

dredging & maintenance



The requirement to provide appropriate infrastructure that meets our shipping needs of today and the future continues to challenge the port. Efforts to secure the longevity of existing assets and undertake new developments has been increased through the appointment of new staff, further evolution of the organisational structure and the momentum of previous gains resulting from the focus on core activities.

achievements

capital works

The port has completed some \$4 million of capital improvements in equipment and services upgrades to ensure a positive contribution to long term growth. Upgrades to cathodic protection and fresh water have ensured that now, after a 3 year effort, the port has the best possible lighting, power, water and sewage systems to meet the needs of our customers.

However, not all aspects of the capital works program undertaken in the previous year have been completed. Although nearing conclusion, still in progress is the \$0.8 million project to replace the 'Perc Tucker' with a contract for construction having recently been awarded. The new vessel will be more powerful and versatile allowing a greater range of tasks to be completed efficiently and effectively. Also still in progress are the \$1.1 million extensions to wharf 10, designed to meet the needs of the Royal Australian Navy. This is also at a stage whereby contracts for construction have recently been awarded.

maintenance works

Perhaps one of the greatest gains in the previous year is captured by the simple fact that we have implemented greater than 95% of our maintenance program for sea and land-side works for the third consecutive year. This achievement is underpinned by a multi-skilled workforce, greater cohesion within the organisation resulting in a significant reduction in unplanned jobs and the flexibility allowing the appropriate amount of contractor assistance.

Specifically, some of the maintenance projects completed during the year include \$320,000 of repairs to concrete piles and soffit in conjunction with the installation of cathodic protection systems under wharves 1, 8 and 9. Also completed during the year were some \$225,000 of steel pile painting under various wharves undertaken from floating platforms amid the difficult constraints of shipping and tidal windows. This was matched with some notable above deck maintenance such as Suter Pier Shed electrical, lighting and painting works being carried out to the tune of some \$250,000.

Because of where Townsville is situated in Cleveland Bay, as is the case every year, a large amount of maintenance dredging was carried out which removed about 340,000m³ to the sea dump grounds and cost \$1.5 million in an effort of ensure

access to the inner and outer harbour.

web

The port has 9 operational berths. Berths are equipped with bulk handling facilities including pipelines for oil, gas, chemicals and molasses; shiploaders for sugar and metal concentrates; and cranes for containers, metals, nickel ore and breakbulk cargo. For more detailed information on our berths please visit us at [www.townsville-port.com.au/the port/cargo berths](http://www.townsville-port.com.au/the_port/cargo_berths)

looking ahead

capital works

For the coming year, a significant fender and spill plate upgrade to the value of \$1.5 million is planned for wharves 2 and 3. The replacement of the old timber system will result in a steel structure that not only is more maintenance friendly, but also of greater berthing capacity.

Dredging is very close indeed to the heart of the port and has been identified as a strategic issue to be addressed over the coming period. A \$1 million upgrade to the split hopper barge 'Eric Netterfield' is planned to allow pump ashore capability. This will allow the port to undertake localised dredging of areas considered to be contaminated or suitable only to a grabbing type operation.

A \$450,000 vessel to conduct hydrographic survey work will also provide a backup to our pilot vessel Petrel II. This purpose-built craft will be constructed this year, incorporating the latest hull design and featuring the most recent technologies in electronic equipment, making her the most advanced craft of this sort in our region.

maintenance works

Funding for annual maintenance dredging has been boosted by 100% to allow much needed dredging to be undertaken in all areas of port jurisdiction including Ross River. The total budget of \$4.5 million will ensure that access to the port and leased areas is maintained as a basic requirement for long term business viability.

A review of most recent information on our concrete wharves has prompted the port to inject significant effort into our repair program. \$2 million will be spent on pile, deck and retaining wall remediation works at wharves 8 and 9 with similar projects to be undertaken at wharf 1. It is anticipated that this work will extend the life of these structures a minimum of an additional 10 years.

Blasting and painting of steel structural piles under wharf 3 to the tune of \$190,000 will follow on from the removal of the old timber wharf in this area, making this a safe zone to conduct maintenance.



- 1 Wayne Connell and Tony Paroz at berth 3.
- 2 Aerial view of berth 10. Extensions will be made to this wharf in the future.
- 3 Scott Ingham in workshop.

planning & development

1 L-R: Lauren Spinks, Public Affairs Officer, Marjorie Walker, Admin. Clerk and Raneë King, Corporate Services Officer.



achievements

new port tenants

In February this year, the Authority and Townsville Warehousing and Container Services agreed to terms which saw the construction of a \$1.8 million warehouse and hardstand facility within the area formerly occupied by Queensland Phosphate. We obtained the land back from Queensland Phosphate (now Western Mining Fertilizers - WMCF) in late 1999 after reaching agreement with the company who constructed purpose-built facilities in our Eastern Port Development area.

web

For the full story on this development go to www.townsville-port.com.au/publications/media_releases

The agreement was a departure from how we have traditionally approached development opportunities. In the past, the developer would have been responsible for development costs with our revenue being restricted to a land rental component.

This new approach provides significant flexibility for potential new customers.

We are currently working with Queensland Transport and the Department of Natural Resources to complete the conversion of non-strategic vested lands.

integrated planning act 1997

The Integrated Planning Act 1997 (the Act) seeks to achieve ecological sustainability by providing a whole-of-government framework through which a wide array of regulatory controls are exercised.

A key feature of the Act is the Integrated Development Assessment System, which is a common regulatory system for making, assessing and deciding development applications.

Strategic port land became subject to the Integrated Planning Act 1997 and the Integrated Development Assessment System on 31 December 2000. We are the Assessment Manager for developments that take place wholly on strategic port land. Strategic port lands are exempt from local government planning schemes under the provisions of the Transport Infrastructure Act 1994. Townsville City Council remains the Assessment Manager for developments on non-strategic port lands.

To ensure appropriate compliance with the Act, port-specific training in conjunction with the Department of Local Government and Planning was undertaken in 2000.

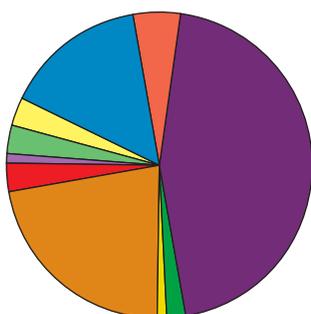
land use plan & land use strategy

Pursuant to the Transport Infrastructure Act 1994, we are required to prepare a Land Use Plan defining strategic port lands and land uses. Our current plan was approved in 1996 by the Minister for Transport, Minister for Main Roads and Deputy Premier. A review of this plan was undertaken in the first half of 2001 to include the new tenure arrangements arising from the Land Tenure Rationalisation Program, and also to ensure that the plan met the requirements of the Integrated Planning Act 1997.

