

## **Inquiry into Coastal Shipping Policy and Regulation**

### **TAFENSW - Hunter Institute**

In response to your letter of March 26 2008, seeking input on matters related to an enquiry into coastal shipping policy and regulation by the House of Representatives Committee on Infrastructure, Transport, Regional Development and Local Government TAFENSW - Hunter Institute is pleased to be able to provide comment that may assist in the enhancement of coastal shipping policy and regulation and contribute to any recommendations to improve the competitiveness and sustainability of the Australian coastal shipping sector.

To assist with the purpose of the Committee's report to outline the nature and characteristics of the Australian shipping industry and the international and coastal trades, Hunter Institute will provide comment for each of the following tasks:

1. Review the policy and regulatory arrangements in place for the coastal shipping sector;
2. Assess strategies for developing an adequate skilled maritime workforce in order to facilitate growth of the Australian coastal shipping sector;
3. Consider the effect of coastal shipping policy on the development of an efficient and productive freight transport system, taking into account issues such as environmental and safety impacts and competitive neutrality between coastal shipping and other modes of transport; and
4. Consider the implications of coastal shipping policy for defence support, maritime safety and security, environmental sustainability and tourism.

### **Background of Witness Organisation: TAFENSW - Hunter Institute**

At the mouth of the Hunter, the Port of Newcastle plays a central role in the economic wellbeing of Newcastle, the Hunter Region, the state of NSW and Australia as a whole. Shipping trade is both an extremely large and complex as well as successful business. Total trade through the Port of Newcastle last year was valued at approximately \$8.3 billion and was a Port record of 85.6 million tonnes moved in more than 3000 ship movements. The value of coal shipped through Newcastle is approximately \$6 billion, with the other \$2.6 billion made up in other exports, indicating the great potential for further growth in non coal exports.

It is recognized that there is a shortage of suitably qualified existing workers and workers-in-training to sustain the maritime industry, both in Australian and world wide. This serves to highlight the crucial role that tertiary education and vocational training has in providing the training and recruitment options necessary for the ongoing sustainability of the maritime industry in all its guises. TAFE NSW - Hunter Institute has shown that it has the necessary capacity and capability, particularly when considered in conjunction with its long term partnerships with a number of local consortia, to provide such selection, training and retraining for the industry. The Institute catered for 1,410 enrolments in the maritime sector between 2002 and 2007.

While exports are important, manufacturing is crucial to the long term sustainability of the Australian national and regional economies. It was therefore exciting for the Hunter region when the New Zealand company, Sensation Yachts recognized that Newcastle had the necessary availability of Port land and facilities to enable them to establish manufacturing operations in Newcastle. Sensation has established its luxury yacht manufacturing facility on the site previously occupied by ADI during the building and commissioning of the Minehunter vessels.

In 2008 Azzura Marine has commenced redeveloping the former State Dockyard site at Dyke Point into a world class super yacht and large custom vessel manufacturing facility. Hunter Institute is working with both companies to assist in the recruitment and upskilling of suitable personnel and in providing training in resin infusion composite plastic boatbuilding. Part of the decision by both Sensation and Azzura Marine to base their businesses in Newcastle stemmed from the capability of Hunter Institute to help identify suitable people for training and employment, conduct skills tests and develop and administer training on and offsite.

It is envisaged that Sensation Yachts will require 200 people to be trained over the next 6 years in plastic and steel craft construction and manufacturing. Since 2006 Hunter Institute has already negotiated with local DET representatives for a number of Skill Shortage Programs (SSP) in initial boat building skills to be conducted.

The Manager of Sensation Yachts in Newcastle, Mr Brad English, has worked extensively with Hunter Institute staff and a local company, Alliance Training Solutions, to run a number of

Federally-funded New Apprenticeship Access Programs. These programs have seen the potential pool of staff for the boatbuilding industry increased and has assisted Sensation Yachts in their initial recruitment of trainees.

The maritime learning precinct based in the Hunter is made up of a loose consortium comprising TAFE NSW - Hunter Institute, Port ASH Marine Pilot Simulator Centre, Newcastle Port Corporation, Pivot Maritime, and the University of Newcastle. Through its school-TAFE-University partnering programs, the Hunter region has the potential to become the recruitment pool for

national and global maritime operators as well as providing a skills platform for future manufacturers and mariners. The Institute provides training in all regulatory aspects of maritime and marine engineering required by state and national legislation. The Institute is also a recognized Centre of Excellence in the maritime training for TAFE NSW and provides one of only 3 marine engineering training facilities in Australia. Its maritime and marine engineering training are highly respected and well regarded by all stakeholders including shipping companies, professional associations, unions and regulatory authorities.

## Profile of TAFE NSW - Hunter Institute

TAFE NSW - Hunter Institute is located in the Hunter Region of New South Wales. It is the largest regional provider of vocational education and training in Australia, with an annual enrolment of nearly 57,000 local and international students and 2,500 expert teachers and support staff. Our qualifications are fully accredited and recognised worldwide. Training is delivered through the Faculties of Industry and Natural Resources, Business & Computing, Access and General Education, Health & Community Services, Tourism and Hospitality, and Arts & Media.

