Passenger ferry operation
- Water taxi service
- Propelled barges
- Shallow Water AHTS Vessels



## Shore-based operations

The majority of shore based operations occurs through a port. Port activities include cargo and passenger loading, unloading and distribution; port security, customs, quarantine and maritime safety; tugboat guidance; spill clean-up and more.

Stevedores are employed at Ports to load and unload cargo such as containers and motor vehicles. Stevedores use a range of heavy machinery including forklifts, straddle carriers and gantry cranes.

Marine pilots are experienced seafarers with extensive local knowledge who assist masters of visiting commercial vessels in navigating around confined waterways in harbours and ports.



## Examples of job roles

Near Coastal	Blue Water	Offshore Oil and Gas	Shore-based Roles
<ul style="list-style-type: none"> <li>Deckhand</li> <li>Coxswain</li> <li>Deck Officer</li> <li>Marine Engine Driver</li> <li>Marine Engineer</li> <li>Skipper</li> <li>Ship's Engineer</li> <li>Ship's Officer</li> <li>Master</li> </ul>	<ul style="list-style-type: none"> <li>Integrated Rating</li> <li>Engineering Officer</li> <li>Deck Officer</li> <li>Marine Cook</li> <li>Steward</li> <li>Ship's Officer</li> </ul>	<ul style="list-style-type: none"> <li>Deck Officer</li> <li>Engineering Officer</li> <li>Integrated Rating</li> <li>Electronics Technician Officer (ETO)</li> <li>Cooks</li> <li>Stewards</li> <li>Crane Operators</li> </ul>	<ul style="list-style-type: none"> <li>Tug Master</li> <li>Marine Pilot</li> <li>Stevedore</li> <li>Ship Manager</li> <li>Harbour Master</li> <li>Marine/Ship's Surveyor</li> </ul>





# career progression opportunities

## DECK HAND

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Assist in navigating ships course and watch for changes in sea and weather</p> <p>Facilitate operation and equipment needed to dock and depart</p> <p>Maintain equipment on the ship, including deck equipment, safety devices, cargo and rigging equipment and conduct routine checks to ensure quality</p> <p>Properly use of all ropes, lines and equipment on board and adhere to safety standards and precautions</p>	<p>Critical Thinking Skills</p> <p>Fishing Techniques</p> <p>Physical Fitness</p> <p>Problem Solving Capabilities</p> <p>Strong Leadership Skills</p> <p>Good interpersonal skills</p> <p>Awareness of maritime safety</p>	<p>Not essential, but previous experience an advantage</p>	<p>Certificate III in Maritime Operations (Integrated Rating)</p>

## SHIP'S OFFICER

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Coordinate and supervise the work undertaken by crew members</p> <p>Liaise with the Ships Master to determine the ship's movements</p> <p>Record the details of the ship's course, position and weather conditions in the log book</p> <p>Handle emergencies that may arise</p>	<p>Confidence and composure</p> <p>The ability to work as part of a team</p> <p>Leadership and motivation skills</p> <p>Physical fitness and strength</p>	<p>Must meet AMSA's Certificate of Competency Requirements which outlines required documented seagoing service experience required to become a Ship's Officer</p>	<p>Diploma of Maritime Operations (Watchkeeper Deck)</p>

## SHIP'S MASTER

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Abiding by safety regulations to protect the sea</p> <p>Ensuring that both people and cargo are loaded properly onto a ship</p> <p>Handling the maintenance and operation of a ship</p> <p>Navigating a ship according to travel plans</p> <p>Organising and supervising the deck crew to clean, paint and make repairs</p> <p>Surveying ships to ensure that all standards are kept</p> <p>Taking care of maintaining ship equipment</p>	<p>Ability to consider various outcomes and look to select the most appropriate actions</p> <p>Ensuring that machines function properly by viewing various indicators</p> <p>Properly handling machinery and systems</p> <p>Reacting to others actions and changing actions accordingly</p> <p>Time management and organisational skills</p> <p>AMSA approved medical care on-board ship certificate</p>	<p>Must meet AMSA's Certificate of Competency Requirements which outlines required documented seagoing service experience required to become a Ship's Master (Master Unlimited)</p>	<p>Advanced Diploma of Maritime Operations (Master Unlimited)</p>

## case study

### D'ARCY HOULAHAN

#### What is your current job role?

2<sup>nd</sup> Mate/DPO (Dynamic Positioning Operator) on board an Offshore Vessel currently operating off the North West Shelf doing subsea Inspection, Maintenance and Repair for an oil major on their assets.

#### What are your responsibilities?

Generally on this vessel my role is to maintain a safe navigational watch, maintain the equipment on the navigating bridge, passage planning, maintain safety equipment, and administrative tasks and of course driving the vessel. During subsea operations I will also keep a DP (Dynamic Positioning) watch monitoring and maintain the vessels position keeping it stationary to enable the ROV to work on the sea bed. We work 12 hour shifts for 4 weeks straight.

#### How long have you been in this role?

Since I completed my Deck Watchkeeper course and passed AMSA (Australian Maritime Safety Authority) Oral exam in March 2013.

#### Have you undertaken any further studies?

Yes, in 2016 I spent 9 Months at South Metropolitan TAFE – Maritime Campus in Fremantle studying Mates/Master which allowed to obtain my Chief Mate Certificate of Competency.

#### Are there specific licences or qualifications required for the job?

Certificate of Competence Watchkeeper Deck. Unlimited DPO Certificate, further operational required short safety courses eg HUET (Helicopter Underwater Escape Training), Working at Heights and Confined Space training.

#### What previous roles have you held?

Integrated Rating on Deck, Crane Operator and Chief Integrated Rating.

#### What skills have you been able to transfer?

What skills have you been able to transfer?

Communication and leadership skills are key... you always have to learn and adapt.

#### What new skills did you need to acquire?

Further my computer and administration skills.

#### What led you to choosing a career in Transport and Logistics?

The diversity. It's not a 9-5 job going back and forth to the same place. Shipping can take you literally around the world, meeting people from all different backgrounds

working on some of the most advanced ships out there. The leave system is also a bonus, we generally work 5 weeks away and then get 5 weeks at home!

#### What are some interesting aspects about the job you do?

1. Some of the new advanced construction vessels have some great technology.
2. Meeting new people from all around the world with experiences I can learn from.
3. The projects we get work on. eg installation of new platforms that will produce oil or gas in the middle of the ocean!

#### What are some of the challenges you face working in the industry?

Most of the work in offshore is project based and so some work is only short term. Every time I join a new ship it's always learning period where we undergo a vessel induction to learn the new systems, procedures and new crew.

#### Are there opportunities available for advancement?

Yes, I will have the opportunity to later become Chief Mate, and then one day I hope to become Captain.

#### What advice would you give to someone who is considering a career in the maritime industry?

This is a long term career path, it can take 10 years or longer to become a Captain. There is no quick or easy path. Also be prepared to work away from friends and family for extended periods.

#### How has technology impacted on your job role?

We are better connected, so there is a bigger demand nowadays for administration, eg more paperwork and reporting, but then we also have access to latest weather forecasts and we find now we have to be more flexible as the work scope can change just as quick as the weather. 24hr operations so I could go off shift and we are headed for Fremantle for mobilisation and then when I come back on shift we are on the way to Darwin!

#### Given the opportunity to pursue further study/training, which area would you choose?

Maybe once Captain, if I did any further study I would consider either Maritime Business or Maritime Law.



## case study

### KATHRYN DAVIES

#### What is your current job role?

I am currently a skipper with Captain Cook Cruises.

#### What are your responsibilities?

Some of the duties include navigating and operating the vessel, ensuring the safety of the crew and passengers, documenting log books and compliance.

#### How long have you been in this role?

Having been in the industry for 14 years, I have been in my current role for a year.

#### Are there specific licences or qualifications required for the job?

A Master 5 qualification/ticket is required to hold the current position. Given the nature in role and type of work that I am in, additional training needed include the Responsible serviced of alcohol, First Aid Certificate and a marine operators Certificate.

#### What previous roles have you held?

I have been fortunate to have diverse number of opportunities within the industry working my way up from hosting and deck hand roles right through to my current role. I have previously worked on a vessel in the Whitsundays dealing with the tourism and hospitality side of the maritime sector. I have also had exposure to the offshore side of the maritime sector working on tugboats for the resources sector.

#### What skills have you been able to transfer?

With the different roles I have held over the years, I have been able to bring across a better understanding of the compliance aspects of the industry, the ability to deal with severe weather, along with other skills such as rope work and safety training.

#### What new skills did you need to acquire?

Further my computer and administration skills.

#### What led you to choosing a career in Transport and Logistics?

I grew up on boats and had an interest in the aspects surrounding boating and so it became a hobby then a lifestyle. Boating is like a travel ticket around the world.

#### What are some interesting aspects about the job you do?

With the type of work that I do, I enjoy meeting different people from all across the state, country and the world. Ferrying passengers, In addition to training the crew and seeing them progress; I also enjoy navigating the river during the different seasons.

#### What are some of the challenges you face working in the industry?

Being responsible for the crew and passengers can be challenging some of the time but that is just part of the role where one has to ensure that all safety aspects are upheld. It can be intimidating thinking about the safety of both crew and passengers that depends you and the actions you make.

#### Are there opportunities available for advancement?

There are a number of avenues one can pursue. These include training and compliance, Management roles, teaching and logistics.

