

Entity name: **Rio Tinto (Hamersley Iron)**

Water Compliance Manual Datasheet - Potable Water Providers NOT subject to NWI Reporting

Water Resources					
Indicator	Reference	Description	Number	Percentage	Comments
Sources of water	W1	Volume of water sourced from surface water (ML)			
	W2	Volume of water sourced from groundwater (ML)	3029.0		
	W3	Volume of water sourced from desalination (ML)	0.0		
	W4	Volume of water sourced from recycling (ML)	0.0		
	W5	Volume of water sourced from bulk supplier (ML)	720.0		
	W6	Volume of bulk recycled water purchased (ML)	0.0		
	W7	Total sourced water (ML)	3749.0		
Uses of water supplied	W11	Total urban water supplied (ML)			
	W12	Average annual residential water supplied (kL/property)	0.0		

Asset Data					
Indicator	Reference	Description	Number	Percentage	Comments
Other water assets	A2	Length of water mains (km)	106.0		
	A3	Properties served per km of water main	22.7		
Water main breaks	A8	Number of water main breaks	16.0		
		Water main breaks (per 100km of water main)	15.1		

The Customers					
Indicator	Reference	Description	Number	Percentage	Comments
Connected properties and population		Total number of customers (connected properties)	2402		
Unplanned water supply interruptions	C15	Average duration of an unplanned interruption - water (minutes)	175.0		
Customer interruption frequency	C17	Number of unplanned interruptions	286.0		
		Average frequency of unplanned interruptions - water (per 1,000 properties)	119.1		
Customer interruptions	Licence Sch 4, Cl. 2.2/3.1	Number of connected properties that did <b>NOT</b> experience an interruption to water supply exceeding 1 hour in duration (12 month data)	1569		
		Percentage of connected properties that did <b>NOT</b> experience an interruption to water supply exceeding 1 hour in duration (12 month data)		65.3%	
Water pressure and flow	Licence Sch 4, Cl. 2.1/3.1	Number of connected properties that have been supplied at a pressure and flow that meets the standards set out in the licence (12 month data)	2401		
		Percentage of connected properties that have been supplied at a pressure and flow that meets the standards set out in the licence (12 month data)		100.0%	

Licence Specific Performance Indicators					
Indicator	Reference	Description	Number	Percentage	Comments
Water quality compliance	H1	Water quality guidelines	Provide details of standard specified in the licence		
	H2	Number of zones where microbiological compliance was achieved (e.g. 23/24)	3/3		
	H3	Percentage of population where microbiological compliance was achieved		100.0%	
	H4	Number of zones where chemical compliance was achieved (e.g. 23/24)	3/3		
	H5	Risk based drinking water management plan assessed externally (yes/no)	Yes		
	H6	Risk based drinking water management plan (please specify plan in place, i.e. ISO9001, HACCP) (yes/no)	Yes		Water Quality Management manual - based on framework of 2004 ADWG
	H7	Public disclosure of drinking water performance (yes/no)	Yes		

Entity name: **Rio Tinto (Hamersley Iron)**

Water Compliance Manual Datasheet - Sewerage Service Providers NOT subject to NWI Reporting

Water Resources						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
Sewage collected	W18	Total sewage collected (ML)	531			
	W19	Sewage collected per property (kL/property)	221.1			
Uses of recycled water	W26	Total recycled water supplied (ML)	0.0			
	W27	Recycled water (percent of effluent recycled)		0.0%		

Asset Data						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
Sewerage assets	A5	Length of sewerage mains and channels (km)	85			
	A6	Properties served per km of sewer main	28.3			
Sewer main breaks and chokes	A14	Number of sewer breaks and chokes	9			
		Sewer breaks and chokes (per 100km of sewer main)	10.6			

The Customers						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
Connected properties and population		Total connected properties - sewerage	2402			

Environment						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
Sewage treatment levels	E1	Percentage of sewage treated to a primary level		100.0%		
	E2	Percentage of sewage treated to a secondary level		100.0%		
	E3	Percentage of sewage treated to a tertiary level		0.0%		
Biosolids reuse	E8	Percentage of biosolids reused		0.0%		
Sewer overflows	E13	Number of sewer overflows reported to environmental regulator	0			
		Sewer overflows reported to environmental regulator (per 100km of sewer main)	0.0			
Sewer overflows	Licence Sch 4, Cl.3.1/7.1	Number of connected properties experiencing a wastewater overflow	9			This is the number of overflows, however not every overflow affects a property directly.
		Percentage of connected properties <b>NOT</b> experiencing a wastewater overflow		99.6%		

Entity name: **Rio Tinto (Hamersley Iron)****Water Compliance Manual Datasheet - Complaints**

Complaints Handling						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
CH 1	C9	Water quality complaints (per 1,000 properties)				
CH 2	C10	Water service complaints (per 1,000 properties)				
CH 4	C11	Sewerage service complaints (per 1,000 properties)				
CH 5	C12	Billing and account complaints - water and sewerage (per 1,000 properties)				
CH 6		Other complaints (per 1,000 properties)				
CH 7	S.8	Irrigation customer service delivery complaints ( per 100 customers)				
CH 8	Licence Sch. 4, Cl. 1.2/2.1	Percentage of customer complaints resolved within 15 business days		59.0%		