TAFE NSW - Hunter Institute maritime training sections are part of the Faculty of Industry and Natural Resources and cover all aspects of maritime training including deck, marine engineering, boat and shipbuilding and composites. The Institute's maritime training is delivered in well established facilities that provide students with a simulated work environment. Teaching is flexible wherever possible and most programs include the possibility of doing some on-the-job training in the workplace. The sections also provide specialist training such as steam and boiler operations and Ship's Captains' Medical. The sections also have an annual enrolment of over 400 students in maritime and related areas. *(See Appendix A: Maritime Enrolment trends TAFE NSW - Hunter Institute)*

TAFE NSW Hunter Institute offers state and nationally accredited training for marine engineers and marine engine drivers and caters for international students in marine engineering. It also offers training for deck hands and coxswains through to bridge officers and has NSW Waterways and Australian Maritime Safety Authority (AMSA) accreditation for its maritime and marine engineering qualifications and for its Standard Training Convention for Watchkeepers 1995 (STCW95) short courses. The Institute's marine engineering qualifications are also recognised by the Institute of Maritime Education, Science and Technology (IMarEST) based in London.

Hunter Institute caters for a number of pathways into the maritime, marine engineering and boat and ship building industry. Appendix B sets out the main maritime and marine engineering pathways.

## Response to the Terms of Reference

TAFE NSW - Hunter Institute has a current staff of 12 full time teachers and 20 part time casual teachers in the maritime and marine engineering area, and has been involved in the development and delivery of courses and curriculum for the maritime industry for several decades.

Institute staff are involved in the development and maintenance of curricula based on the requirements of industry and the regulatory bodies and within requirements of the Australian Quality Training Framework. The Head Teacher of Marine Engineering, Mr Bill Elliott, and the Associate Faculty Director INR, Mr Neil Owen, along with Maritime Program Manager from the TAFE NSW Curriculum Centre, Mr Fulgentius D'Souza, participated in the committee reviewing the Maritime Training Package TDM07.

### 1. Review the policy and regulatory arrangements in place for the coastal shipping sector:

TAFE NSW - Hunter Institute is involved in assisting regulatory bodies, mainly through consultation and participation in reviews, on the most appropriate ways to train mariners in line with current policies and regulatory arrangements. Continuing this process of consulting with all relevant stakeholders would seem to be a best practice approach.

Within its own industry, however, it is useful to note that TAFE NSW - Hunter Institute also complies with many policies and guidelines to maintain its credibility within the vocational education sector. Hunter Institute is a Registered Training Organisation (RTO) and is regularly audited to confirm its adherence to the Australian Quality Training Framework 2007 (AQTF 07).

TAFE NSW - Hunter Institute also has achieved ISO 9001/2000 accreditation and utilises the Australian Business Excellence Framework (ABEF) as the framework for developing its business principles and practices.

The Institute complies with Federal and State authority regulation and is audited by the Australian Maritime Safety Authority (AMSA) to operate as an AMSA approved maritime trainer. It is also accredited by NSW Maritime for delivery of state qualifications.

Meeting the compliance needs of AMSA aligns our training with the requirements of the various conventions of the International Maritime Organisation (IMO).

TAFE NSW is well supported in this teaching discipline area by Mr Fulgentius D'Souza, Maritime Program Manager for the TAFE NSW Manufacturing, Engineering, Construction and Transport Curriculum Centre (MECAT). Mr D'Souza provides advice on interpreting and implementing Training Packages, industry needs and compliance issues. Quality Training Package delivery requires a close working arrangement between the stakeholders to ensure the training meets the needs of the Industry. TAFE NSW - Hunter Institute has been proactive in customising training to meet the needs of the various stakeholders within the regulatory framework. Customisation in

delivery, mode of delivery and hours of required attendance are modified where practical to meet the State and Federal requirements.

*(See Appendix C: Maritime and Related Course Offerings at TAFE NSW - Hunter Institute)*

## **2: Assess strategies for developing an adequate skilled maritime workforce in order to facilitate growth of the Australian coastal shipping sector:**

Hunter Institute is currently recognised as an excellent maritime trainer both in Australia and internationally. The Institute believes that it has a major role to play in maintaining a skilled maritime workforce particularly in relation to assisting with the growth of the Australian coastal shipping sector.

Among its recent successful programs and resources are:

- AMSA Sea Safety Certificate course (over 400 complete)
- Installing a bridge simulator for deck watchkeeping programs
- AMSA accreditation of an Integrated Rating program
- AMSA accreditation of Deck Watchkeeper and Master under 500t Course (8 in 2006 & 13 in 2007)
- Extensively equipped Marine Electrical, Electronics and PLC labs.
- Access to fire grounds through relationships with Mines Rescue Boolaroo.
- Lifeboat and access to a working lifeboat through TAFE NSW - Sydney Institute.