A revised plan will be released in the second half of 2001, which will incorporate a Land Use Strategy. The Land Use Plan and Strategy will be reviewed every three years to ensure the integrity of land holdings, and to ensure consistency with future port planning objectives as defined in the Port Development Plan.

The Land Use Plan details all strategic land owned or controlled by the Authority, and defines the land uses (current and proposed) which are considered when assessing development applications under the Integrated Planning Act 1997. The Land Use Strategy establishes guidelines for developments on port lands to ensure compliance with the Integrated Planning Act 1997 and to maintain consistency with local council planning objectives.

vessel calls 2000/01



land tenure rationalisation program

To ensure we continue to have access to land that is required to achieve future planning objectives, we established an ongoing Land Tenure Rationalisation Program.

The first component of the program involved the conversion of strategic vested lands to alternative tenures, and the surrender of non-strategic vested land considered as not being essential to port operations, to the State for further dealing. The conversion of all strategic vested lands to alternative tenures was completed last year.

planning & development

web

Our port and shipping directory provides reference information on our capabilities. Go to www.townsville-port.com.au/doing-business/shipping-directory

Extensive consultation with relevant government agencies and the public will be undertaken once both documents are completed in final draft. Following the public consultation process, we will apply for approval of the Land Use Plan & Land Use Strategy by the Minister for Transport, Minister for Main Roads and Deputy Premier as required under the Transport Infrastructure Act 1994.

tenancy risk management

During the period, we established a tenancy risk management and compliance strategy. The strategy involves an initial assessment of all tenancies through questionnaires to ascertain compliance with the conditions of agreements between ourselves and the respective tenant. The document is also designed to receive information in respect to the level of compliance in relation to our port notices and policies and any relevant legislation applying to the land occupied. The questionnaires have been forwarded to all tenants and we have commenced collation procedures.

port rationalisation

As highlighted in the Chairman's report, we continued to negotiate with major port customers with respect to solving issues associated with port congestion. The outcome from these discussions have been extremely positive with a general willingness being displayed to work together to solve the issues.

Previously we had been focussed on the perception that the only way to relieve inner harbour congestion was to construct an additional outer berth. This would have enabled all bulk concentrate material to be exported through outer harbour facilities, freeing up inner harbour wharves for breakbulk and container operations. Whilst the idea had considerable merit from a development angle, it was not considered to be a wise investment from the perspective of our customers who were concerned that we may well have been providing unnecessary infrastructure.

Following a number of meetings with our customers, it has emerged that there appears to be an opportunity to increase the utilisation of the existing inner harbour without going to the considerable expense of constructing an additional outer berth. Whilst the substance of discussions to date are of a commercial-in-confidence nature, we are extremely pleased with the progress being made.

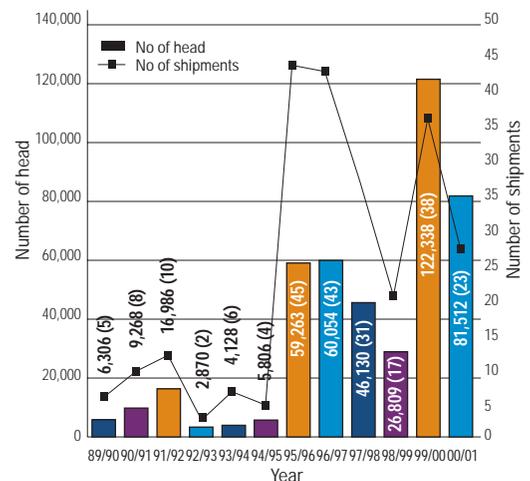
The revised plan would involve the relocation of some bulk handling operations to adjacent facilities in the inner harbour and the realignment of existing wharf infrastructure. These modifications would achieve, based on future trade forecasts, enough capacity for the port to operate efficiently for the next two decades.

looking ahead

In the next period we will continue to work towards completing a number of initiatives including:

- our Land Use Plan and Land Use Strategy, with an anticipated gazettal by the end of the 2001 calendar year;
- the completion of the divesting of non-strategic vested lands following the enactment of legislation enabling this process by parliament;
- the assessment of tenancy questionnaires and finalisation of initial lease audits under the Tenancy Risk Management and Compliance Strategy, and ongoing random audits of lease sites to minimise risks and reduce any exposure to liability;
- the finalisation of land tenure arrangements to facilitate the construction of the third sugar shed including the acquisition of an additional 2 hectares of land, and facilitate the development applications required under the Integrated Planning Act 1997 in conjunction with Queensland Sugar Limited; and,
- continuing negotiations with stakeholders in relation to the rationalisation project. We would anticipate entering into development agreements with those concerned in the next period.

live cattle exports 1989/90 to 2000/01



Live cattle exports decreased by 40,826 head or 33% due to increased demand in the Australian markets.

summary table

summary of imports - tonnes 1991/92 - 2000/01

	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
GENERAL	36,598	46,248	72,873	106,292	71,768	66,360	90,684	116,477	123,846	109,625
OIL										
General Purpose	716,323	748,919	786,140	892,980	842,865	878,633	915,821	872,671	857,930	874,546
Liquid Gas	19,355	23,926	24,186	21,608	19,445	18,013	21,045	19,978	19,781	20,330
	735,678	772,845	810,326	914,588	862,310	896,646	936,866	892,649	877,711	894,876
FERTILISER										
Bulk	1,016	-	18,020	48,058	75,604	80,262	129,898	94,631	105,130	92,137
NICKEL ORE	2,303,687	2,572,571	2,952,403	2,927,383	3,017,977	3,429,445	3,224,442	3,439,217	3,309,831	3,540,218
GYPSUM	14,133	5,761	-	-	-	-	-	-	-	-
STEEL PIPE	-	-	-	-	-	22,176	-	-	-	-
ZINC CONCENTRATES	-	-	-	-	-	-	-	-	183,898	270,906
COPPER CONCENTRATES	-	11,185	-	10,896	-	-	-	-	-	-
SULPHUR	-	-	-	-	-	-	-	7,010	34,151	35,458
CEMENT	-	-	166,440	303,335	274,662	266,536	273,698	290,210	279,660	253,045
SULPHURIC ACID	-	-	-	-	9,461	28,479	29,314	16,035	3,001	-
TOTAL (Mass Tonnes)	3,091,112	3,408,610	4,020,062	4,310,552	4,311,782	4,789,904	4,684,902	4,856,229	4,917,228	5,196,265