Entity name: **Rio Tinto (Hamersley Iron)**  
Water Compliance Manual Datasheet - Contact Centre

Call Centre Performance						
Indicator	Reference	Description	Number	Percentage	Value (\$)	Comments
TS 1	C14 (Water Corporation only)	Percentage of calls answered by an operator within 30 seconds				
TS 2	Licence Sch. 4, Cl. 2.1 (Water Corporation only)	Percentage of calls that were abandoned after 5 seconds				
TS 3	Licence Sch. 4, Cl. 1.1	Percentage of customers who, within 1 hour of reporting an emergency, were advised of the nature and timing of the action to be undertaken by the licensee		100.0%		

RioTinto

UTILITIES  
NETWORKS

WATER AND  
WASTE WATER SERVICES





## WATER QUALITY

- We will supply you with drinking water to the standard determined by the Water Services Operating Licence.
- We continually monitor and assess the quality of drinking water supplied.

## RELIABLE WATER SUPPLY AND SEWERAGE SERVICE

- We aim to provide water supply and sewerage service to you 24 hours of every day.
- In the event of an interruption to your water supply or sewerage service we will be on call 24 hours, 7 days a week please call **1800 992 777** and a decision maker will return your call within an hour.
- We will make every effort to limit any interruption to your water supply or sewerage service to six hours.
- If a water interruption exceeds six hours, drinking water will be available from a nominated point.
- We will respond within two hours for sewerage overflow problems.
- When we have a need to undertake planned service interruptions we will provide at least 48 hours notice to our domestic and at least 7 days notice to our commercial or industrial customers.
- In case of an emergency such as sewer overflow call **1800 992 777**.

## YOUR RIGHTS TO ASSISTANCE, REDRESS & COMPENSATION

- If Rio Tinto's activities have caused serious damage to your property or disruption to you, such as sewer overflow, Rio Tinto shall deal with the matter in a fair and business like manner, whether or not a complaint is received. Rio Tinto may rectify damage and, as necessary, refer any compensation claims to its insurers for assessment and necessary action.

## WATER PRESSURE AND FLOW

- We will ensure each property service is provided with pressure ranges and flow rates in line with recommended industry standards, being 20 litres per minute flow, a minimum pressure of 15m, and a maximum pressure of 100m.

## TREATMENT AND DISPOSAL OF WASTEWATER

- We are committed to environmentally sound practices in the treatment and disposal of wastewater.
- We will operate all wastewater treatment plants according to licence conditions set by the Department of Environment and Conservation.

## CUSTOMER ENQUIRIES

- We will endeavour to address all enquiries on the same day they are received, and if we are unable to do so we will contact and advise you.  
We will be available weekdays between 8:00am and 3:30pm. Please call **1800 992 777**.

## CUSTOMER COMPLAINTS

- We aim to resolve complaints as quickly as possible, at least within 15 business days. For complex issues, we will maintain a free and accessible dispute resolution process. Please call **1800 992 777**. You may raise the complaint to a higher level within Rio Tinto's Management structure if you are not satisfied with the initial response. If you are not satisfied with the outcome, you can refer the complaint to the Department of Water at

Customer Services Officer  
The Department of Water  
Water Industry Support Branch  
PO Box K822 Perth WA 6842  
Phone: (08) 6364 7600  
Website: [www.water.wa.gov.au](http://www.water.wa.gov.au)  
Email: [WISBcomplaints@water.wa.gov.au](mailto:WISBcomplaints@water.wa.gov.au)





The Water Services Planning Branch provides a reconciliation service and will provide explanations and recommendations.

#### AUDIT OF PERFORMANCE

- The charter sets out the broad philosophy of Rio Tinto in supplying water supply services and waste water services in accordance with the operating licence issued by the Economic Regulation Authority under the Water Services Licensing Act 1995.
- The charter informs you, the customers of Rio Tinto, of your rights in accordance with the provisions of the operating licence, including service interruptions, levels of service and complaints procedures. If you would like a copy of the operating licence please contact Rio Tinto on **1800 992 777** or ERA on 9213 1900.

#### CUSTOMER OBLIGATIONS

- When you move into a property and vacate a property, you will need to complete either an application form or a termination form for the water supply. The form must be returned to: Rio Tinto, within 7 days of occupying the property.
- Rio Tinto account terms are strictly 30 days. Failure to pay within these terms may result in restriction or disconnection of your water supply.



#### CONDITIONS OF CONNECTION

- From time to time, we will need to enter your property to undertake maintenance on our systems. Except in an emergency, we will provide 48 hours notice. In an emergency, we will leave a card advising you of our presence on your property.
- Your water meter must be accessible at all times to Rio Tinto staff and their contractors.
- If the water meter is damaged, Rio Tinto reserves the right to recover the cost from you for reinstatement.
- Rio Tinto reserves the right to list you as a default debtor with Credit Advantage Australia should you fail to pay your account. Please call **1800 992 777** for any queries relating to your account.