The Faculty is pursuing a waterfront site to install davits that will allow utilisation of the Faculty lifeboat locally.

Hunter Institute is able to work to support the ongoing development of a skilled maritime workforce through several specific strategies such as refining and providing Vessel Tracking System (VTS) and Pilot training for the port and generally for the maritime industry and becoming a provider and incubator of maritime succession training.

The shortage of qualified Pilots across Australia was identified as a major issue in 2003 and AMPA carried out a review of marine pilot training. Traditional Pilot recruitment was from holders of Master Class 1 qualifications. Pilot training is a small niche market and Hunter Institute is well placed to deliver the program in collaboration with Challenger TAFEWA and Port Ash.

Further investigation into a Regional Skills Development Project funded through COAG and the NSW Department of State and Regional Development (DRSD) may provide assistance to develop both of these strategies.

In the past Hunter Institute has sought support from the Transport and Logistics Centre to join with the stakeholders such as TAFE NSW Maritime Steering Committee, Port ASH Marine Pilot Simulator Centre, Newcastle Port Corporation, Pivot Maritime, and Newcastle University, Newcastle City Council, Sensation Yachts, Forjacs, Azzura Yachts to prepare a business plan / proposal to establish an enhanced Maritime Training Network/Centre in NSW. It was intended that this plan would give a focus and purpose to a strategy to promote Newcastle and the Hunter as a National Maritime Training Centre and to provide a platform for dealing with skill shortage areas across Australian ports, promote commercial revenue for Hunter, New South Wales and Australia and to provide employment opportunities within the Hunter region. Development of such a business plan could also be used to support applications for possible government funding.

TAFE NSW created a Maritime Steering Committee in 2002 to enhance the provision of the maritime operations and marine engineering programs and identify efficient use of resources across TAFE Institutes. This has been a useful strategy in maximising access and resources for the industry. A consortium of Challenger TAFE WA, the Australian Maritime College (AMC), Tasmania, and Hunter Institute has recently applied for Federal funding to support a Reframing the Future project to develop a similar national network with the same focus on maximising outcomes in all areas for the industry across Australia.

The following excerpts from the joint application provide some insight into what the project aims to do.

“This project meets the Reframing the Future goal to “increase the productivity of the VET workforce and contribute to the productivity of the Australian workforce.” It aims to develop a sustainable framework to meet the needs of the Australian and international maritime industry which operated in an environment where there are strong pressures, particularly on human resources. The three major established maritime training providers will investigate ways to combine resources to enable more efficient and productive training of maritime professionals Australia-wide. The Australian Maritime College (part of the University of Tasmania, Launceston), Challenger TAFE NSW – Hunter Institute of TAFE (Newcastle) are the three providers.

The three project participants are providers of international Certificates of Competency in Australia and all are subject to the Australian Marine Safety Authority’s compliances. AMSA has responsibility for setting and monitoring standards of training for Australia’s international shipping industry and for issuing of qualifications which are referred to as “Certificates of Competency” for ships masters and engineers. State-based “coastal” shipping is managed by state jurisdictions and interstate and “offshore” (oil and gas industry oriented) shipping, by a combination of AMSA and state authorities.

Productivity of the three organizations (two VET and one university) and their workforces will be enhanced through the development and utilization of the following:

- Improvement of recruitment and retention of lecturing staff. Providers must necessarily compete for qualified personnel with industry, where salary packages of \$120 000-\$240 000 are far beyond packages offered by training providers. There is current real concern amongst all

three providers for continued operation in the face of declining staff numbers, despite record demands for training.

- Joint development of equipment standards and sharing of specialized materials like simulation software
- AMSA recently (2008) advised that training providers were now expected to use Units of Competency from the (newly revised) Maritime Training Package TDM07. AMC has not been obliged to use the Package and one of the VET providers has not fully utilized it. This project will enable development of strategies for implementation of the revised Package and effective sharing of training package materials that meet the national training framework and AQTF07.
- Shared and joint development of assessment tools and teaching materials including flexible delivery and skills recognition tools and delivery
- Development of consistency of training programs and compliance with AMSA and AQTF requirements between Centers
- Streamlining processes such as visa applications and approvals for international students - Australian visas usually take 2-6 months to gain, while a common time in UK is a few days.

This project provides real potential for harnessing the strengths of the three major providers of maritime training in Australia. Through providing a forum for discussion, negotiation and strategic planning, key decision makers from the major providers, with input from industry stakeholders will develop and negotiate within their own organizations for changes in policy and practice that will have a positive impact on the critical issues facing this industry.

Apart from the significant outcome of the development of strong relationships amongst the key training providers, it is anticipated that a range of activities will be planned between the three providers to develop subsequent products, policies and strategies to address industry issues such as skills shortages, difficulties in meeting recruitment demands for trainers, challenges in the provision of flexible learning materials and techniques etc. There is a strong potential to create partnerships through this project – whether informal or formal.