summary of exports - tonnes 1991/92 - 2000/01

	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
GENERAL	99,566	115,113	143,016	150,997	189,508	145,530	167,583	163,644	165,895	155,567
MEAT & ASSOCIATED PRODUCTS										
Frozen	15,664	23,576	31,790	41,179	24,891	15,480	17,437	34,663	40,542	32,559
Hides	1,173	1,571	1,671	4,623	1,387	2,075	944	669	125	42
Tallow	11,340	9,953	7,512	10,488	10,744	8,286	10,882	24,490	11,250	12,888
By-Products	8,806	3,774	3,057	2,358	11,912	13,704	12,683	11,864	13,134	15,108
	36,983	38,874	44,030	58,648	48,934	39,545	41,946	71,686	65,051	60,597
MINERALS										
Refined Copper	123,144	122,191	142,768	85,732	72,731	76,732	71,931	102,916	161,926	152,285
Concentrates:										
Copper	53,780	47,365	75,419	106,504	266,107	362,224	494,924	693,085	475,756	676,247
Zinc	458,161	457,615	661,692	418,451	495,092	450,739	402,365	453,801	389,042	373,826
LGM	181,565	129,921	151,227	85,545	69,539	20,301	-	-	-	-
Lead	14,803	22,083	21,228	26,269	22,047	21,444	112,001	245,801	296,398	310,780
Copper Ore	-	-	-	-	-	-	-	39,964	20,091	10,209
Lead Ingots	182,793	210,466	187,609	155,982	156,599	161,916	147,499	130,829	135,562	117,717
Zinc Ingots	-	-	-	-	-	-	-	-	44,851	183,113
Nickel	21,812	23,247	28,176	29,008	22,402	11,637	11,439	18,850	11,350	11,981
	1,036,058	1,012,888	1,268,119	907,491	1,104,517	1,104,993	1,240,159	1,685,246	1,534,976	1,836,158
HIGH ANALYSIS FERTILISER	-	-	-	-	-	-	-	-	108,080	530,761
SULPHURIC ACID	-	-	-	-	-	-	-	-	65,392	124,049
MOLASSES	81,929	196,441	129,097	222,093	332,104	354,749	321,941	306,371	348,593	212,881
SUGAR	570,810	895,513	950,818	1,003,073	1,098,822	1,124,599	1,281,994	1,051,428	1,254,893	1,079,088
CATTLE	(16,986)	(2,870)	(4,128)	(5,806)	(59,264)	(60,054)	(46,130)	(28,416)	(122,338)	(81,512)
	Head)	Head)	Head)	Head)	Head)	Head)	Head)	Head)	Head)	Head)
	8,493	1,435	2,064	2,903	29,632	30,027	23,065	14,208	61,169	40,756
LIVE SHEEP	-	-	(200 Head)	-	(80 Head)					
			10	-	4	-	-	-	-	-
TOTAL (Mass Tonnes)	1,833,839	2,260,264	2,537,154	2,345,205	2,803,521	2,799,443	3,076,688	3,292,583	3,604,049	4,039,857

summary table

web 

For operational statistics please access our website at [www.townsville-port.com.au/commercial info/statistics](http://www.townsville-port.com.au/commercial%20info/statistics)

total throughput - tonnes 1991/92 - 2000/01

	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
Tonnages (Mass Tonnes)	4,924,951	5,668,874	6,557,216	6,655,757	7,115,303	7,589,347	7,761,590	8,148,812	8,521,277	9,236,122

shipping information 1991/92 - 2000/01

Only vessels over 200 tons included

	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01
Cargo Vessels	376	463	523	585	633	623	653	624	651	673
Gross Tonnage	5,381,454	6,668,539	7,392,834	7,889,576	8,351,985	8,609,140	9,401,354	9,865,591	10,149,228	10,873,965
Passenger Vessels	12	9	14	11	7	2	6	13	9	7
Gross Tonnage	151,238	116,626	226,490	197,487	144,345	36,293	93,381	181,619	188,337	106,146
Naval Vessels	68	59	46	41	49	48	30	29	24	32
No GRT Recorded										
Bunkers	1	2	2	8	5	1	2	50	48	55
Gross Tonnage	21,619	2,282	55,477	58,365	93,075	10,511	3,544	18,300	36,426	60,012
Other Vessels	47	45	28	33	26	29	25	13	21	17
Gross Tonnage	37,312	26,530	9,129	10,953	38,045	18,702	36,438	19,417	77,391	39,392
Total No. of Vessels	504	578	613	678	720	703	716	729	753	784
Total Gross Tonnage	5,591,623	6,813,977	7,683,930	8,156,381	8,627,450	8,674,646	9,534,717	10,084,927	10,451,382	11,079,515

cargo records 1976 - 2001

	date	vessel	record
Imports	18-Jun-01	Asian Nova	discharged 67,360 tonnes of Nickel Ore
Exports	6-Oct-99	Ever Mighty	loaded 63,000 tonnes of Raw Sugar - World Record Shipment for Sugar
Deepest Draft Vessel	26-Jun-97	Maersk Taurus	13.05 metres loaded with 66,804 tonnes of Nickel Ore
Longest Vessel	19-Jun-89	Taiko	262.08 metres
Highest D.W.T. Tonnage	26-Mar-76	Capetan Carras	85,108 tonnes
Widest Beam	12-May-81	Tokurasan Maru	37.57 metres



1 Mandy Mackenzie, Statistics and Revenue Officer and Len McDougall, Financial Controller.

marine services



achievements

integrated services

During the year we successfully negotiated an Enterprise Bargaining Agreement with the AMOU in respect to our Marine Services and pilotage personnel. The pilot boat crew (formerly employed as a contract service) have also been included in this agreement.

The agreement has enabled us to rationalise our workforce in these areas.

This rationalisation of personnel will allow for significant efficiency gains in the provision of marine services to our customers. We anticipate having a multi-skilled marine services workforce who will be able to perform core functions including:

- port control – ship scheduling, berth allocation, dangerous goods approval, port operations;
- pilotage services – we have 6 marine pilots servicing the shipping industry;
- pilot transfer – Marine Services is equipped with a 13 metre vessel for the transfer of pilots; and,
- small boat harbour management – mooring management, harbour due collection.

In addition, we will further determine training requirements with respect to our marine pilots in relation to our oil spill response capabilities.

review of port procedures manual

In conjunction with the Regional Harbour Master's office, the Marine Services Manager, Pilot Superintendent and marine pilots participated in a review of the port procedures manual for Townsville. The review resulted in a number of changes and simplification to navigation procedures in Townsville.

Marine Services participated in the development of the standards for pilotage in Queensland, and more specifically Townsville. The Pilot Superintendent was nominated to sit on a sub-committee to assist with this process. The document sets the new minimum standards for pilotage and forms the basis of our internal procedures, which were developed and implemented throughout the year.

devolution of pilotage

During the previous 12 months, Marine Services has undergone a further transition. We have seen the finalisation of the devolution of pilotage from Queensland Transport to port authorities. This was finalised and effected on 1 July 2001.