#### What advice would you give to someone who is considering a career in the maritime industry?

Consider all the aspects of the industry as this could impact things like family as some roles require periods of time away at sea. It should be known that it takes a few years to attain licences and or certificates. I would advise that you do some thorough research for what is required for the particular pathway you choose. Medical conditions such as colour blindness could affect which roles would be made available to you.

#### How has technology impacted on your job role?

Technology has mostly impacted activities relating to compliance and a system that is recognised nationally.

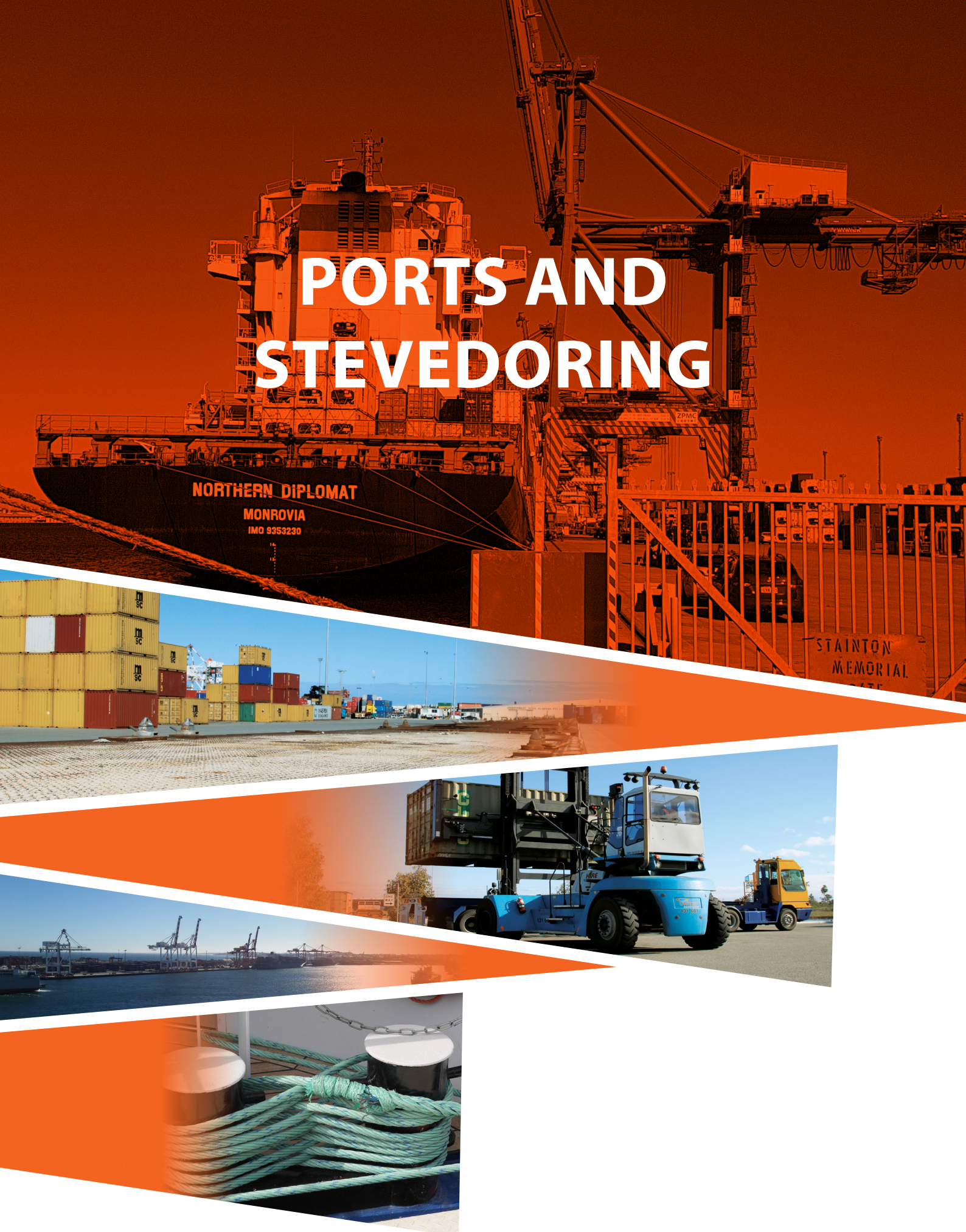
#### Given the opportunity to pursue further study/training, which area would you choose?

I would be interested in pursuing the prospects of becoming a trainer and assessor.





# PORTS AND STEVEDORING





# ports and stevedoring

Ports are a critical link in the logistics chain and play a vital role in the State's economy. They are a necessary gateway to international markets for the State's exports and are the entry point for imports. They are a key requirement at the end of road and rail infrastructure for the effective transit of freight, be it mining exports or consumer products. The expansion of Western Australia's resources sector is resulting in significant increases in demand for port facilities and shipping activities.



There are five port authorities that manage the State's major ports:

- **Fremantle Ports**
- **Kimberley Ports Authority**
- **Mid-West Ports Authority**
- **Pilbara Ports Authority, and**
- **Southern Ports Authority**

The Department of Transport currently has responsibility for the following ports (however responsibility for these ports is subject to change and may be handed over to the relevant regional ports authority after the enabling legislation is passed through Parliament):

- Wyndham Port
- Derby Port
- Yampi Sound ports of Cockatoo and Koolan Islands
- Proposed port at James Price Point
- Cape Curvier port
- Useless Loop port
- Port of Barrow Island
- Cape Lambert (Port Walcott)
- Onslow
- Cape Preston
- Thevenard Island
- Varanus Island
- Airlie Island

## Stevedoring Services

Stevedoring is the activity that takes place at a port and involves the loading and unloading of shipping containers cargo to and from a vessel, including storage where required. The sector is an important link in the supply chain between shippers, importers and exporters.

A stevedore is sometimes known as a dockworker, docker or dock labourer. The primary role of a stevedore is the loading and unloading of freight on and off ships while they are in port. With port capacity increasing in Australia, demand for skilled portside workers is set to rise, particularly around mining areas. New technology and systems are being introduced at ports targeting documentation, yard layout, ship loading and discharging, ship stability calculations and operational statistics. Operators often work with large hi-tech machinery, including automated straddle carriers and gantry cranes.



In smaller ports, stevedores may be casual workers, working only when ships are in port, and may combine this job with other seasonal employment. Commodities such as grain, iron ore and other minerals are shipped in bulk through regional ports while the majority of container goods flow through the major terminals such as Fremantle.

Stevedores work outside, near water and generally close to cities and towns.

Other responsibilities include:

- **Mooring and unmooring ships**
- **Cleaning and preparing containers**
- **Stacking and securing cargo**
- **Administrative processes associated with the transfer of cargo**

Stevedores often work with other government agencies such as Australian Border Force and Department of Agriculture and

Operators provide navigation services, towage services, and other services to the water transport sector. These include:



**Safety is critically important in ports and stevedoring roles**

## Water Transport Terminals

These terminals are mainly engaged in the operation of ship mooring facilities and passenger or freight sea transport terminals (including sea cargo container terminals and coal or grain loaders) used for the loading or unloading of vessels.

Freight or cargo trains are loaded and unloaded in intermodal terminals (also called container freight stations or freight terminals), and at customer locations such as mines, ports, grain elevators and factories.

## Port Operators

Port operators are predominantly engaged in the maintenance and leasing of port facilities to assist with the transition of goods and passengers between land and sea. They also manage the movement of ships in and out of the port.

## Services to Water Transport

## Examples of job roles

- Stevedore
- Stevedore Foreperson
- Stevedoring Manager
- Marine Pilot
- Port Operative
- Port Operative Team Leader
- Port Operations Supervisor
- Port Operations Manager
- Vessels Traffic Services Officer
- Safety Manager
- Port Facility Safety Manager
- Tug Master
- Health Safety and Environment Officer
- Remote and Manual Gantry Operator
- Procurement and Administration Assistant
- Supply Officer
- Terminal Coordinator
- Container Terminal Manager
- Harbour Master





# career progression opportunities

## JOB ROLE STEVEDORE

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Attaches identification tags to items in preparation for transportation</p> <p>Guides truck drivers through tight spaces</p> <p>Installs protective devices to keep items from shifting during transportation</p> <p>Moves freight or other items to and from storage areas</p> <p>Sorts items before loading and unloading</p>	<p>A driver's licence</p> <p>Able to accomplish tasks quickly</p> <p>Effectively uses communication systems</p> <p>Pays attention to work orders</p> <p>Physically able to move and lift heavy items</p> <p>Safety conscious</p>	<p>No prior experience required for most positions, however mechanical trade qualifications, and licenses in High Risk, Forklift, Dogging, Crane , Elevated Work Platform etc are highly regarded</p>	<p>Certificate III in Stevedoring</p>