#### DISCONNECTION

- If the water supply service and the waste water services is no longer required by you, a disconnection from the Rio Tinto services may be approved provided that:-
  1. Rio Tinto is first notified of the intention; and the property has no further water supply services and waste water disposal requirement; and
  2. The disconnection is carried out by a licensed plumber who must be provided by Rio Tinto.
- In most circumstances, disconnection of water supply services and waste water services does not terminate this charter. Rio Tinto will continue to charge water supply services and waste water services rates to the owner of the land/ tenant (including vacant land) where water supply services and waste water services are available for connection. The charter is void if there were no services available and no charges levied.
- Rio Tinto shall reconnect its services at your request and on compliance with the terms and conditions of this charter. A reconnection fee shall apply.

## FUTURE WATER NEEDS

- We continue to identify new water source requirements associated with likely future growth.
- We plan to ensure our infrastructure and systems are developed to cater for projected growth.

## YOU'RE RIGHTS - WATER AND SEWERAGE SERVICES

ITEM	REQUIREMENT
Provision of minimum notice for planned works (Residential properties affected)	48 Hours
Provision of minimum notice for planned works (commercial/industrial properties affected)	7 Days
Time for provision of advice in response to a complaint/service query	Within 1 hour from the receipt of complaint/enquiry
Interruption to water supply or sewerage services	Every effort to be made to limit to a maximum of 6 hours
Provision of drinking water for water supply interruption	To be provided after 6 hours
Response to serious water supply bursts and leaks	Respond within 1 hour Commencement of work within 1.5 hours of notification Completion of work within 6 hours
Response to moderate water supply bursts and leaks	Respond within 1 hour Commencement of work within 3 hours of notification Completion of work within 6 hours
Response to minor water supply bursts and leaks	Respond within 24 hours Rectification within 3 days of notification

## YOUR RIGHTS TO CONSULTATION AND INFORMATION

- We provide customer information and consultation by two methods: by conducting annual surveys and by the publication of magazines and newsletters.
- Rio Tinto will publish and make available at its premises information on matters relating to its water and waste water supply services and on other aspects such as complaints handling. Rio Tinto company representatives will provide their name and section in business discussions with customers.

## FEES AND CHARGES

- Property owners will receive an annual fixed service charge (referred to as "water & sewerage rates"). The sewerage service charge isn't the same for everyone; it depends on the rateable value of your property.
- Property tenants receive a charge for the water they use. The rate begins at a lower rate per kilolitre and goes up in steps as you use more water. This is the normal water regulation pricing system for North West Country areas.

## SEWERAGE SPILLS

- Rio Tinto will make every reasonable effort to minimise sewerage spills on customer's properties, due to failure of Rio Tinto sewerage systems.
- Where Rio Tinto is responsible for a sewerage spill on a customer's property, it will ensure that:-
- The spill is contained within 1 hour of notification if the spill is in the customer's house; all other spills are contained within 4 hours.
- Inconvenience to the customer is minimised and
- The areas are cleaned up as quickly as possible in such a manner to ensure the risk to human health is negligible



## SEWER BLOCKAGES

- If a customers sewer becomes blocked Rio Tinto can be contacted on 1800 992 777 to arrange repairs.
- If the blockage is in a Rio Tinto sewer pipe, Rio Tinto will pay for the clearance.
- If the blockage is in the customers sewerage pipe the customer can contact Rio Tinto on **1800 992 777** to arrange repairs at the customers own cost.

## MAINTENANCE

- Rio Tinto's water supply services and waste water services are provided from the point where the pipes serving your property connect to Rio Tinto's water supply main and wastewater reticulation main.
- Water supply mains and wastewater reticulation mains and associated fittings remain the property of Rio Tinto whether or no they are located in the private property. The location of these structures can be obtained from Rio Tinto's office. You are required to ensure that Rio Tinto's pipelines and structures are reasonably accessible and, are not interfered with, covered, built close to, built over or damaged.
- Prior to undertaking building or construction activity on land connected or capable of being connected, it is a requirement to gain approval from Rio Tinto. In the first instance, you should contact the Rio Tinto office. Unauthorised property improvements, which interfere with the Rio Tinto's assets, may be required to be removed at your cost.
- It is also required that you **DIAL BEFORE YOU DIG** on:  
**9143 5662 - Dampier**  
**9143 3211 - Tom Price**  
**9143 4501 - Paraburdoo**
- Rio Tinto is responsible for the maintenance of water supply connections and waste water connections (sewer connections) where they are unable to be cleared or repaired from the inspection shaft – provided the fault in the property is outside the property concerned.
- You are responsible for all plumbing, pipes and fixtures on or serving your property to the point where the pipes connect to the Rio Tinto water supply connections.

## OUR COMMITMENT TO SERVICE

- Rio Tinto will provide its services in a manner which is fair, courteous and timely – with a focus on consultation with our customers, respecting your rights, and meeting your reasonable expectations.

## LIMITATION OR WITHDRAWAL OF SERVICES

- Rio Tinto may discontinue its water supply services and waste water services in the following circumstances:-
- If you do not comply with the terms and conditions of this charter
- If there is a public health, environment and/or safety risk to Rio Tinto's services from your service connection (e.g. backflow risk or unauthorised industrial waste discharge); and/or
- If you do not pay, or meet and make arrangements to pay overdue charges for the services.