The project will provide opportunities for representatives from the three major training providers and industry representatives to meet regularly. These meetings will:

- Promote greater collaboration amongst providers that traditionally would be operating in a competitive environment
- Endorse and develop the outcomes listed above
- Consider governance issues for the network, such as the establishment of a memorandum of understanding
- Identify key personnel in each organization to address the identified outcome areas
- Scope projects to implement strategies to achieve identified outcomes
- Monitor and evaluate these projects
- Ensure distribution and promotion of outcomes

## **Project deliverables:**

### **Outcome One - Development of strong networks and relationships (Partnerships)**

The maritime industry has very high expectations of public providers. Much of the training occurs in industry, particularly on the job, but the maritime industry still relies on the training providers to deliver services for its staff that align with the compliance requirements of international and national shipping that in Australia, are overseen by AMSA. There is intense demand for training; and limited options for provision as a result of the shortage of qualified, trained lecturers. The three providers therefore have a limited arena of competitiveness and a strong desire to collaborate to improve their services to industry.

The maritime training sector has a long history of attempts at collaboration – mainly in the form of the establishment of loose alliances, one of which, the Maritime Education and Research Alliance is currently operational. This project is confined to the three major providers and will draw on the capabilities of existing leaders to focus on specific issues and devise practical responses. As part of the project, an industry reference group including industry stakeholders such as AMSA, the Australian Ship-owners Association and Royal Australian Navy, will be formed to comment on and endorse strategies. We anticipate this early buy in will assist in long term change management strategies.

### **Outcome Two: effectively implement training package competencies to meet industry and legislative requirements (Quality, Training Packages, and Assessment)**

This project has as a primary motivator the desire to share resources and knowledge to develop a strategy to effectively ensure that Australia meets the highest standards of training delivery. A strategic alliance between the three providers will ensure that consistency and quality of training provision will occur as full implementation of the Maritime Training Package proceeds in consultation with AMSA. Furthermore the establishment of a partnership or alliance will assist in the facilitation of further activities around quality delivery such as joint development of assessment materials, alignment of Units of Competency with AMSA's "licensing" requirements, moderation and validation activities, development of non endorsed components of the training package like joint development of assessment and teaching materials.

### **Outcome Three: improvement of recruitment of lecturing staff (Skills shortages)**

All three training providers experience incredible challenges in recruiting lecturing staff. The conditions available when working with a public training provider that is bound by strict controls around human resource practices and available levels of reimbursement, limit capacity to attract and retain teaching staff. The competition with industry for trainers is significant and the discrepancy between the conditions (especially in relation to pay), means that working in industry is usually a much more attractive option. There is a need to work together strategically to address this issue. As such an analysis of scope of providers, involvement and consultation of the three providers with industry will assist in devising an effective recruitment strategy. A potential focus area is the Navy, which has different requirements for vessel commanders and engineers.

### **Outcome Four: Meeting industry wide strategic directions**

In addition to meeting organizational strategic directions, this project aims to create strategies for the maritime training sector and the maritime industry to work together to meet national issues

identified by the industry.

The Australian Ship Owners Association succinctly sums up the pressures facing the maritime industry and the sense of urgency around the issues:

'...one of the most prevalent concerns in the industry - both in Australia and internationally - is the looming shortage of maritime skills. The diminishing number of young persons wanting to be trained as seafarers in the Australian-controlled fleet is contributing to an ageing skills base. Seafarers gain unique experience and skills whilst at sea. That experience, in turn, is critical for effective pilots, surveyors, cargo planners, harbor masters, ship managers, maritime regulators, and so on. Maritime training institutions require a continuing core of seafarer trainees to remain viable. Whilst not yet critical, the 'point of no return' may be fast approaching. And the answer is not as simple as 'train more' - young Australians need encouraging career paths, and the opportunities and operating environment must first exist to encourage those opportunities.' (see <http://www.asa.com.au/labour.asp>)

Internationally, the maritime industry is set to expand with World trade expected to double between now and 2020, coupled with ongoing infrastructure development, increasing energy demands, relocation of manufacturing, containerization, the massive growth in China and India, and the robust Australian GDP growth forecasts, are all driving this expansion.

At the same time, other industry areas are experiencing skills shortages and therefore contributing to the recruitment difficulties within the maritime industry. In the late '90's the United Kingdom began to address the concerns that are facing Australia now and a national campaign with high level leadership was initiated. Over 190 organizations from the maritime sector became involved, joining together to focus on two objectives:

- to raise the profile of the maritime sector with the general public and specifically to target awareness among the young, the "seed corn" of the maritime future, and
- to set a blueprint for co-operation across the sector for the future.

(Information sourced from Prof Malek Pourzanjani)

In Australia, Malek Pourzanjani, President and Principal of the Australian Maritime College, has identified that there is a need to undertake the following activities in order to move forward and to begin to strategically address needs to:

- Gain sustained political support
- Obtain unity within all stakeholders
- Conduct high level conference
- Identify a lead group – network of networks
- Prioritize & develop a work-program
- Develop Australian solutions for Australian issues."