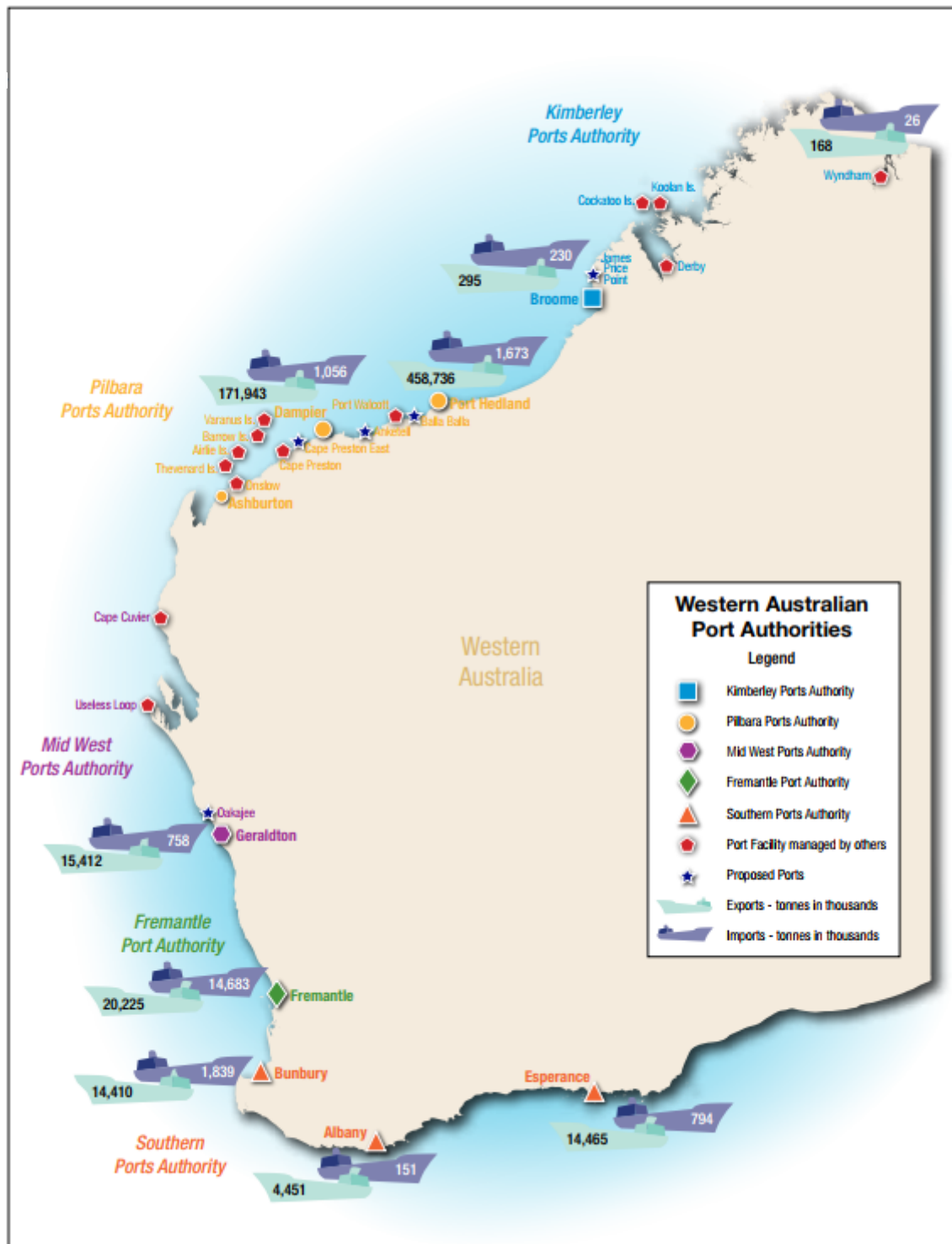
## JOB ROLE MARINE SURVEYOR

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Examining marine vessels to assess the condition of their structure, machinery and equipment</p> <p>Undertake surveys of ships to ensure they are constructed, equipped, cleaned and maintained in accordance with safety standards, rules and regulations as required by marine authorities</p> <p>Controlling and directing shipping operations to ensure the secure and efficient loading and transport of cargo</p>	<p>Ability to plan and manage time and resources</p> <p>High degree of organisational and communication skills</p> <p>Team work and cooperation</p> <p>Customer service orientation</p>	<p>Previous experience as a Chief Officer, with extensive sea-time</p>	<p>Marine qualification, preferably Master Class 1 with minimum Chief Officer Certificate of Competency</p>

## JOB ROLE HARBOUR MASTER

TYPICAL TASKS	GENERAL SKILLS REQUIRED	EXPERIENCE PREFERRED	QUALIFICATIONS
<p>Ensuring the safe and efficient operation of all marine activity at the Port</p> <p>Responsibility for the planning, managing and optimising of the Port's marine operations</p> <p>Managing the Port's pilotage services</p> <p>Ensuring compliance with government regulations</p> <p>Conducting formal vessel inspections covering safety equipment and general quality presentation passenger/crew areas and facilities</p> <p>Compiling reports and providing advice to management regarding shipboard activities</p>	<p>Coaching, training and leadership skills</p> <p>Time and planning management skills to ensure the punctual running of vessels</p>	<p>Several years' experience as a master on a commercial vessel is generally recommended in order to have sufficient experience to be able to manage a port's operation</p>	<p>Progression through the deck-officer ranks (a combination of study and sea-time)</p>

## Western Australian port authorities trade volumes



Department of Transport

## case study

### ELSPETH GRAY

#### What is your current job role?

My job spans across several roles. I am a Marine Pilot, Marine Surveyor, Load Master and Marine Examiner..

#### What are your responsibilities?

I am primarily responsible for safely and efficiently piloting vessels in and out of the port in Onslow, Koolan Island and Cocos Island. In addition to the port handling and the navigational tasks, I also coordinate the tug boats and hold inspections to ensure that vessels are in a fit state to be loaded with cargo. As a Load Master, I monitor the processes involved with loading vessels as per the chief officer's plan and ensure that the ships are loaded correctly.

#### Have you undertaken any further studies?

No additional formal training has been required since taking on this role; however, there are a number of continuous improvement, professional development, and refresher courses that need to be undertaken in order to maintain currency and remain up to date with any changes that are taking place in the industry.

#### What led you to choosing a career in Transport and Logistics?

My family life has played an influential role in my decision to pursue a career in the maritime sector. My Father was a Marine Pilot and Harbour Master (which are now two separate roles), and we lived in close proximity to the port which gave me exposure to the industry.

#### What are some interesting aspects about the job you do?

I get to go on-board and navigate different types of vessels. The role is shore based meaning that I get to home at the end of each day, and not have to spend long durations of time out at sea. In rough weather conditions, it can be quite

challenging going up and down the ladder of large vessels as well as learning the requirements of a new port.

#### Are there opportunities available for advancement?

Depending on where you want to go, there are a number of avenues that you can pursue. Administrative type roles are available such as Harbour Master. It should be noted that most people that want to become Marine Pilots tend to stay Pilots.

#### How has technology impacted on your job role?

The use of technology has greatly impacted the industry. It has made it easier to increase the levels of safety and efficiency especially for pilot navigation. GPS positioning, inputted ship dimensions and the Automatic Radar Plotting Aid (ARPA) can be displayed on mobile devices, giving Pilots live positioning data and enabling them to predict where the vessel will end up. Other systems like Dynamic Underkill Clearance (DUC) help to more accurately measure and determine the variant speed levels for clearance as well as how much more additional cargo can be loaded.

#### What advice would you give to someone who is considering a career in the maritime industry?

Working in the maritime sector provides interesting and diverse career pathways. It is intellectually engaging and challenging i.e. manoeuvring gas tankers can be a complex but rewarding process when you successfully berth a ship. Nowadays, there are a lot more women entering the industry. I would encourage anyone joining the industry to know their job, be patient and people will respect you. Go straight for the big ships, if that is what you want to do as there could be a long lead time to achieving your goals with the required sea time you will need to attain.





# licensing requirements

Maritime crews operating in international waters (eg crew on international cargo ships) are regulated by the Australian Maritime Safety Authority (AMSA) which administers the Seafarers' Training, Certification and Watchkeeping Code (STCW 95).

Marine crew operating in the offshore oil and gas industry (eg tugs, support vessels, barges, rigs etc) are primarily regulated by:

- **Australian Maritime Safety Authority (primary regulator)**
- **Western Australian Department of Mines and Petroleum**
- **Western Australian Department of Transport (Commercial Vessel Safety Branch)**
- **All marine crew working in port are also regulated by WorkSafe WA.**

**The safety of all those employed in the industry is paramount, so there are regulations and procedures in place to protect everyone involved. These include requirements for staff and contractors as well as medical assessments. Age restrictions may apply**

The Australian Maritime Safety Authority (AMSA) is a statutory authority established under the Australian Maritime Safety Authority Act 1990 (the AMSA Act). AMSA's principal functions are:

- **promoting maritime safety and protection of the marine environment**
- **preventing and combating ship-sourced pollution in the marine environment**
- **providing infrastructure to support safety of navigation in Australian waters**
- **providing a national search and rescue service to the maritime and aviation sectors.**

AMSA is charged with the responsibility for ensuring the safety of Australian flagged vessels and foreign flagged vessels in Australian ports, and the seafarers on board. International and national conventions and regulatory frameworks provide the standards enforced by AMSA.

The National System has been designed to improve marine safety and make it easier for seafarers and their vessels to work around Australia. State and Territory marine safety agencies act as delegates of AMSA and are responsible for the face-to-face operations of the National System.

A Certificate of Competency is required before you can work on any domestic commercial vessel in Australia. A Certificate of Competency shows a seafarer's capability to master a vessel and its passengers. Below is a list of the training that is needed for each type of Certificate of Competency.