## PROVIDING NEW SERVICES

- Where the reticulation main is available, we will provide a connection to the water reticulation system within 10 days of receiving your application subject to charge.

## CUSTOMER SUGGESTIONS

- If you have any suggestions relating to water and sewerage service please call **1800 992 777**.

## SERVICE INTERRUPTIONS

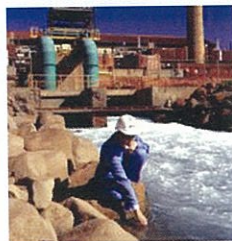
- Rio Tinto's water supply and waste water supply services are designed to be available 24 hours a day. However, Rio Tinto may interrupt, postpone or limit its water supply services and sewerage services to customers:-
- If any part of works is damaged, by bursting, blockages or breakdowns: or
- It is necessary to inspect, maintain, repair or replace any part of works: or
- For connection of new works or services: or
- If an event beyond Rio Tinto's control, including acts by others, sabotage, flood cyclone, earthquake, power or water shortage or industrial action.

## LIABILITY

- Rio Tinto is liable for any loss or damage that you may suffer:-
- As a result of this charter by Rio Tinto, its servants or agents;
- As the result of a negligent act or omission by Rio Tinto its servants or agents; and /or
- As a result of the failure to meet standards prescribed by its operating licence or regulations (if any).

## DISCHARGE OF UNAUTHORISED SUBSTANCES

- It is your responsibility to ensure that stormwater (including roof runoff) and other unauthorised substances are not discharged into Rio Tinto's sewers. Certain waste products are not suitable for disposal in the Rio Tinto waste water system because of their nature and ability to pollute. Specialised procedures for disposal are required for substances such as:-
- Cooking oil and grease – these should be placed in a container or wrapped and placed in a rubbish bin;
- Paint, paint thinners, dry cleaning fluids, engine oil, solvents, acids, alkalis, laboratory chemicals, kerosene, garden poisons, polishes or cleaning fluids; and
- Products like disposable nappies, panty hose, sanitary napkins, tampons, cotton buds, syringes, toilet deodorant packs and razors – *these should be wrapped and placed in a rubbish bin*



**FOR ALL ENQUIRIES**

Rio Tinto

Parker Point, Dampier

PO Box 21

Dampier WA 6713

Freecall: 1800 992 777

Facsimile: (08) 9143 5280

Office Hours: 8.30am - 4.00pm

Rio Tinto Pty Ltd

ABN 35 107 210 248

October 2008

Website: [www.riotinto.com.au](http://www.riotinto.com.au)

Email: [picc@riotinto.com](mailto:picc@riotinto.com)

**EMERGENCY CONTACT 1800 992 777**

(Available 24 hours per day)



**CUSTOMER SURVEY ACTION PLAN 2010**

Category	Issue	Resolution/Commitment	Action to be taken	Team
1. RTIO Service Provider	1.1. 1 in 4 customers do not know RTIO is their water and sewage provider.	1.1.1. Improve RTIO branding on invoices, correspondence, etc. 1.1.2. Increase general information from RTIO to customers.	1.1.2.1. Provide RTIO Calendar with all relevant information.	Ext CSU
2. Water Services	2.1. Low awareness in customers of the minimum standards of service. 2.2. Customers felt water quality needed improvement.	2.1.1. Increase information provided to customers about standards to expect. 2.1.2. Provide information about standards to new customers with their "Welcome" letter. 2.2.1. Increase information/education to customers about causes of water issues.	2.1.1. Provide information about standards in quarterly Water Wisdom newsletter. 2.1.1.2. Provide notes/link on water invoices in relation to standards and where to find info. 2.1.1.3. Provide RTIO Calendar with all relevant information. 2.1.2.1. Create a pamphlet summarising the standards and where to locate more info about them.	CSU CSU CSU
3. Sewage Services	3.1. Low awareness in customers of minimum standards of service. 3.2. Customers key concerns - sewage odours, blockages & overflows.	3.1.1. Increase information provided to customers about standards to expect. 3.1.2. Provide information about standards to new customers with their "Welcome" letter.	3.1.1.1. Provide information about standards in quarterly Water Wisdom newsletter each year. 3.1.1.2. Provide notes/link on water invoices in relation to standards and where to find info. 3.1.2.1. Create a pamphlet summarising the standards and where to locate more info about them.	CSU CSU CSU
4. Customer Complaints Procedure	4.1. Very few customers actually aware of charter. 4.2. Very few customers aware of complaints procedures available.	4.1.1. Continue to provide all customers with charter. 4.1.2. Increase methods of informing customers about charter. 4.2.1. Provide customers a summary/diagram of complaints procedure and review process.	4.1.1.1. Continue to provide all new customer with charter in their "Welcome" letter. 4.1.1.2. Continue to provide all customer with a copy of the charter at least every three years. 4.1.2.1. Provide notes on water invoices about where to locate online charter. 4.1.2.2. Provide information about online charter in Water Wisdom newsletter once each year. 4.2.1.1. Provide new customers with a copy with "Welcome" letter. 4.2.1.2. Include summary/diagram in Water Wisdom newsletter once each year.	CSU CSU CSU CSU CSU CSU