Part of the devolution of pilotage has seen the port engage the services of the pilot transfer crew, who have become permanent employees. To ensure a smooth transition of the pilots and transfer crew becoming permanent employees within the Marine Services division, negotiations between the

Authority and the AMOU resulted in a certified agreement covering the working conditions for employees in Marine Services.

These conditions will allow all employees to upgrade their skills as a direct result of each employee becoming totally familiar with all aspects of the operation from the existing Port Services Officers (PSO's) duties to the transfer of pilots to and from ships.

All PSO's are required to have a medical to clear the way to obtain their Master Class 5 certificate of competency.

port towage contract up for renewal

The current ten year licence with our contracted towage provider, North Queensland Marine Towage expires in December 2003. Our customers have made it very clear to us that they expect value for money in terms of the provision of towage services.

To date we have commenced informal discussions with a number of potential service providers. We intend to formalise these negotiations in the months ahead and we will be looking for innovative approaches with respect to the provision of towage and lines and launch services.

berth 11 simulation study

The simulation study of ship manoeuvrability to and from berth 11 was not completed during the year as result of budget constraints. This training and study will be completed in the coming financial year.

port security audit

Questions relating to the port security system formed part of this year's external customer audit. The result showed that 91% of our customers were satisfied with the level of service currently provided.

looking ahead

We will:

- continue to develop the skills of all Marine Services employees through the appropriate training, providing a multi-skilled workforce trained to perform all aspects of the job including marine pollution response;
- provide assistance to the engineering division in the implementation of the backup pilot/hydrographic survey vessel, ensuring a 100% capability to manoeuvre ships in and out of the port;
- complete the simulation study of ship manoeuvrability in and out of berth 11, to increase the overall efficiency of the port. Currently vessels are required to transit the full length of the channel; and,
- commence the analysis of options and costs of alternative structures and management for towage services in the port, as the current contract expires on 31 December 2003.



- 1 Pilot transfer with Ben Harrington, Port Services Officer and Hugh Ripley, Pilot.
- 2 This facility was constructed to provide a place for small craft operators to dispose of their waste oil containers for recycling. Pictured: Gary Feil, Port Services Officer.



external communications

1 Right: Susan Vickers and Kelly Jorgensen, Financial Accountant.



- 1 Over \$35,000 has been raised for charities since 1996 as a result of our charity golf days.
- 2 Ron McLean farewells Caryn Anderson, Environmental Services Manager.
- 3 Prof. Paul Ryder, Executive Dean, Faculty of Law, Business and the Creative Arts, presenting the TPA prize in tourism to Catherine Guilfoyle.
- 4 Kellie Constantine, Receptionist and Anne-Maree Peters, Secretary.
- 5 Ron McLean congratulates Melanie McEvoy-Bowe on 15 years of service.

achievements

external communications

We are conscious that our customers expect to receive information from us regarding matters that have the potential to impact on how they carry out their business in a timely manner.

During the year we commenced the publication of our external newsletter 'in depth' and expanded information on our website.

web

Go to www.townsville-port.com.au/publications/corporate_newsletters

These changes have seen hits on our site increase as we place the sort of information on the site that our customers find useful.

We have also maintained more formal information exchange forums such as the Port Advisory Body, which is chaired by a representative of the port community.

The issue of maintaining meaningful communication channels with the wider community remains one of our challenges. We will continue to attend regular community forum meetings.

internal communications survey

In an effort to more fully understand how our employees viewed our internal operations we commissioned an external consultant to undertake a survey. The survey was extremely thorough in that it canvassed all aspects of our internal operations from Board level down.

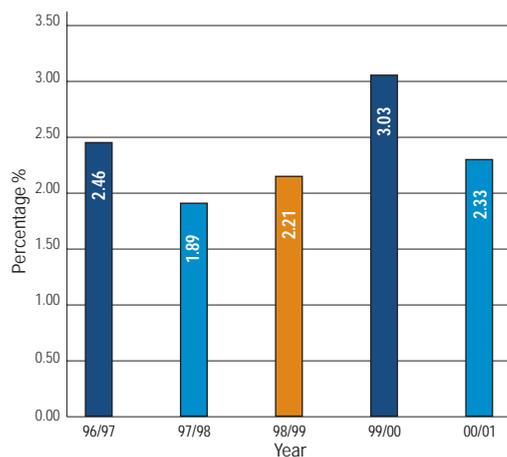


Some results of the survey were of concern to senior management, particularly from an internal communications perspective. Some of our employees commented that they found it hard to determine how their jobs were related to the overall effectiveness of the Authority.

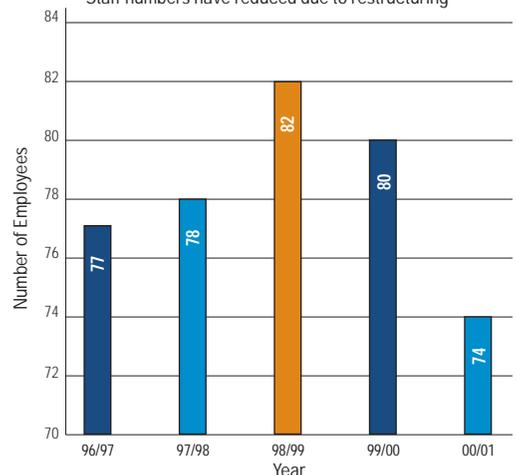
Management utilised the results of the survey when formulating plans and strategies in a formal corporate planning session held in November 2000.

In addition, management has implemented formal performance appraisal systems with tangible links between employee goals and organisational objectives. This is part of our new approach to goal attainment.

sick leave as % of total hours worked - 1996/97 to 2000/01
Reduction in % due to less staff and less sick leave taken



employee numbers - 1996/97 to 2000/01
Staff numbers have reduced due to restructuring



external communications

long serving employees

employee	occupation	period of employment	completed years of service
John Neal	Engineering Support Officer	5 Aug 1968 – 4 May 2001	32
Robert King	Planning & Estimating Officer	25 Mar 1974 – 25 May 2001	26
Cecil Denham	Tradesperson	13 May 1975 – 3 Jul 2000	24
Ronald Marsh	Workplace Health & Safety Officer	14 Jun 1977 – 4 May 2001	23
John Sherriff	Finance Manager	12 Oct 1977 – 27 Nov 2000	23
Frederick Porter	Labourer	19 Feb 1981 – 6 Jul 2000	18
Melanie McEvoy-Bowe	Statistics & Revenue Officer	3 Feb 1986 – 22 Jun 2001	15
Ebeda Kanai	Labourer	21 Jan 1985 – 14 Jun 2001	15



1 A real tug-of-war competition, proudly sponsored by North Old Marine Towage.

2 The 'Croc'.

port open day

The community were given a rare opportunity to inspect our facilities and operations when we held a port open day on 22 October 2000. The open day was a huge success with an estimated 5000 people participating in guided tours of the port including tours of major operations such as Queensland Sugar, Mount Isa Mines, WMC Fertilizers and Queensland Cement Limited.