Hunter Institute would suggest that this would be a most worthwhile strategy to pursue as a reasoned way of providing a mechanism to start to address the sustainability needs of the maritime industry and in particular as a way to monitor and address the implications of growing the coastal shipping sector.

**3: Consider the effect of coastal shipping policy on the development of an efficient and productive freight transport system, taking into account issues such as environmental and safety impacts and competitive neutrality between coastal shipping and other modes of transport:**

In developing policy the whole supply chain must be considered in a strategic way. Newcastle Port Corporation is addressing the challenges in the Hunter by identifying the issues affecting the supply chain.

*“Newcastle Port Corporation is known for its functionality, efficiency and commitment to safety in focussing on diversification of business growth, port related development and other commercial activities. Newcastle Port Corporation’s Business Development Branch is constantly working to establish a better understanding of customers’ respective businesses in line with the service-orientated position of the port and its progressive development strategy. The team includes experts in the fields of trade development, property and infrastructure development business analysis and marketing.” Gary Webb, CEO Newcastle Port Corp, March 2008 edition Shipping Australia page 147.*

Hunter Institute attempts to support this approach by strategic partnering with relevant stakeholders to ensure that its maritime training is responsive to industry needs and directions.

**4: Consider the implications of coastal shipping policy for defence support, maritime safety and security, environmental sustainability and tourism:**

Again TAFE NSW – Hunter Institute is involved in assisting regulatory bodies, mainly through consultation and participation in reviews, on the most appropriate ways to train mariners in line with current policies and regulatory arrangements. This approach is similarly applied to working with maritime industry stakeholders to develop good practice models and the supporting training in the areas listed. The implications of coastal shipping policy in these areas on Hunter Institute are therefore likely to be substantial in terms of capacity and capability in particular.

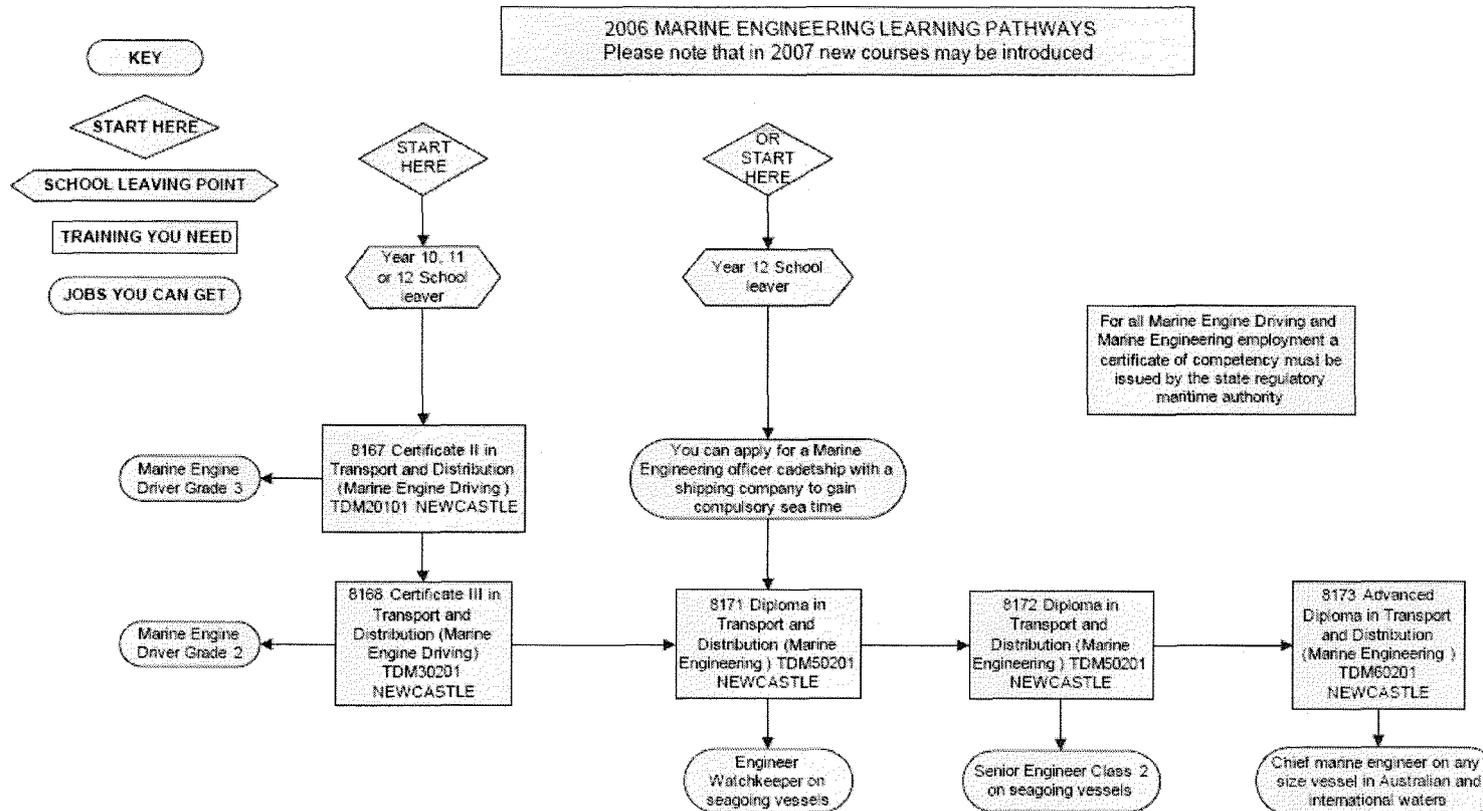
As just one example of how Hunter Institute supports industry, it has been actively involved in training for Australian Defence Industry (ADI) projects, including the Minehunter mine sweeper construction. The Institute is currently involved in providing Recognition of Prior Learning (RPL) for ADI staff. It also participates in the local Defence Industry Committee activities.