**RIO TINTO**

# Water and Sewerage Services

## Customer survey results

March 2010

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### Executive Summary

- Rio Tinto conducted a survey among its customers to understand how Water and Sewerage Services are regarded.
- The results suggest that more effort is needed to meet expectations in the following areas:

**Water Services**

Water hardness  
Below expectation for 58%

Water quality (mainly taste)  
Below expectation for 53%

**Sewerage Services**

Odours  
Below expectation for 25%

Blockages  
Below expectation for 20%
- Customers would like more information about what happens to sewerage.
  - Where does it go? How is it treated? How are the environmental impacts (on waterways, etc) minimised?
- A communications strategy may also assist Rio Tinto to lift its profile as a provider of water and sewerage services, and to raise awareness of its Minimum Standards of Service, Customer Charter and Customer Complaints Procedure.
  - 1 in 4 did not know that Rio Tinto supplies their water and sewerage services.
  - A majority of respondents were unaware of the Minimum Standards of Service, Customer Charter and Customer Complaints Procedure.
  - While awareness is a bit higher among those who know Rio Tinto is their provider, it remains low overall, especially among younger customers.

### Introduction and research method

- Rio Tinto is keen to understand how its Water and Sewerage Services are regarded by customers.
- A survey was designed and administered by Rio Tinto to evaluate:
  - Awareness of service provider
  - Familiarity with minimum standards of service
  - Service performance
  - Issues with water and sewerage supply
  - Awareness of the Customer Charter
  - Awareness of the Customer Complaint procedure
- 218 customers participated in the survey.
- The survey attracted responses from a mix of customers by age and gender, as illustrated to the right.
- Data was entered by Rio Tinto.
- CATALYSE® assisted with statistical analysis and reporting.

**Gender**

Gender	% of respondents
Male	58%
Female	42%

**Age**

Age Group	% of respondents
18-25 yrs	3%
26-35 yrs	27%
36-45 yrs	34%
46-55 yrs	30%
56+ yrs	6%

When responses do not add to 100% within this report this is attributed to rounding errors or 'other', 'don't know' or refused responses

# Water services

### Awareness of water supplier

**% of respondents**

Supplier	% of respondents
Rio Tinto (Hamilton City)	74%
Water Corporation	6%
Other Authority	1%
Don't know	19%

- Most customers are aware Rio Tinto supplies their water.
- However, 1 in 4 are unaware that Rio Tinto is their supplier.
- Among those who are unaware, most simply do not know who provides their water, while a few think it is the Water Corporation or Water Authority.
- Awareness appears to be lower among younger customers.

% of customers	Rio Tinto	Don't know
Male	78%	17%
Female	71%	20%
18-35 yr	60%	20%
36-45 yrs	74%	19%
46+ yrs	81%	12%

Q. Do you know which organisation supplies you with water?  
Base: All respondents (n = 218)

### Water Supplier

#### Familiarity with minimum standards of service

**% of customers**

Level of familiarity	% of customers
I know a lot about the standards of service	12%
I know some of the aspects of the standard of service	21%
I am aware of the standards of service but know very little about them	31%
I know nothing about my water supplier's minimum standards of service	36%

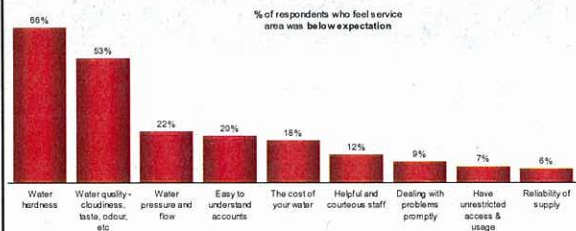
- Generally, customers have low knowledge of their water suppliers' minimum standards of service.
  - 51% claim they know nothing about their water supplier's minimum standards of service.
- There is greatest room to improve awareness among younger customers.
- Familiarity is higher among those who are aware that Rio Tinto is their service provider.

% of customers	I know a lot	I know some	I am aware	I know nothing
Male	7%	10%	24%	59%
Female	1%	12%	23%	64%
18-35 yr	0%	8%	13%	79%
36-45 yrs	3%	14%	28%	55%
46+ yrs	8%	14%	26%	52%
Aware Rio Tinto is service provider	4%	14%	29%	53%
Don't know who service provider is	2%	0%	12%	86%

Q. Which of the following statements best describes how much you know about your water supplier's minimum standards of service?  
Base: All respondents who answered, excludes non-responses (n = 216)

## Water Service Performance

- Water hardness and water quality are the main areas to focus on improving.

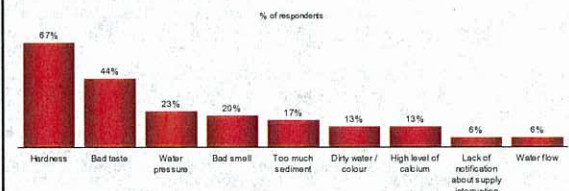


Q. Has your water service been below expectations on any of the following matters during the last six months? Yes / no / don't know  
Base: All respondents (n=218)



## Issues and concerns with water supply

- The top two concerns are water hardness and taste.