It was an exercise aimed at increasing awareness to local and regional communities of why the port is here and what it does.

The success of the open day would not have been possible without the cooperation of many of our employees, customers and community organisations and we would like to thank everyone for their involvement in the day.

external stakeholder survey

As highlighted in the management review & analysis, the stakeholder survey highlighted some issues in relation to how our customers viewed our planning activities.

In order to address specific issues we subsequently formed a number of smaller informal working groups consisting of interested port user representatives and Authority staff. Outcomes from these meetings have led to a number of planning initiatives being revisited. The working groups have also proved to be an excellent forum of information exchange on wider port issues.

looking ahead

During the twelve months ahead we have put in place a number of processes to ensure that the momentum we have gained with the above initiatives will not be lost. These include:

- our commitment to further refining our performance appraisal process to focus employee effort towards goal attainment, where the individual goals are linked directly back to organisational objectives;
- ensuring that employees continue to receive adequate training to assist in career development and goal attainment;
- maintaining an internal culture, which enhances employee involvement in decision making, motivation and job satisfaction; and,
- continuing to refine and enhance internal and external communication systems and mechanisms.

information & systems

achievements

new financial and maintenance software system implemented

Substantial information technology resources were invested in migrating our financial, payroll and maintenance systems to a single integrated system. This was primarily achieved through the implementation of an enterprise information system called Pronto.

With the implementation of Pronto, a number of goals were achieved, particularly:

- migration to lower cost software suitable to our data volumes and information requirements; and,
- the reduction of multiple database management systems – from Maximo (Maintenance Management System), Oracle (Financials) and Port Management System (Shipping). The current Port Management System is being replaced with a new shipping system called SPOT - Shipping Port of Townsville.

Our systems are now fully integrated, particularly finance, payroll and maintenance applications.

We expect to achieve immediate efficiency gains and cost reductions as a result of these new applications. A reduction in future costs with respect to software upgrades, as the need for separate upgrades has been eliminated, is also expected. Also more cost-effective hardware has been used in the implementation of Pronto.

The implementation of Pronto was an Authority-wide project. Assistance from the finance, supply, engineering and human resources sections, saw the implementation completed on time.

geographic information system

Significant analysis has taken place to date in relation to the implementation of a geographic information system for our port

lands and services on those lands. The implementation of this system will provide our employees with the ability to have access to real time information concerning our land holdings. Thus providing us with the opportunity to more immediately respond to customer enquiries.

It is envisaged that analysis of a suitable software package will be finalised in the coming months. Upon finalisation of the software, an implementation program will commence.

website

Our website has proven to be extremely popular with many of our customers. During the year we have identified that it may now be appropriate for us to host our own site as opposed to the current system which sees the site hosted by Telstra. The necessary equipment and software to allow the site to be relocated from a Telstra site to a TPA site has been identified. It is anticipated that the site will be relocated early within the next period.

web  Go to www.townsville-port.com.au



looking ahead

In the coming financial year, the following projects are expected to be finalised:

- implementation of a geographic information system;
- expansion of a TPA-hosted web site. Work will then commence on extending the site to better serve internal and external customers. Potential extensions will include the ability to book berths, to transmit manifests, respond to debtor and creditor enquiries and process dangerous goods applications; and,
- implementation of a document handling system. Our current manual system is showing signs of inefficiency and investigations into alternative systems is expected to commence within the period.



1 Seated: Amanda Cox, IT Applications Officer with Geoff Payne, IT Projects Officer and Chris Lynch, Informations System Support.

2 Bottom left: Greg MacDonald, Accounts Payable Clerk.

3 Bottom right: Ian Evans, IT Consultant and Scott Martin, Finance Officer.



environmental regulation



- 1 Divers taking pile scrapings as part of the Baseline Survey for introduced marine pests.
- 2 Abandoned prawn farms on Ross River South Bank. Remediation plans are underway.

achievements

baseline survey for introduced marine pests

CRC Reef was commissioned to undertake a baseline survey for introduced marine pests at the Port of Townsville. Introduced marine pests have the potential to impact on the high recreational, commercial and natural values of the port and the surrounding coast. Introduced marine pests often disrupt the natural ecosystems by introducing disease and competing with native species for space and food.

The aim of the survey was to describe the existing marine communities and determine whether any non-indigenous species, of pest status or otherwise, were present within the port or adjacent marine areas. In addition, the results of the survey will be used in Australia's Decision Support System (DSS), developed by the Australian Quarantine and Inspection Service (AQIS) for the effective management of ballast water within Australian waters.

The project commenced in September 2000, with the sampling program undertaken in October 2000. Following the sampling, organisms were sorted into

family groups and sent to taxonomic experts for identification. The project also includes a community awareness program, including the publication of three public awareness brochures.

The final report is yet to be completed however early reports confirm no organisms of concern within the port. The final report should be finalised by October 2001 and will be accompanied by the final community awareness brochure.

web

Go to [www.townsville-port.com.au/publications/environmental newsletters](http://www.townsville-port.com.au/publications/environmental_newsletters)

review of environmental management strategy

The Environmental Management Strategy was developed in October 1998, through a cooperative approach including participation from port customers, as a tool to effectively manage the port environment and provide unified environmental management aims, objectives and targets. During the initial development of the strategy it was determined that the document would be reviewed every two years.

The strategy underwent a review process in October 2000 in an effort to better focus the document towards current environmental management objectives and initiatives. The main concern with the document was the lack of measurable key performance indicators.

The document was updated to include measurable key performance indicators and distributed to all port customers. Port-wide environmental performance will now be monitored and assessed against key performance indicators within the strategy. Achievements will be reported at Environmental Working Group meetings. These meetings are held quarterly and are made up of members from the port community. The purpose of these meetings is to communicate changes in environmental legislation and management initiatives and to update members on environmental issues.

iso 14000 certification

We have continued to develop an Integrated Environmental Management System with the key focus of obtaining ISO14000 certification. A preliminary audit of the system against the ISO14000 standard was undertaken in August 2000.

The aim of the audit was to gauge at what stage the system is at by identifying any non-conformances. Recommendations from the audit will be adopted and the system modified to ensure compliance.