CERTIFICATE OF COMPETENCY	APPROVED RTO CERTIFICATE OR DIPLOMA	FIRST AID	MARINE RADIO OPERATORS VHF CERTIFICATE OF PROFICIENCY	MARINE RADIO OPERATORS CERTIFICATE OF PROFICIENCY
General Purpose Hand NC	✓	✓		
Coxswain Grade 2 NC	✓			
Coxswain Grade 1 NC	✓	✓	✓	
Master <24m NC	✓	✓		✓
Master (Inland Waters)	✓	✓		
Master <35m NC	✓	✓		✓
Mate <80m NC	✓	✓		✓
Master <80m NC	✓	✓		✓
Marine Engine Driver Grade 3 NC	✓	✓		
Marine Engine Driver Grade 2 NC	✓	✓		
Marine Engine Driver Grade 1 NC	✓	✓		
Engineer Class 3 NC	✓	✓		

**The Office of Transport Security is Australia's transport security regulator for aviation transport, maritime transport and the offshore oil and gas industry. Its role is to make sure Australians and our national interests are secure through regulation that supports industry and the community as they carry out trade and travel activities.**

In addition to the qualifications and experience Marine Pilots are required to be licenced by the relevant authoritative body. Under the shipping and pilotage act, this would be the Department of Transport and under the Port Authorities Act, this would be Port Authority. In order to qualify for a pilot licence, a seafarer must:

- **Hold a Master Class 1, 2 or 3 certificate of competency issued by the Australian Maritime Safety Authority.**
- **Undertake a required number of transits, under prescribed conditions, as a trainee pilot under the direct supervision of a licensed pilot.**
- **Meet the required health standards.**
- **In accordance with regulation 9A of the Shipping and Pilotage (Ports and Harbours) Regulations 1966, a person must hold a valid pilot licence to act as a pilot**

All port workers must have a Maritime Security Identification Card (MSIC) as a minimum entry requirement. This is a nationally recognised identification card which demonstrates that the holder has been cleared by the Australian Federal Police/ASIO (AusCheck) and is not a threat to the maritime or offshore industry. All ports have their own security requirements on top of the MSIC, which can cause some confusion for those servicing the ports.



## case study

### LUKE JONES

#### What is your current job role?

Stevedoring Foreman, Fremantle Ports

#### What are your responsibilities?

Across the course of my work, I operate Internal Transfer Vehicles (ITV's), small and heavy forklifts, bobcats, straddle carriers and other mechanical equipment. I undertake shipboard and wharf duties including trimming, lashing, and packing and unpacking of containers. I perform basic security duties, and other clerical tasks such as the processing of information or documents associated with the receipt and delivery of cargo/containers. I also carry out basic servicing and cleaning of equipment. As a Stevedore Foreman, I coordinate and supervise stevedoring operations and other staff.

#### How long have you been in this role?

I have been in this role for 20 years.

#### Have you undertaken any further studies?

I have completed my Certificate IV in Workplace Training and Assessment and a Certificate IV in Stevedoring and Logistics.

#### Are there specific licences or qualifications required for the job?

Stevedores are required to have a number of different licences. They include:

- CB- Bridge and gantry
- CN - Non slewing crane
- DG - Dogman
- LF - Light forklift

CD - Derrick crane

CP- Portal Boom Crane

RB - Basic rigger

WP - Elevated work platform

#### What previous roles have you held?

I was previously a Stevedore at Patrick Stevedores terminal and Bulk and general -all grades from G2 general hand to G7 shift supervisor and in all areas of bulk and general and container terminals.

#### What new skills have you needed to acquire?

Skills/licences to operate different heavy machinery.

#### What led you to choosing a career in Transport and Logistics?

I had the choice of undertaking a 2 year traineeship on a salvage tug or a 2 year traineeship at as a Stevedore, I chose the Stevedore position.

#### What are some interesting aspects about the job you do?

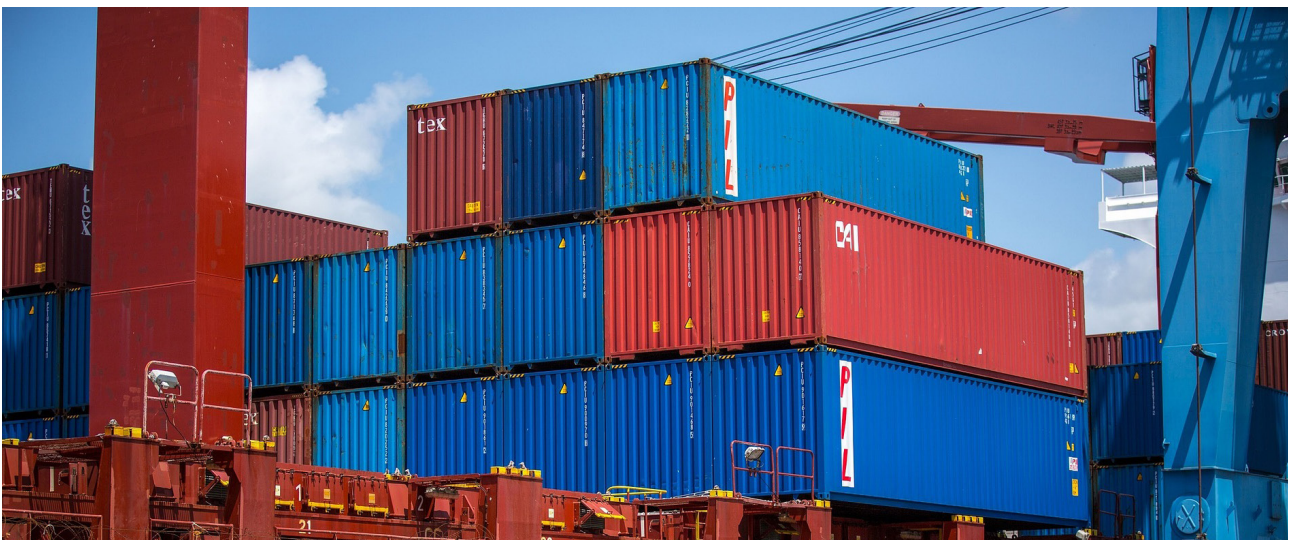
Problem solving, the operation of heavy machinery and cranes

#### How has technology impacted on your job role?

Some areas are seeing a move towards automation and driverless operations.

#### What advice would you give to someone who is considering a career in the maritime industry?

Stevedoring can be a tough environment. Shift work can be hard to get used to and you have to have a very understanding partner and family to last.





# other maritime divisions

## Royal Australian Navy

The Royal Australian Navy is a modern military organisation operating advanced vessels and aircraft. Its personnel are expertly trained to defend Australia and perform a variety of maritime duties.

All personnel have an important part to play in day to day operations, whether the vessels are used in combat or humanitarian and rescue missions. With the potential of being deployed to numerous destinations, the Royal Australian Navy provides a supportive team environment for those that are drawn to the opportunities available working out at sea. Maritime jobs in the Royal Australian Navy include:

- **Boatswain Mate**
- **Marine Engine Officer**
- **Marine Engineer Officer Submariner**
- **Maritime Warfare Officer Submariner**
- **Maritime Technician Submariner**
- **Maritime Logistics Support Operations Submariner**
- **Maritime Logistics Officer**
- **Supply Chain Officer**
- **Supply Chain Submariner**
- **Weapons Electrical Engineer**
- **Weapons Electrical Engineer Submariner**



# study options

A career in maritime, ports and stevedoring can follow a number of pathways. The following table gives details of vocational education and training options to start you on your way. A wide range of qualifications is covered, from base level through to tertiary level.

QUALIFICATION TYPE	CERTIFICATE II	CERTIFICATE III	CERTIFICATE IV	DIPLOMA/ADVANCED DIPLOMA	DEGREE AND ABOVE
<b>OUTLINE</b>	<b>Graduates at this level will have gained:</b>				
	Knowledge and skills for work in a defined environment and can proceed to further learning	Theoretical and practical workplace knowledge and skills and can proceed to further learning	Theoretical and practical knowledge and skills for a combination of specialised work, skilled work and/or further learning	Specialised knowledge and skills for skilled/ professional work and/ or further learning	A broad and comprehensive understanding and skills for professional work and/or learning
<b>QUALIFICATIONS AVAILABLE IN MARITIME, PORTS AND STEVEDORING</b>	Maritime Operations Stevedoring	Maritime Operations Marina Operations Stevedoring	Maritime Operations Stevedoring	Maritime Operations	Maritime and Logistics Management Maritime Technology Management Nautical Science Marine Engineering
<b>OTHER QUALIFICATION AREAS</b>	Logistics	Logistics International Freight Forwarding (Operator)	Logistics International Freight Forwarding (Senior Operator)	Logistics International Freight Forwarding	Engineering Marine Electrical Engineering
<b>EXAMPLES OF JOB ROLES</b>	General Purpose Hand Near Coastal Coxswain Grade 2 Near Coastal Marine Engine Driver Grade 3 Near Coastal Coxswain Grade 1 Near Coastal Stevedore	Marina Hand Marine Engine Driver Grade 2 Near Coastal Master Inland Waters Master up to 24 metres Near Coastal Stevedore	Marine Engine Driver Grade 1 Near Coastal Master up to 35 metres Near Coastal Marine Survey Assistant	Master up to 80 metres Near Coastal Marine Engineering Class 3 Near Coastal Marine Surveyor Watchkeeper Deck Marine Engineer Class 1	Deck Officer Marine Engineer Marine Engineer Officer Port/Terminal Management Ship Operations Management Maritime Economics

## Traineeships

Traineeships provide an opportunity to gain practical experience and training whilst earning a wage. Upon completion of relevant training, which can be full-time, part-time, or started at school through a school-based traineeship, you can receive a nationally recognised qualification. On completion, there may also be the option to pursue further study, either on a full-time or part-time basis.