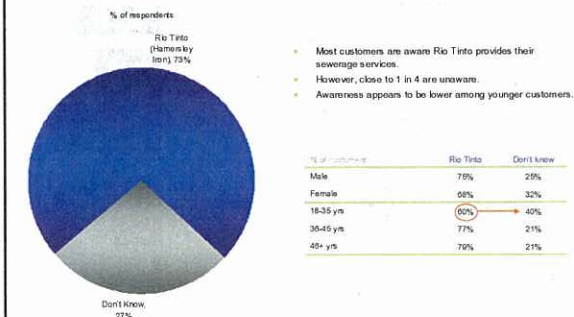
- Less than 5% of customers made reference to the following issues: prime time interruption to supply, high level of chlorine or fluoride, water causes skin irritation, temperature of water warm or too hot, varying quality, unsuitable for drinking, corroding, tap timers, need to have new RO fitted, tap hammer and pipe, chalky and had to have pressure and flow repaired.

Q. Do you have any issues or concerns over the water supply in your area? Multiple response allowed  
Base: All respondents (n=218)



## Sewerage services

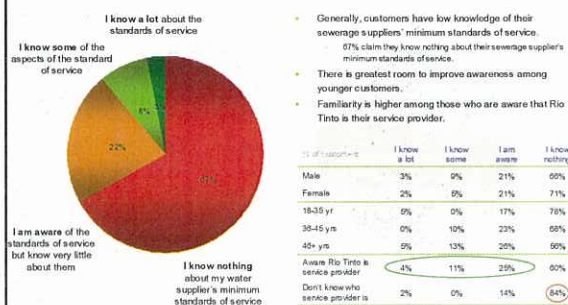
## Awareness of sewerage services supplier



Q. Do you know which organisation supplies you with the sewerage services?  
Base: All respondents who answered, excludes non-responses (n=213)



## Sewerage Services Supplier Familiarity with minimum standards of service

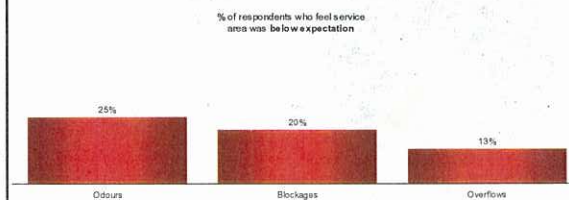


Q. Which of the following statements best describes how much you know about your sewerage supplier's minimum standards of service?  
Base: All respondents who answered, excludes non-responses (n=213)



## Sewerage Service Performance

- There is most concern about odours, followed by blockages and overflows.



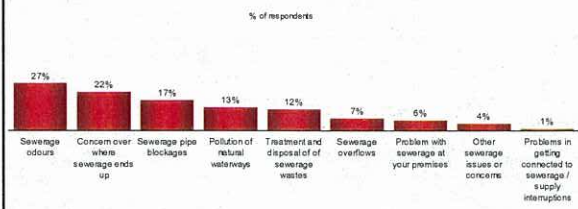
Q. Has your sewerage service been below expectations on any of the following matters during the last six months? Yes / no / don't know  
Base: All respondents (n=218)





## Issues and concerns with sewerage supply

- The main concerns with sewerage supply relate to odours and pipe blockages.
- There is also a general concern about where sewerage ends up, how it is treated and the impact on the environment.

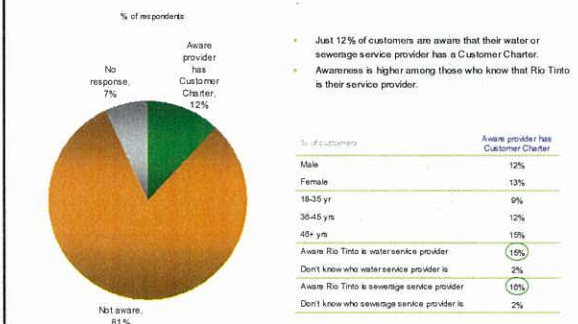


Q. Do you have any issues or concerns over the sewerage supply in your area? Multiple response allowed.  
Base: All respondents (n = 218)



## Awareness of Customer Charter & Customer Complaints Procedure

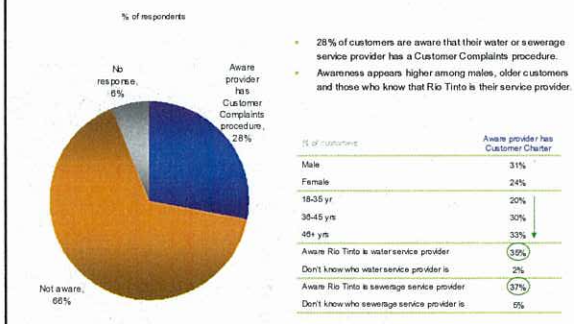
### Awareness of Customer Charter



Q. Do you know if your water / sewerage service provider has a Customer Charter?  
Base: All respondents (n = 218)

○ = significant variance CATALYSE

### Awareness of Customer Complaints procedure



Q. Do you know if your water / sewerage service provider has a Customer Complaints procedure?  
Base: All respondents (n = 218)

○ = significant variance CATALYSE

Can we assist Rio Tinto further with:

- Strategic Marketing and Communications
- Market Research (focus groups, surveys and desk research)
- Investor Relations Studies
- Employee Attraction and Retention

For further information, please contact:

Lisa Lough  
Marketing Director  
CATALYSE Pty Ltd  
t: +61 8 9380 9800  
e: lisa@catalyse.com.au  
www.catalyse.com.au



## WATER WISDOM

NEWSLETTER | ISSUE 3 - QUARTER 1 2010



### WATER CONSERVATION

The water supply for our towns comes from groundwater from underground bores.