Recommendations include:

- further development of the Environmental Policy and sign off by the Board;
- development of a system for identifying significant environmental aspects associated with routine planned maintenance activities;
- develop suitable objectives and targets for the above identified significant environmental aspects;
- develop programs and operational controls, including standard operating procedures for activities undertaken that have the potential to impact on the receiving environment;
- implement an environmental training and awareness program for employees and contractors;
- further develop emergency response procedures to deal with environmental incidents;
- further improve document control procedures; and,
- develop and implement an audit schedule for both the management system and port activities.

A number of these recommendations have already been implemented and the system is still undergoing changes with respect to the preliminary audit. It is anticipated that we will receive ISO14000 certification prior to June 2002.

environmental park concept design

The close proximity of neighbouring residential communities to the port have historically been a cause for concern. Port activities have the potential to impact on sensitive residential areas through issues such as dust, noise, light and aesthetic



environmental regulation



1 Sensitive marine environments in close proximity to the port.

impacts. In an effort to address the above issues and to provide a physical buffer between the port and adjacent residential areas, we have commissioned the C&B Group to design an environmental buffer zone concept.

The concept plans for the environmental park were presented in draft format to members of local residential areas in an effort to gain feedback on the design of the park and to obtain the community's input on the final design. An official launch day was held on 5 November 2000 to formally present the plans to the local community and to explain the park concept. The community consultation period was held over a couple of months and a number of comments were received and incorporated into the final design.

The final design and report have since been completed and assessed. An implementation schedule and planning process will be developed to ensure the best possible outcomes for both the port and the local residents.

renewal of five year sea dumping permit

All sea dumping activities are assessed under the Commonwealth Environmental Protection (Sea Dumping) Act 1981 and to have the authority to dispose dredge material at sea, a sea dumping permit is required. Our previous permit expired earlier this year and an application was made for a new five year permit.

In order to receive the permit, we must satisfy both the provisions of the Environmental Protection (Sea Dumping) Act 1981 and the ANZECC Interim Sea Disposal Guidelines 1998. The application was reviewed by our Technical Advisory and Consultative Committee (TACC) for dredging which includes

members from Environment Australia, the Great Barrier Reef Marine Park Authority, Queensland Environmental Protection Agency, Queensland Department of Primary Industries and Queensland Department of Transport.

Following this review, the application was then sent to Environment Australia where it received sign off on 23 February 2001. Whilst we now have a permit to dispose dredge material at sea for a further 5 years, a number of provisions must be met, such as a limit

on the amount of material to be disposed at sea and specific monitoring and reporting requirements.

implementation of noise monitoring program

Increases in noise complaints, coupled with continual record growth figures at the port and subsequent developments, has resulted in the need for regular noise monitoring. We have designed and implemented a program with the specific aim of assessing the impact of port activities on sensitive adjacent land uses.

The program involves the collection of noise levels from 24 locations around the port and throughout the South Townsville community over 6 time periods, twice per year. The data gathered is entered into a GIS system and noise contour maps are produced. The data is also assessed against relative legislation and guidelines to ensure that we are meeting regulatory requirements.

Results from the noise sampling will be used to assess problem areas and assist in future planning of port developments to ensure that activities are not situated adjacent to noise sensitive areas.

'ship to shore' newsletter and community survey

In a continual effort to maintain good communications with the community on environmental matters at the port, an environmental awareness newsletter is produced annually.

The second edition of 'Ship to Shore' was published in February 2001 and approximately 4000 copies were distributed to residents of South Townsville and Railway Estate, government organisations, community groups and industry.

The newsletter included a number of articles on environmental management initiatives at the port

including the proposed environmental park, the urban stormwater initiative project, environmental management initiatives of BHP, Bulk Sugar Terminals, QNI, WMC Fertilizers, MIM port operations, Pacific Marine Group and information on the proposed prawn farm remediation and the proposed Ross River recreational boat ramp facility.

A survey form accompanied the newsletter in an attempt to gauge the public's perception. A high number of responses were received with the majority of the feedback indicating interest in the newsletter and favourable comments.

The newsletter will continue to be produced annually, updating issues from previous newsletters and highlighting further advances in environmental management at the port.

web 

Go to www.townsville-port.com.au/publications/environmental-newsletters

inner harbour sediment contamination modelling

Initial studies of sediments within the inner harbour undertaken in 1993 revealed concentrations of heavy metals exceeding dredge material disposal guidelines. Since this time we have commissioned a Long Term Sediment Monitoring Program to regularly gauge the levels of heavy metals contained within sediments.

Recent concerns with decreases in declared depths and the need to deepen the port to accommodate larger ships has placed urgency on the need to dredge the inner harbour. In order to gain a more complete understanding of the heavy metal contamination within the inner harbour, and in cooperation with QNI and MIM, we have contracted Douglas Partners to undertake a modelling study.

The aim of the study was to model heavy metal levels within the inner harbour in respect to various dredge disposal methods. This was undertaken to determine the appropriate disposal options for sediments within the inner harbour to ensure environmentally safe disposal options.

looking ahead

port buffer zone

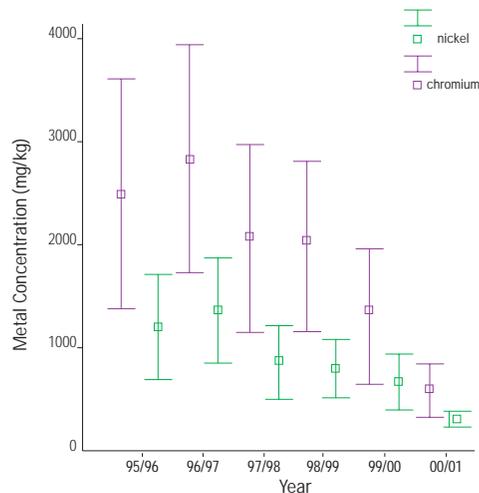
Following the completion of concept plans for the environmental park and the subsequent community

environmental regulation

sediment

The Long Term Sediment Monitoring Program was implemented to examine the level of heavy metal contamination within the sediments at the port. The program began in 1995 and involves the collection of 242 sediment samples every 3 months. The samples are sent to a laboratory for the analysis of 13 heavy metals.

This graph illustrates the changes in nickel and chromium concentrations within the sediments of berth 2 over time. Nickel handling operations were moved from berth 3 to berth 2 in 1996 and berth 2 has since become a designated nickel handling berth. The graph illustrates a marked decline in the level of both nickel and chromium within berth 2 sediments over time. This coincides with a significant improvement in the environmental management of nickel handling operations at the port.



consultation period and review, we will begin initial planning and works on the proposed buffer zone.

The Port of Townsville is in close proximity to residential land and as such, port activities have the potential to impact on the quality of life of neighbouring residents. Issues such as noise, dust, visual intrusions and aesthetics can be potential problems and can influence future port development and management opportunities.