There are numerous other examples of training that is provided to support the maritime industry to meet its policy requirements. As changes to coastal shipping policy are required, there is a corresponding impact on how the Institute meets the changing needs in terms of adapting or developing new programs, ensuring suitably qualified teaching staff and correct equipment, maintaining staff qualifications and currency and possibly even introducing new areas of training and closing others.

**Appendix A: Maritime Enrolment Trends TAFE NSW - Hunter Institute** Note: (\*) = Newcastle area/Hunter Institute)

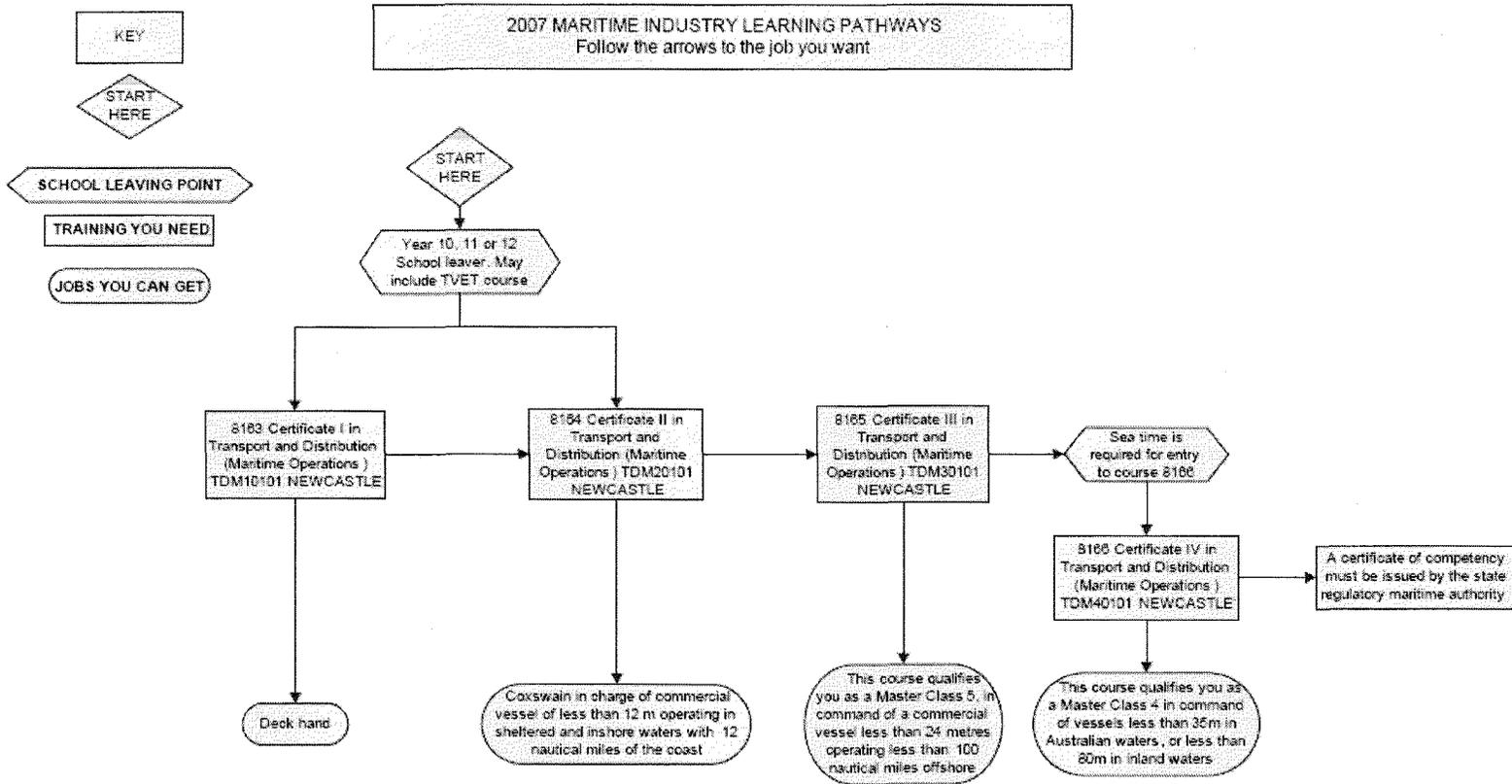
MARITIME AND MARINE DELIVERY HUNTER INSTITUTE (Maritime Operations, Marine Engineering, Marine Craft Construction and Composite Industry)							
Course Code	Course Name (utilising competencies from the TDM07 training package)	Enrolments - 6 year history					Comments
		2007	2006	2005	2004	2003	
4654	Operation and Maintenance of Marine	5(1)	12(1)	18(0)	14(1)	3(0)	6(1)
4655	Marine Automation and Practical Electrical	5	12	18	14	3	6
4683	Adv Marine Automation and PLC	0(0)	1(1)	3(1)	1(0)	3(0)	2(0)
4684	Adv Circuit Analysis and Fault	0(0)	1(0)	3(0)	1(0)	3(0)	2(0)
6896	Steam Plant Operation	0(0)	0(0)	0(0)	0(0)	0(0)	10(9)
8167	Transport and Distribution CII	9(8)	0(0)	13(11)	3(3)	6(6)	12(12)
8168	Transport and Distribution CIII	3(3)	9(0)	0(0)	0(0)	0(0)	0(0)
8171	Transport and Distribution Watchkeeper-Diploma	5(0)	0(0)	4(0)	6(1)	1(0)	0(0)
8172	Transport and Distribution Second Class Diploma	2(0)	7(1)	7(3)	3(1)	0(0)	2(1)
8173	Transport and Distribution First Class Adv Diploma	6(1)	12(2)	4(1)	9(4)	1(0)	0(0)
21920	STCW95 Adv Fire Prevention	62(15)	51(8)	35(9)	39(4)	33(2)	67(12)
21934	Marine Engineering STCW95 Electrical	1(0)	0(0)	0(0)	18(2)	11(0)	43(7)
21938	Marine Engineering STCW95 Introduction	0(0)	0(0)	0(0)	19(3)	16(0)	43(6)