Traineeships available in Western Australia in the maritime, ports and stevedoring industry include:

TRAINEESHIP NAME	QUALIFICATION NAME	PART TIME	SCHOOL-BASED TRAINEESHIP	NOMINAL TERM (MONTHS)
Integrated Rating	Certificate III in Maritime Operations (Integrated Rating)	✓		24
Maritime Operations - Coxswain	Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal)	✓	✓	6
Maritime Operations – Marine Engine Driver (Grade 2)	Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal)	✓		12
Maritime Operations – Marine Engine Driving (Grade 3)	Certificate II in Maritime Operations (Marine Engine Driver Grade 3 Near Coastal)	✓	✓	6
Stevedoring (Level 2)	Certificate II in Stevedoring	✓	✓	12
Stevedoring (Level 3)	Certificate III in Stevedoring	✓		24





## case study

### IAN FRYER

#### What is your current job role?

Port Service Officer, Internal Trainer, and Shore Tension Specialist.

#### What are your responsibilities?

Mooring Duties Quay Side; Security; Delivery of various training courses such as: Manual Handling, Confined Space, Working at Heights, First aid, and initial training of new Port Service Officers; Maintenance of Shore Tension Units; Servicing and support of shore tension to other Port Service Officer Team Leaders; and Verification of Competency assessments on machinery at Fremantle Ports.

#### How long have you been in this role?

4 years as a Port Service Officer and over 1 year as the Internal Trainer, and Shore Tension Specialist.

#### Are there specific licences or qualifications required for the job?

Port Service Officer Position: Heavy Rigid Drivers Licence; High Risk qualifications of Dogging, Forklift, Elevated Work Platform, Certificate II in Security, Provide First Aid, Front End loader, Oil Response Trained, Working at Heights, Traffic Management.

Internal Trainer: Certificate IV in Training and Assessment, competent and certified in various areas where I deliver training

#### What previous roles have you held?

I completed 20 years' service in the Royal Australian Navy retiring as a Chief Petty Officer Boatswain.

#### What skills have you been able to transfer?

formally recognised. From this process, I have been awarded various qualifications of Diploma's in Work Health & Safety, Public Safety, Security and Risk Management. Certificate IV in Work Health & Safety, Training and Assessment, Front Line Management and Maritime Operations.

#### What new skills did you need to acquire?

Traffic Management, Front End Loader, Qualifications within Registered Training Organisations (RTOs) to deliver training.

#### What are some interesting aspects about the job you do?

2 days are never the same, there is always a new challenge.

#### What advice would you give to someone who is considering a career in the maritime industry?

Do your research, give it a go, and don't give up. It may be a hard field to crack into but once you're in, opportunities start opening up everywhere.

#### How has technology impacted on your job role?

Some areas are seeing a move towards automation and driverless operations.

#### Given the opportunity to pursue further study/training, which area would you choose?

I would like to pursue further study to enable me to become a High Risk work assessor instructor. I would also like to further my career and work my way up the maritime masters skill set levels.



# career pathways

The diagram below illustrates some career pathway options available in the maritime, ports and stevedoring industry.

New entrants often start with entry level positions, which are shown at Certificate II. The gradual progression is illustrated from left to right, leading to job roles operating at a higher level. Job titles are a guide only, as different organisations may use slightly different job titles to those indicated. There may also be variation in the qualifications level of some positions.

There are also multiple entry points for career changers. This is usually determined by experience and/or skill level. Examples of career changers can include self-employed individuals, existing workers from related areas and those who transfer from another operational area within the same company.

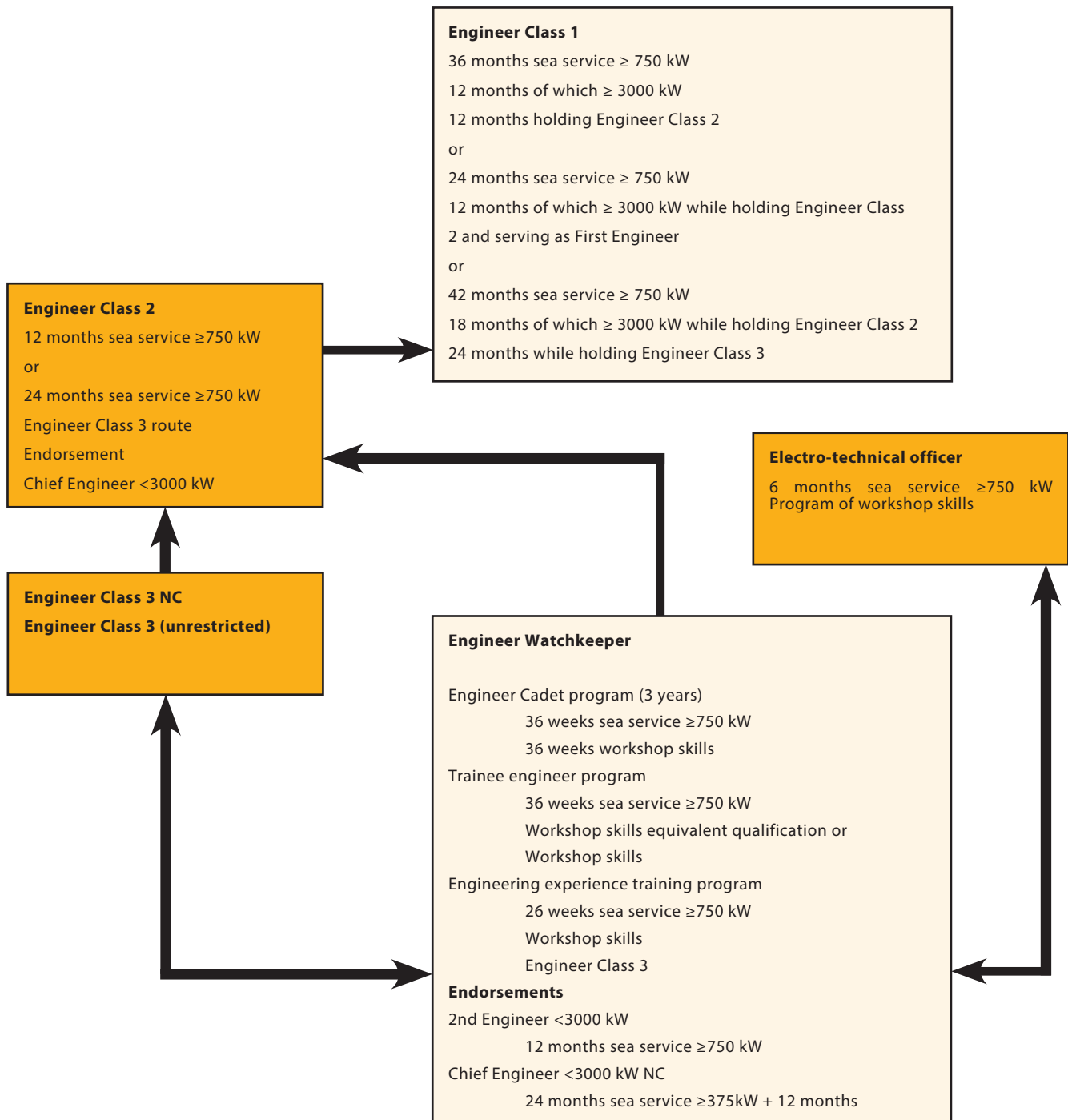
CERTIFICATE II	CERTIFICATE III	CERTIFICATE IV	DIPLOMA/TERTIARY QUALIFICATION
Coxswain Grade 1	Integrated rating	Marine Engine Driver Grade 1	Marine Engineer Class 3 Near Coastal
Coxswain Grade 2	Marine Engine Driver Grade 2 Near Coastal	Chief Integrated Rating	Master up to 80 metres
General Purpose Hand Near Coastal	Master (Inland Waters)	Master up to 35 metres Near Coastal	Watchkeeper Deck/Deck Officer
Marine Engine Driver Grade 3	Marine Engine Driver Steam	Marine Survey Assistant	Master up to 500GT/Chief Mate
Deckhand	Marine cook	Stevedore Shift Foreperson*	Marine Engineer Class 1
Stevedore*	Marina Operator	Stevedore Charge Foreperson*	Master Unlimited
Waterside worker*	Crane Operator*^		Harbour Master
	Equipment Controller*		Marine Surveyor
	Equipment Operator*		Port/Terminal Management
	Reefer		Ship Operations Management
	Team Leader*		
ENTRY LEVEL	OPERATIONS	MIDDLE MANAGEMENT	SENIOR MANAGEMENT