This is a limited resource that is only recharged by rainfall. With limited rainfall this summer, water use at work and at home affects future water supplies.

A number of water conservation initiatives have been completed across the sites including:

- Tom Price - repairs to leaking hoses and pipes around the plant, water truck level indicators, automation of stockpile water sprays, vacuum pump water recycling;
- Paraburdoo - pipework repairs, stockpile water recycling, water reuse for dust suppression;
- Dampier Port Operations - installation of new washdown facility which recycles water for washdown use; and
- Dampier, Paraburdoo and Tom Price towns - leak detection programme.

Conservation of water also saves you money. Rio Tinto customers in Dampier, Paraburdoo and Tom Price are charged a low tariff for every kilolitre of water that they use. However the more you use, the quicker you move up the sliding scale to a higher tariff level.

### TOWN SEWER UPGRADE

Rio Tinto Networks is continuing the town sewer upgrade programme in Paraburdoo and Tom Price. This work is designed to extend the life of key sewer assets, and ensure that blockages and sewer overflows do not occur.

As part of the programme, vitreous clay and cast iron sewer pipes are being replaced with PVC pipes.

Manager Networks Services Paul White said that using PVC pipes meant that the assets have a greater capacity and resistance to corrosion and chemicals.

"They are easier to handle than clay or steel pipes, and therefore safety on the job is improved," he said.



### OUR FIVE TOP TIPS TO SAVE WATER

1. Water your garden wisely - before 9am or after 6pm.
2. Fix leaking taps, hoses and pipes - a tap dripping at one drop per second wastes 50L of water per day.
3. Take a shower instead of a bath - a short shower uses about a third as much water as a bath.
4. Don't use the washing machine until it is full.
5. Wash your car on the lawn and use a bucket, not a running hose.



## WATERING DAYS - NORTH OF KALBARRI AND KALGOORLIE

Cross reference the **last digit** of your house number to find out your watering days.

House Number	Watering Days
1	1st, 3rd, 5th, 7th, 9th, 11th, 13th, etc.
2	2nd, 4th, 6th, 8th, 10th, 12th, 14th, etc.
3	1st, 3rd, 5th, 7th, 9th, 11th, 13th, etc.
4	2nd, 4th, 6th, 8th, 10th, 12th, 14th, etc.
5	1st, 3rd, 5th, 7th, 9th, 11th, 13th, etc.
6	2nd, 4th, 6th, 8th, 10th, 12th, 14th, etc.
7	1st, 3rd, 5th, 7th, 9th, 11th, 13th, etc.
8	2nd, 4th, 6th, 8th, 10th, 12th, 14th, etc.
9	1st, 3rd, 5th, 7th, 9th, 11th, 13th, etc.
0	2nd, 4th, 6th, 8th, 10th, 12th, 14th, etc.

Where a house number is not available, it defaults to the **last digit** of your lot number. You may water only once either before 9am or after 6pm.

## CUSTOMER COMPLAINTS

We aim to resolve complaints as quickly as possible, at least within 15 business days.

For complex issues we maintain a free and accessible dispute resolution process, please contact:

### Rio Tinto Utilities Customer Services

Parker Point, PO Box 21  
Dampier WA 6713

**Freecall: 1800 992 777**

You may raise the complaint to a higher level within Rio Tinto's management structure if you are not satisfied with the initial response.

If you are not satisfied with the outcome, you can also refer the complaint to the Department of Water at:

### Customer Services Officer

The Department of Water  
Water Industry Support Branch  
PO Box K822  
Perth WA 6842

Phone: **(08) 6364 7600**

Email: [WISBcomplaints@water.wa.gov.au](mailto:WISBcomplaints@water.wa.gov.au)

Website: [www.water.wa.gov.au](http://www.water.wa.gov.au)

## IMPORTANT INFORMATION

### WATER CONSUMPTION & WATER RATES

There are two costs for water

- Property owners will receive an annual fixed service charge (referred to as "water & sewerage rates"). The sewerage service charge isn't the same for everyone; it depends on the rateable value of your property.
- Property tenants receive a charge for the water you use. The rate begins at a lower rate per kilolitre and goes up as you use more water. This is the normal water regulation pricing system for North Country areas. It aims to encourage water conservation and discourage excessive use of water (and it works!).

### WATER REBATE

A water rebate is paid to compensate for the extra watering demands of gardens in the Pilbara. It is paid according to the table below and will be paid to all Iron Ore staff tenants through the payroll in July each year. You will receive a pro rata rebate in your first and final year.