21939	Marine Engineering STCW95 Revalidation	17(2)	27(2)	33(6)	18(3)	14(0)	24(4)
22138	STCW95 Basic Fire Prevention/Control	150(54)	68(16)	30(8)	26(1)	12(4)	10(2)
22154	Marine First Aid (STCW95)	45(14)	39(15)	24(14)	8(0)	33(13)	53(5)
22155	Marine Proficiency in Survival Craft	28(8)	24(5)	0(0)	0(0)	34(1)	50(2)
22495	Boiler Operations	0(0)	0(0)	0(0)	0(0)	2(0)	0(0)
31776	Oil Tanker Operations Adv Training	19(3)	0(0)	0(0)	8(0)	12(1)	0(0)
1217	Transport and Distribution Deck Watchkeeper/Master under 500t	12(6)	7(2)	0(0)	0(0)	0(0)	0(0)
1240	Marine Industry/Maine Coxswains TVET	0(0)	0(0)	0(0)	5(5)	0(0)	0(0)
8163	Transport and Distribution GPH	89(19)	86(30)	73(29)	67(34)	63(25)	89(32)
8164	Transport and Distribution Coxswains	16(16)	24(21)	39(29)	17(16)	13(12)	0(0)
8165	Transport and Distribution Master 5 composite	1(1)	10(10)	7(7)	6(6)	7(7)	2(2)
19	Marine Craft Construction Third Year	4(4)	8(8)	4(3)	4(3)	0(0)	9(0)
1236	Plastics (composites)	1(1)	7(5)	4(4)	6(5)	9(9)	0(0)
1285	Polymer Technology	1(1)	1(1)	0(0)	0(0)	0(0)	0(0)
7124	Aeroskills mechanical	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
9272	Marine Craft Construction	6(6)	0(0)	0(0)	0(0)	0(0)	0(0)
<b>Total</b>	<b>2002 to 2007= 1410 enrolments</b>	<b>486</b>	<b>381</b>	<b>280</b>	<b>263</b>	<b>281</b>	<b>416</b>

## Appendix B: Maritime Qualification Pathways



[www.hunter.tafensw.edu.au](http://www.hunter.tafensw.edu.au)  
Course Enquiries Phone 131225

40  
Course offerings are subject to demand and resources.  
Courses and campuses may change without notice  
(\* shows course by application only)



[www.hunter.tafensw.edu.au](http://www.hunter.tafensw.edu.au)  
Course Enquiries Phone 131225

41  
Course offerings are subject to demand and resources.  
Courses and campuses may change without notice  
(\* shows course by application only)