\* stevedoring role

^ There are also additional requirements for off-shore Crane Operators

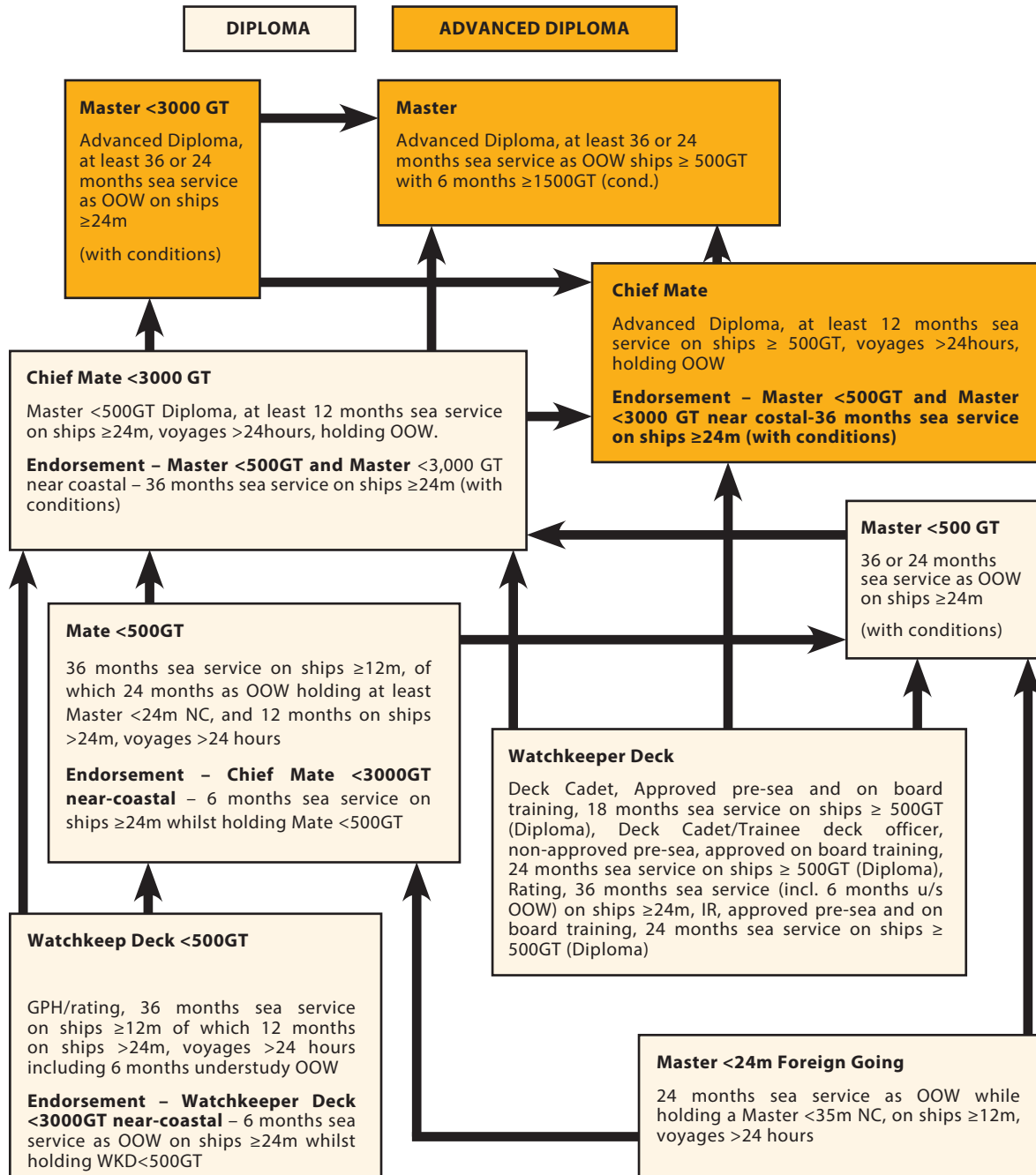


## Career Pathway Options – Engineer Officers

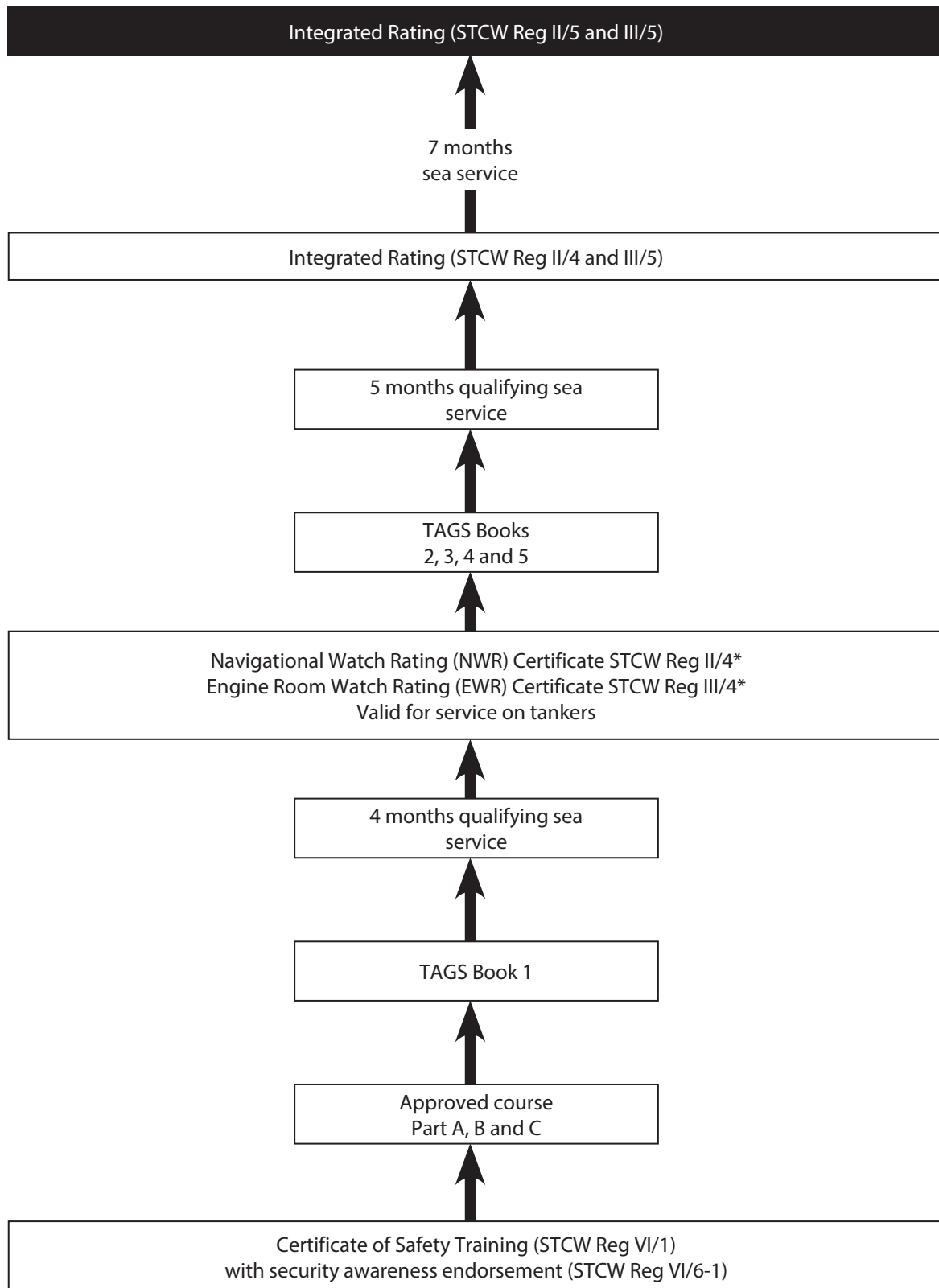




## Career Pathway Options – Master and Deck Officer



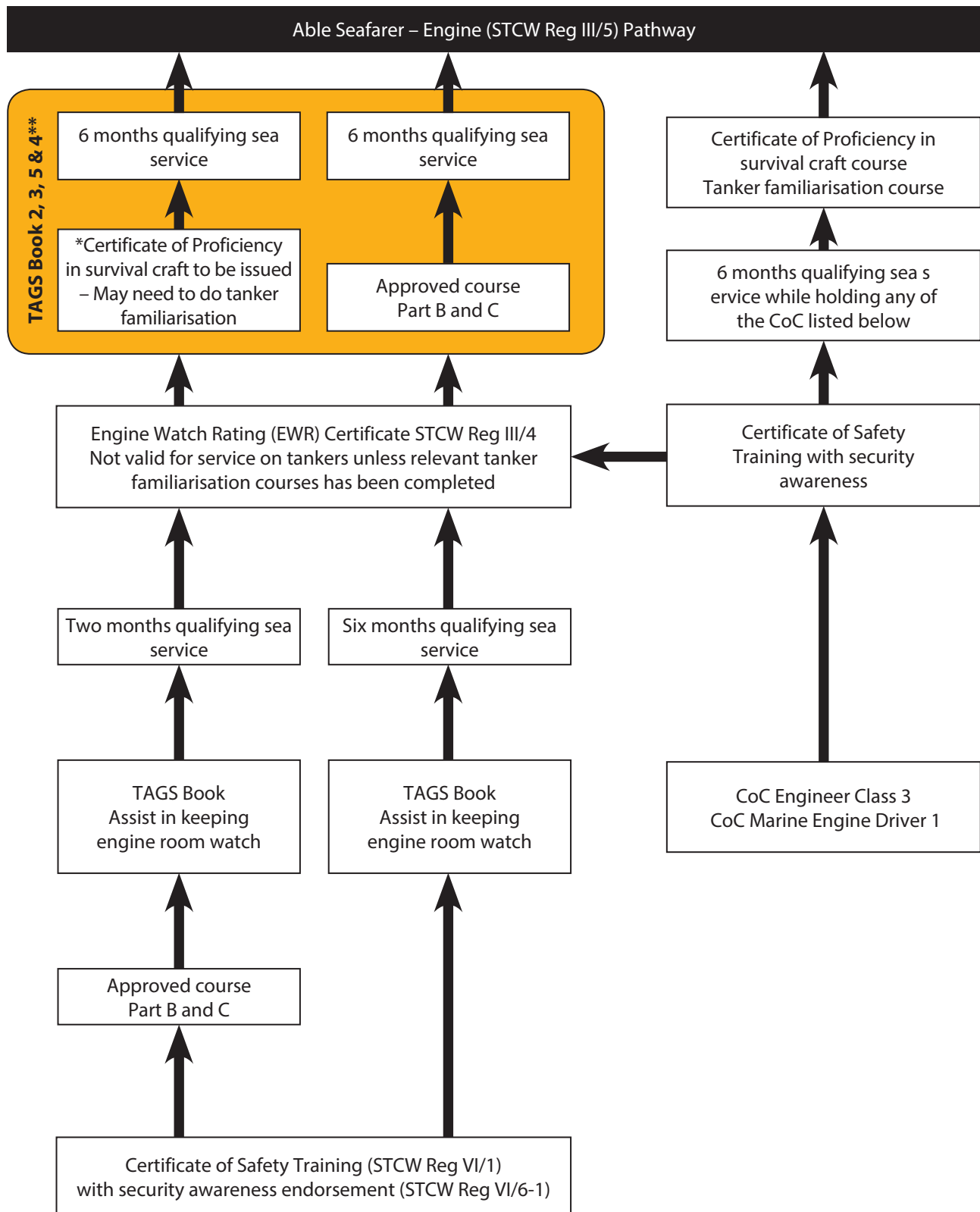
## Integrated Rating Pathway



\* Endorsement signed in back of TAGS Book 1 by AMSA Examiner

NB The initial sea service while completing TAGS Books is supernumerary sea service supervised.