In an effort to minimise the impact of port activities on neighbouring residential communities, we have devised the concept of a vegetative buffer zone to act as a physical buffer between the two land uses.

The initial concept plan was based on a large scale environmental park idea including community facilities such as walking tracks, seating, boardwalks, open space areas and bicycle tracks. We have opted for a staged approach to the development, with the idea of undertaking works over a period of time to ensure that the main objectives of the buffer zone are met.

The first stage of the buffer zone development will be to undertake initial tree planting and landscaping works. This will allow for the successful propagation of the vegetation with minimal human impact whilst providing an essential buffer between port activities and residential areas. Further concepts will be included following the successful implementation of Stage 1 of the project.

integrated environmental monitoring system

In an effort to better gauge a number of environmental parameters at the port, Greenspan Technology have been commissioned to implement an Integrated Environmental Monitoring System.

The contract, to the value of \$200,000, involves the purchase and installation of a number of environmental monitoring

equipment including:

- a stormwater monitoring station;
- automatic tipping bucket rainfall gauge;
- water quality monitoring sensors; and,
- acoustic doppler system.

The stormwater monitoring station will be a portable unit with the ability to relocate it to a number of stormwater drains within the port. The stormwater monitoring station will be utilised to examine first flush episodes within the port and determine contaminant levels within stormwater run-off.

An acoustic doppler system with associated water quality monitoring sensors will be installed at berth 11 for the monitoring and recording of current and wave data and water temperature, salinity and suspended sediment data. The aim of this equipment is to gain an understanding of hydrodynamic processes within the outer harbour. This will in turn assist in the development of improved sediment control management and subsequently minimise maintenance dredging volumes within the outer harbour.

All of the above monitoring equipment, and other environmental monitoring equipment already in place, will be equipped with remote communication devices and linked as an integrated system to provide real time data on a number of environmental parameters at the port.

outer harbour modelling

Since the development of berth 11 within the outer harbour, maintenance dredging volumes have increased beyond predicted levels. Not only does this result in an increase in dredging costs but this also has the potential to impact on the environment. The increase in dredging volumes has resulted in a greater volume of dredged material being disposed at the sea disposal site.

In an effort to better understand the hydrodynamic processes within the outer harbour and to examine the effects of a number of hypothesised sediment management techniques, we have contracted Gutteridge, Haskins and Davey Pty Ltd to undertake a hydrodynamic modelling study of the outer harbour.

The project, valued at \$115,000, will involve the modelling of sediment transport mechanisms within Cleveland Bay to determine the path of sediment movement into the outer harbour basin. Following the completion of the model, a number of sediment management techniques, such as modifications to the outer harbour, construction of a breakwater and silt trenches, will be examined to determine their potential effect on the sediment movements within the area.

It is anticipated that following the modelling work and assessment of the various management techniques, a set of recommendations



1 Craig Wilson monitors noise levels in the port.

environmental regulation

noise

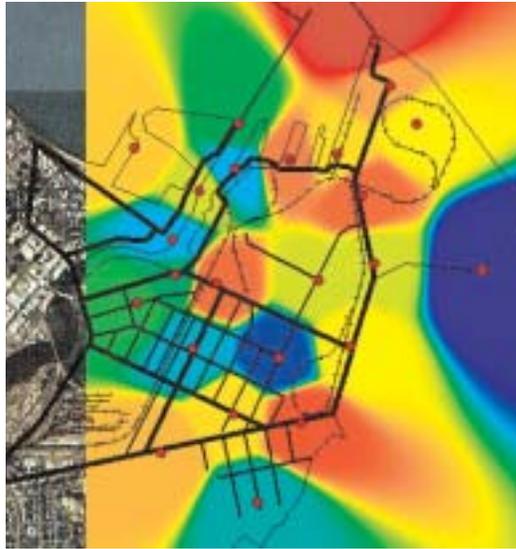
A Noise Monitoring Program was implemented during 2000 in an attempt to determine the noise impact of port operations on neighbouring residential communities. Our aim of the program was to develop noise contour maps to identify areas that may be effected by port-related noise.

This contour map is a map of noise data collected during the weekday night sampling period in November 2000. As can be seen in the legend, the blue colours are low noise levels and the red colours are high noise levels.

The higher noise levels are generally located within the port area. There are other areas where moderate noise levels were detected, especially along the major transport corridors of Benwell Road and Boundary Street. In all of the cases however, noise levels recorded did not exceed legislative guidelines.

In the majority of sampling locations outside the port area, port noise was virtually undetectable with traffic noise and general noise such as fauna being the major noise sources.

weekday night noise levels - November 2000



Weekday Night (LAeq)



will be made, that if implemented, will substantially reduce our dredging requirements within the outer harbour.

water quality monitoring program

In addition to our stormwater monitoring equipment and environmental monitoring programs, a water quality monitoring program will also be implemented. The program will focus on the receiving waters at the port and examine a number of potential contaminants.

The program will be based on the Draft 1999 Australian and New Zealand Guidelines for Fresh and Marine Water Quality. At this stage the program will include the collection of a number of water samples within the port on a quarterly basis. Samples will be analysed for a number of contaminants identified as having the potential to be elevated within port waters.

The program will provide a greater understanding of the impact of port operations on the receiving environment.

It will also assist in the identification of possible sources of contamination and assist in the development and assessment of environmental management techniques to effectively manage these operations.

review of long term dredge material disposal strategy (LTDMDMS)

A condition on the issue of our sea dumping permit was that the current LTDMDMS be reviewed to comply with the current permit

and recent changes in environmental management initiatives.

We have sought the services of an environmental consultant to review the existing strategy and develop a timeframe for the development and implementation of a new strategy. It has been acknowledged that the review process should be undertaken throughout the life of the permit and cannot be undertaken as a basic review.

An implementation schedule for the review has been formulated and will be adopted following approval from the Technical Advisory and Consultative Committee (TACC) for dredge management. The TACC is made up of members from a number of interest groups which meet twice a year and include:

- Townsville Port Authority;
- Environment Australia - Marine and Water Division;
- Queensland Environmental Protection Agency;
- Queensland Department of Transport;
- Queensland Department of Primary Industries;
- Great Barrier Reef Marine Park Authority;
- Port Advisory Body;
- Townsville City Council; and,
- community interest groups including Sunfish and the North Queensland Conservation Council.

The schedule outlines a timeframe for the review over five years with the new strategy due for finalisation prior to the issue of the new permit.

oil and chemical storage facility

An environmental audit of our workshop area was undertaken in October 1999 in an effort to identify any practices that had the potential to impact on the environment. A number of issues were identified including the incorrect storage of oils and chemicals. A number of drums of paints, thinners, oils and fuels were found to be stored in unbunded areas with high potential for spillage to stormwater. The storage of waste oil and paint drums was also of high concern with the potential for stormwater contamination.