## Appendix C: Maritime Course Offerings TAFE NSW - Hunter Institute

COURSE NUMBER	DESCRIPTION
6896	This course is intended to develop in students knowledge and skills required of operators of steam plant. It is intended for persons working in the operation of steam plant to help them toward gaining a national Certificate of Competency from a registered assessor.
8167	This course develops skills and knowledge for people in charge of machinery onboard small commercial vessels.
8168	This course develops skills and knowledge for people in charge of machinery onboard marine vessels where the main propulsion machinery does not exceed 750KW.
8171	This course develops broad skills and knowledge with substantial depth in some areas as required to analyze and plan the maintenance and operation of marine engines, machinery, and systems in a range of situations. As well as responsibility for quality of one's own output, learners should be able to take some responsibility for group outcomes.
8172	This course develops broad skills and knowledge with substantial depth in some areas as required to analyze and plan the maintenance and operation of marine engines, machinery, and systems in a range of situations.
8173	This course develops specialized skills and knowledge with depth in some areas as required to analyze, design and make judgments across a broad range of technical or management functions in relation to the maintenance and operation of marine engines, machinery and systems.
1217	This course aims to provide a training program for people employed in the maritime industry as integrated ratings or apprentice and have the required sea service as required by AMSA.
1240	The aims of this course is to provide instruction, demonstration and practical experiences to facilitate acquisition of the basic skills and underpinning knowledge required by those seeking employment within maritime industry and subsequent careers whilst still a student of the general education system.
8163	This course is for people wanting to enter the maritime industry. Graduates of the course should be able to work safely as a General Purpose Hand on commercial vessels operating in coastal and middle waters.
8164	This course provides learners with the knowledge and skills to either become coxswains or deckhands.
8165	This course develops skills and knowledge for people who wish to command a commercial vessel of less than 24 meters operating offshore within 100 nautical miles.
19	This course is for people who work in the boating industry. Constructing, maintaining and repairing marine craft.
1236	This course is for people already employed in or seeking employment in the composite FRP fabrication industry.
1285	This course is for people in the composite/FRP industry who want to gain an understanding of the operations and practices in their workplace.
7124	Delivering composites for North Coast Institute (commercial) aeroskills
9272	This course is for people who work in the boating industry constructing, maintaining and repairing marine craft.

### **Prevocational Training**

There are pre-apprenticeship type programs such as Tertiary Vocational Education and Training (TVET) and “traineeships in schools” where young people can get some basic training and work experience that can be counted towards a certificate II qualification as part of their Higher School Certificate. These courses give participants an advantage when seeking an apprenticeship. Companies involved in the work experience component often use these programs to recruit new talent.

From time to time funds become available through a tendering process for Strategic Skills Programs (SSP). This training is to address identified skills shortage areas. They usually run full time and are between 96 – 120hrs and are advertised in local papers and job networks.

### **Certificate I in Maritime Operations 8163**

This course is for people wanting to enter the maritime industry. Graduates of the course should be able to work safely as a General Purpose Hand on commercial vessels operating in coastal and middle waters.

### **Certificate II in Maritime Operations 8164**

This course provides learners with the knowledge and skills to either become coxswains or deckhands.

### **Certificate III in Maritime Operations 8165**

This course develops skills and knowledge for people who wish to command a commercial vessel of less than 24 meters operating offshore within 100 nautical miles.

### **Certificate II in Marine Engine Driving 8167**

This course develops skills and knowledge for people in charge of machinery onboard small commercial vessels.

### **Certificate III in Marine Engine Driving 8168**

This course develops skills and knowledge for people in charge of machinery onboard marine vessels where the main propulsion machinery does not exceed 750KW.

### **Certificate III in Marine Craft Construction 9272**

This course is for people who work in the boating industry constructing, maintaining and repairing marine craft.

### **Certificate IV in Maritime Operations 8166**

This course develops skills and knowledge for people who wish to command a commercial vessel

### **Diploma in Maritime Operations 1216**

This course aims to provide a training program for people employed in the maritime industry as integrated ratings or apprentice and have the required sea service as required by AMSA.

### **Diploma in Maritime Operations 1217**

This course aims to provide a training program for people employed in the maritime industry as integrated ratings or apprentice and have the required sea service as required by AMSA.

### **Diploma in Marine Engineering 8171**

This course develops broad skills and knowledge with substantial depth in some areas as required to analyse and plan the maintenance and operation of marine engines, machinery, and systems in a range of situations. As well as responsibility for quality of one's own output, learners should be able to take some responsibility for group outcomes.

### **Diploma in Marine Engineering 8172**

This course develops broad skills and knowledge with substantial depth in some areas as required to analyse and plan the maintenance and operation of marine engines, machinery, and systems in a range of situations.

### **Advanced Diploma in Marine Engineering 8173**

This course develops specialized skills and knowledge with depth in some areas as required to analyze, design and make judgments across a broad range of technical or management functions in relation to the maintenance and operation of marine engines, machinery and systems.

- All courses can have training plans customized to suit stakeholders.
- RPL pathways are encouraged with parameters of TAFENSW and NSW Maritime and AMSA requirements.