## Able Seafarer – Engine Pathway

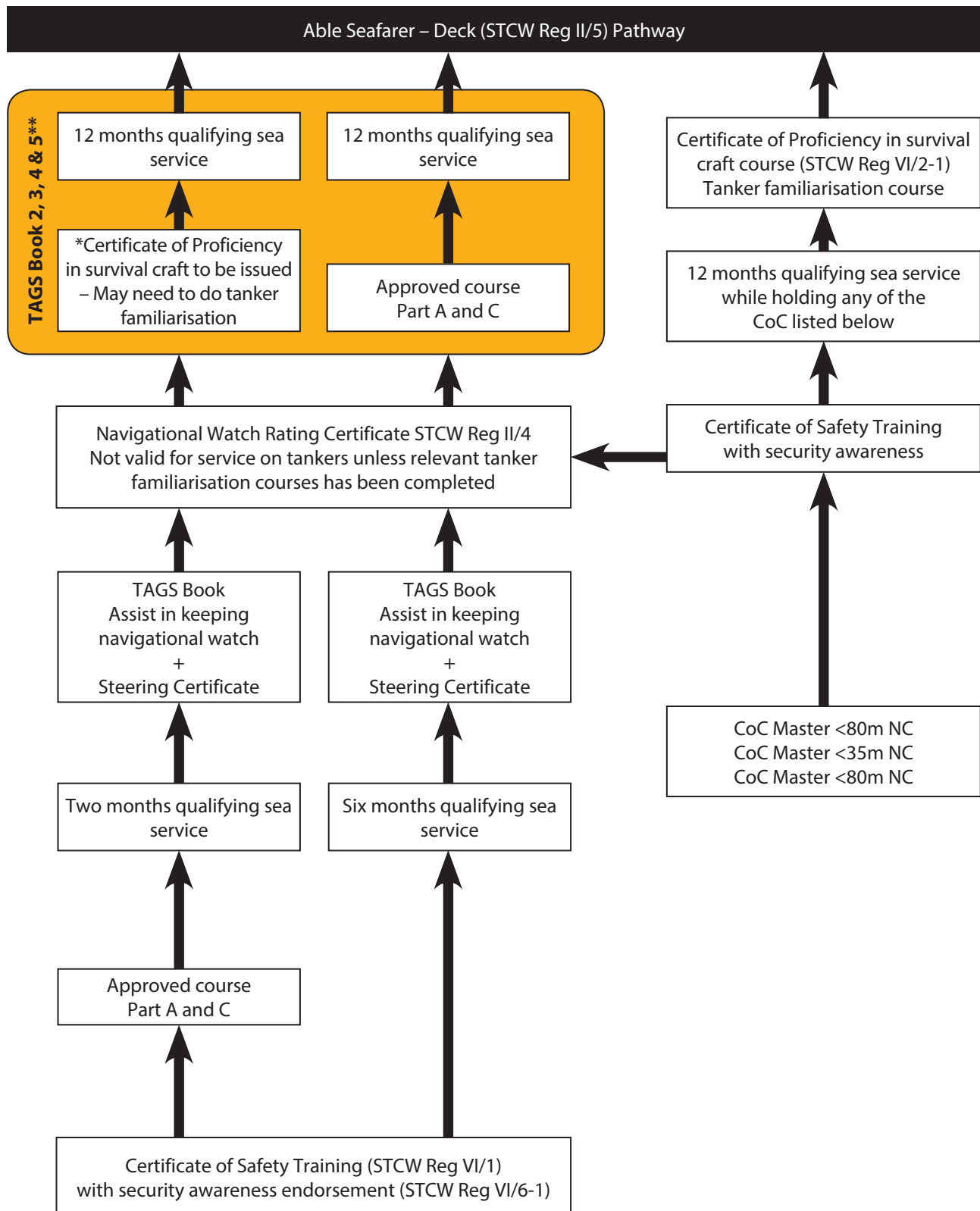


\* A Certificate of Proficiency in survival craft can only be issued after completion of six months sea service (STCW Reg VI/2 (1.2))

\*\* AMSA approved RTOs may decide if all section of TAGS Book 3 need to be completed



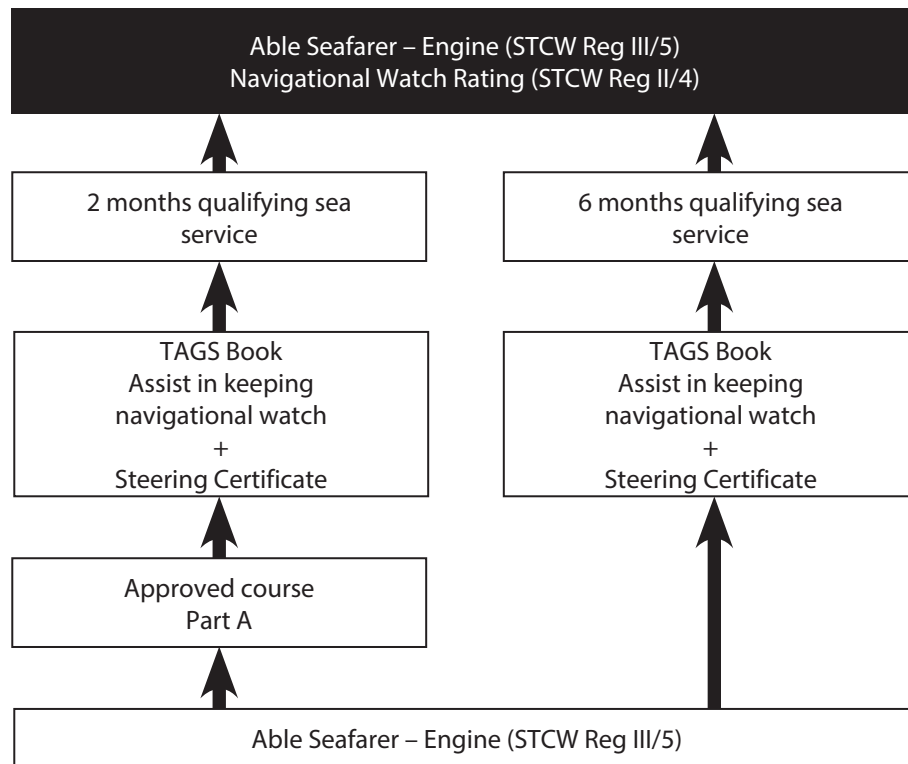
## Able Seafarer – Deck (STCW Reg II/5)



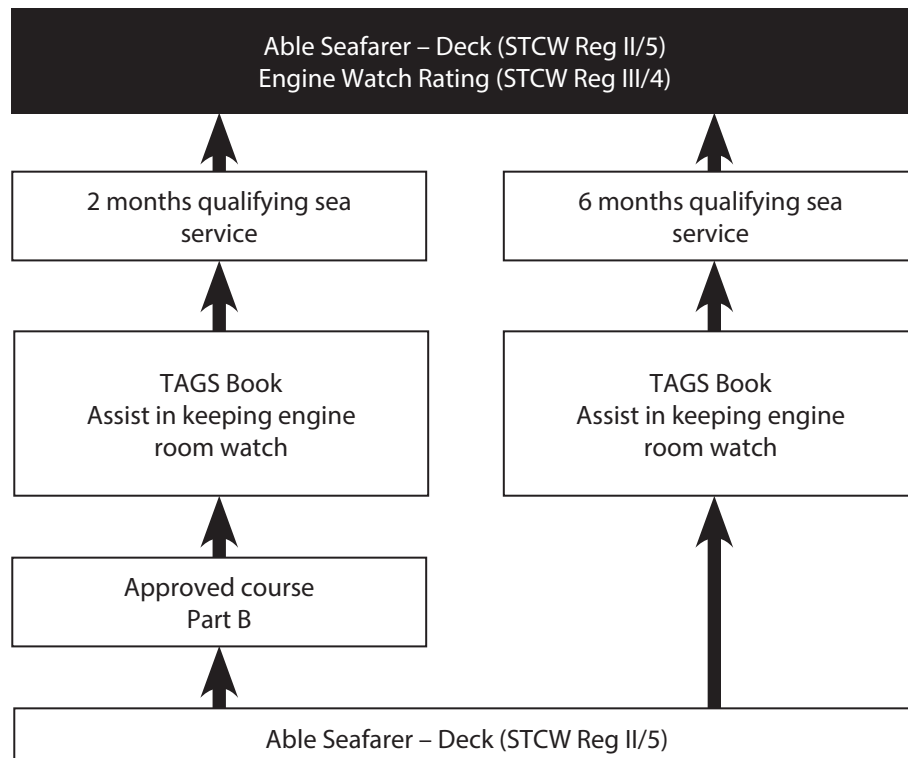
\* A Certificate of Proficiency in survival craft can only be issued after completion of six months sea service (STCW Reg VI/2 (1.2))