To address the problem, an undercover oil and chemical storage facility will be constructed providing a protected, banded area for the safe storage of oil and chemical drums along with a designated waste material facility.

prawn farm remediation

Natural Heritage Trust funding from the Coastal Acid Sulfate Soils Program has been approved for the Townsville Southbank Coastal Acid Sulfate Soil Remediation Project.

A former prawn farm site located on the east bank of the Ross River has been the subject of a number of investigations during the year. The site has been identified as having a high presence of acid sulfate soils. Together with Townsville City Council, Sunfish, Sinclair Knight Merz, RIVER, Department of Natural Resources and Mines, Citiwater, Environmental Protection



1 Craig Wilson checking stormwater discharge monitoring probes.

environmental regulation

PM10

The Long Term Dust Monitoring Program measures dust levels at the port. The TEOM system continually measures PM10 levels which are presented as 30 minute averages. PM10, or particulate matter, is all dust particles less than 10µm in size. These particles are considered a health concern as they are able to penetrate the lower respiratory tract. This graph illustrates the concentration of PM10 levels measured at the port during the 2000-2001 sampling period and the direction from which the dust originated. As can be seen, the extreme dust events originate from a predominantly easterly direction, however they are also recorded from a general southerly direction. The majority of our operations are located in a easterly direction from the dust monitoring unit so it is expected that the extreme dust events would originate from this direction.

The lack of data from the westerly direction is due to the lack of westerly winds within the Townsville region.

wind

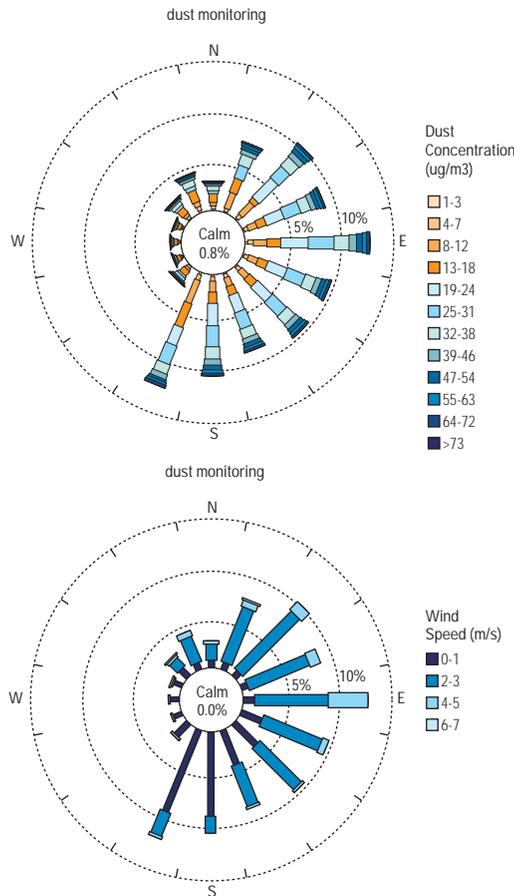
The dust monitoring station includes a wind sensor to record wind speed and direction. Wind data is used to determine whether extreme dust events are associated with high wind events or whether they are source-based. This graph is a wind rose illustrating wind speed and direction during the 2000-2001 sampling period. The majority of the high wind events during this period were recorded from an easterly direction. This data shows some correlation with the PM10 data suggesting the extreme dust events may have been associated with high winds.

incidents

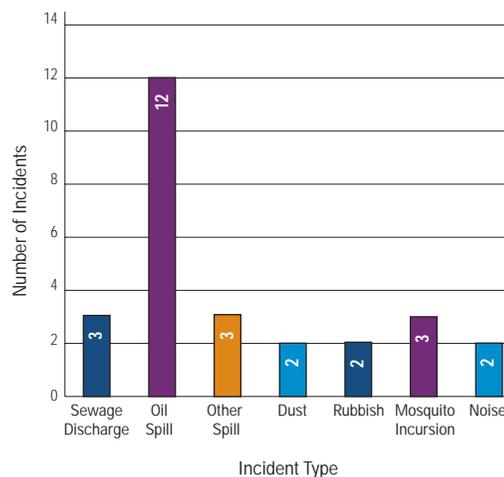
As part of the Authority's Integrated Environmental Management System, we maintain a database of all environmental incidents and complaints that occur at the port.

This graph illustrates the number and types of incidents recorded during the 2000-2001 financial year. Oil spills were by far the most common incident during the reporting year, with 12 oil spill incidents recorded. The high number of oil spills is due to the port's location and the diverse range of activities undertaken within the port area - shipping, small boat harbours and bulk fuel storage.

By examining the environmental incidents data and identifying trends in the data, we are able to focus environmental management initiatives towards problem areas to minimise the number of incidents.



environmental incidents 2000/01



Agency, James Cook University, and CSIRO Land and Water, we have secured \$250,000 from Environment Australia which will go towards remediation works on the site. As yet, a detailed program of works and additional funding sources have not been established.

trade waste agreement (TWA)

We currently operate a small package sewage treatment plant which treats wastes from a number of port customers. Effluent from the plant is used to irrigate land within the port, and as such, must meet stringent environmental conditions. During the operation of the plant, a number of incidents have occurred which has resulted in a significant decline in the sewage effluent to the extent that licence conditions have been exceeded.

In an effort to minimise the impact of wastes on the optimal functionality of the plant, we will implement a Trade Waste Agreement for all users of the system. The agreement will be based strongly on Townsville City Council's TWA and will stipulate levels of trade waste to be accepted by the plant.

research and monitoring

In an effort to monitor the impacts of port operations on the receiving environment, and in conjunction with port customers, we have implemented a number of environmental monitoring programs. In addition to the programs discussed above, other monitoring programs include:

- Long Term Sediment Monitoring Program;
- Long Term Dust Monitoring Program; and,
- Dust Deposition Monitoring Program.

We also encourage research programs with a focus on port operations. A number of post-graduate studies have been recently completed or are still underway including:

- natural and anthropogenic influences upon trace metal geochemistry in sediments of Cleveland Bay;
- effects of the dumping of dredged material of Townsville Port on the soft-bottom benthic community of Cleveland Bay;
- arsenic speciation in waters and sediment of Cleveland Bay, and controls on arsenic uptake in a commercial crab species;
- heavy metal transference in a three-level food chain;
- marinas as reservoirs for marine fouling organisms; and,
- inner harbour fine scale modelling

■ complete ● in progress

web

Dugongs, seagrass beds, fringing coral reefs and mangrove forests are all sensitive natural habitats within the Great Barrier Reef World Heritage Area. Find out about how we care for the environment and our environmental policy at

www.townsville-port.com.au/the/port/environment