\*\* AMSA approved RTOs may decide if all section of TAGS Book 3 need to be completed

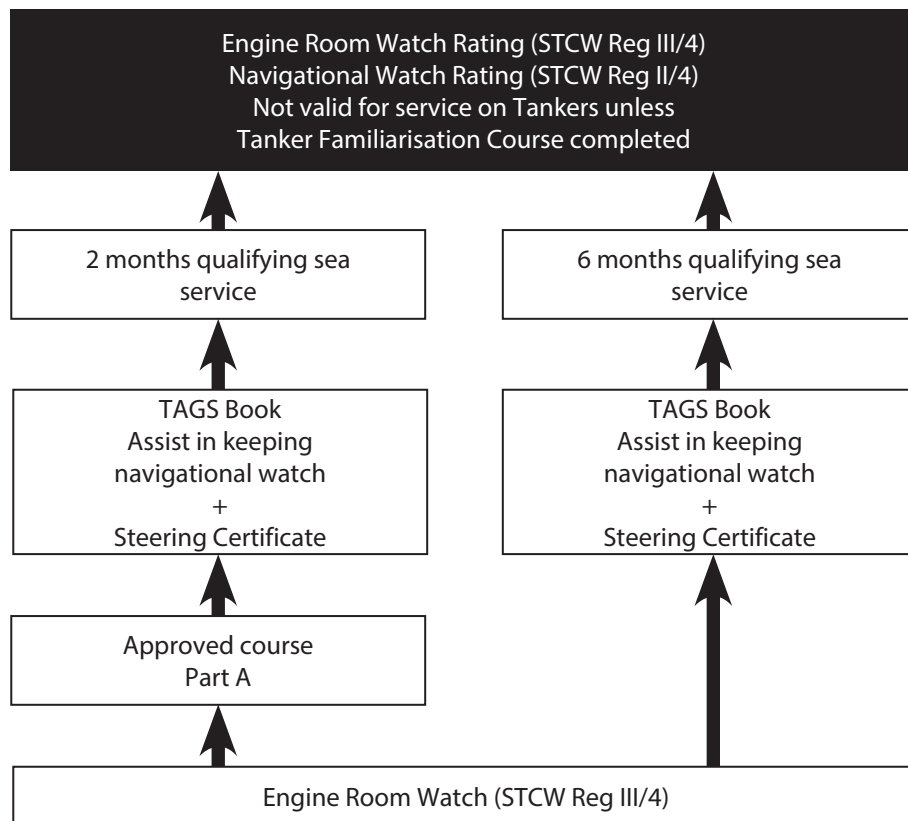
## Able Seafarer – Engine with Navigational Watch Rating Pathway



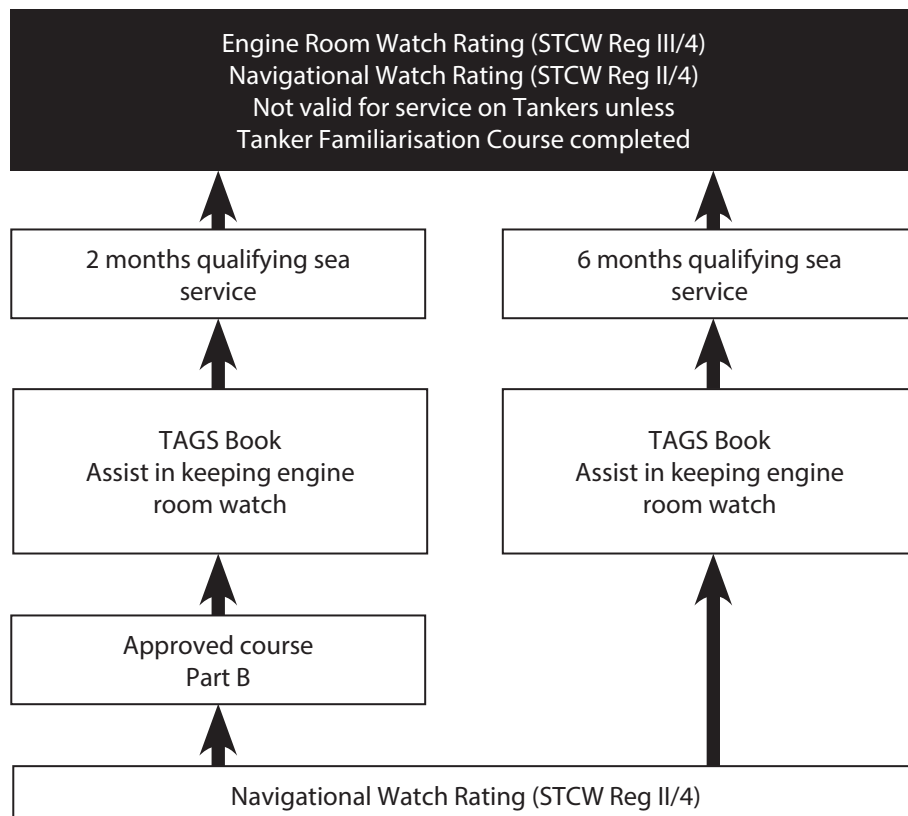
## Able Seafarer – Deck with Engine Watch Rating Pathway



## Engine Room Watch Rating to Navigational Watch Rating Pathway



## Navigational Watch Rating with Engine Room Watch Rating Pathway





# additional training

Additional training may be offered to staff, either through in-house training or outsourced to an external training provider. These are mostly short courses that add value to the processes and duties carried out by individuals working in the Maritime, Ports and Stevedoring sectors.

- Customer service skills
- First aid
- Occupational safety & health procedures
- Supervisor training
- Team building
- Time management
- Use of electronic devices
- Workplace communication

## useful links

Australian Industry Standards.....	<a href="http://www.australianindustrystandards.org.au">www.australianindustrystandards.org.au</a>
Australian Maritime Safety Authority (AMSA).....	<a href="http://www.amsa.gov.au">www.amsa.gov.au</a>
Australian Maritime Union of Australia.....	<a href="http://www.mua.org.au">www.mua.org.au</a>
Bureau of Infrastructure, Transport and Regional Economics .....	<a href="http://www.bitre.gov.au">www.bitre.gov.au</a>
Careers at Sea.....	<a href="http://www.careersatsea.com.au">www.careersatsea.com.au</a>
Defencejobs.....	<a href="http://www.defencejobs.gov.au/navy/">www.defencejobs.gov.au/navy/</a>
Department of Commerce (WorkSafe WA).....	<a href="http://www.commerce.wa.gov.au/worksafe">www.commerce.wa.gov.au/worksafe</a>
Department of Education.....	<a href="http://www.education.wa.gov.au">www.education.wa.gov.au</a>
Department of Training and Workforce Development .....	<a href="http://www.dtwd.wa.gov.au">www.dtwd.wa.gov.au</a>
Department of Transport.....	<a href="http://www.transport.wa.gov.au">www.transport.wa.gov.au</a>
Job Outlook .....	<a href="http://www.joboutlook.gov.au">www.joboutlook.gov.au</a>
Job Skills WA .....	<a href="http://www.dtwd.wa.gov.au/jswa">www.dtwd.wa.gov.au/jswa</a>
Logistics Training Council .....	<a href="http://www.logisticstc.asn.au/">http://www.logisticstc.asn.au/</a>
National Transport Commission.....	<a href="http://www.ntc.gov.au">www.ntc.gov.au</a>
Safe Work Australia.....	<a href="http://www.safeworkaustralia.gov.au/Pages/default.aspx">www.safeworkaustralia.gov.au/Pages/default.aspx</a>
The Nautical Institute .....	<a href="http://www.training.gov.au">www.training.gov.au</a>
Training.gov.au .....	<a href="http://www.nisea.org/">http://www.nisea.org/</a>









**AVIATION  
FREIGHT FORWARDING  
LOGISTICS  
MARITIME  
POSTAL  
RAIL TRANSPORT  
ROAD TRANSPORT  
STEVEDORING  
WAREHOUSING  
WHOLESALE**

The Logistics Training Council's professional staff  
will assist with all your queries.

**Phone: (08) 9388 8781**

**Fax: (08) 9388 8784**

**E-mail: [logistics@logisticstc.asn.au](mailto:logistics@logisticstc.asn.au)**

**PO Box 7033  
SHENTON PARK WA 6008**

**17 Lemnos Street  
SHENTON PARK WA 6008**

The Logistics Training Council website has a wide range of industry and training information  
regarding news and events, careers, workforce development, traineeships,  
training packages, resources and links to other useful websites.

**[www.logisticstc.asn.au](http://www.logisticstc.asn.au)**

Published November 2017