Area	Rebate per 1000 litres
Cherwell	100
Iron Point	150
Paraburdoo	450
Perth area	1774

The Water Rebate is based on the requirements of a house or duplex and is not applicable to other types of dwellings such as town houses, flats and home units.

### WATER CONSUMPTION - YEAR TO DATE

Water consumption is charged on a Year to Date basis. You are charged on a tier level according to what level of consumption you are using.

Water Consumption	Cost per kilolitre
Up to 150	\$0.190
Over 150 but under 350	\$0.634
Over 350 but under 550	\$0.634
Over 550 but under 750	\$0.715
Over 750 but under 950	\$0.990
Over 950 but under 1150	\$1.415
Over 1150 but under 1550	\$2.060
Over 1550 but under 1950	\$2.377
Over 1950	\$2.760

### ACCOUNTS

You will be sent water-usage accounts in the months following our quarterly reads: meters are read at the end of February, May, August and November.

### GENERAL INFO

Sometimes our meter readers may not be able to access your meter - for example if there is a dog on the property, or you have locked gates etc. If you receive a card saying 'We could not access your meter today' please call us on **1800 992 777** as soon as possible so we can obtain an accurate reading, and you can avoid an assessed consumption.

## WATER WISDOM

NEWSLETTER | ISSUE 2 - NOVEMBER 2009



### WELCOME TO THE 2009 EDITION OF WATER WISDOM.

As we are all aware, water is a precious and limited resource - we must use it wisely and be responsible for our impact on the environment. Mining is the second biggest consumer of water in Western Australia.

In the Pilbara, summer temperatures are hot, evaporation is high, and recent rainfall has been lower than average.

Reducing water consumption defers the need for new water sources and groundwater schemes, and reduces environmental impacts.

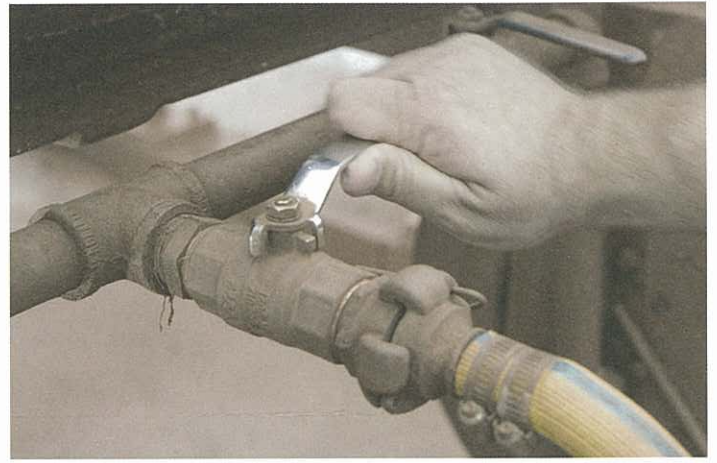
We have implemented a number of water conservation initiatives within the business including active leakage management and appreciate your support in helping us achieve a water wise operation.

In this issue of Water Wisdom we provide some important information on water operations in the Pilbara and what you need to know, and offer some tips on how you can help save water in your home and at work.

I hope you find the information useful.

Bennie Smith  
**General manager - Utilities**





## WHAT CAN YOU DO?

### AT HOME?

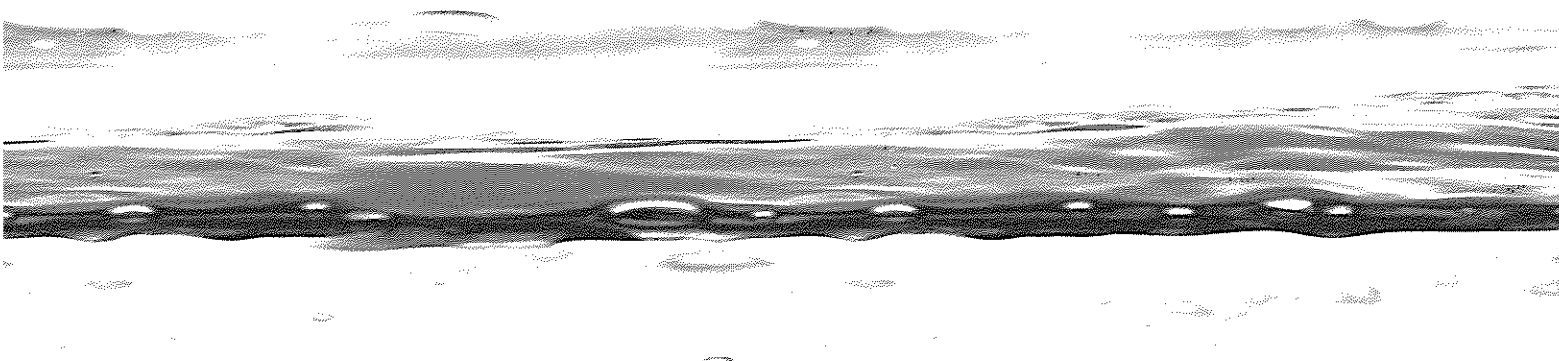
- WATER YOUR GARDEN WISELY
- USE A SOIL WETTING AGENT
- USE EFFICIENT WATERING SYSTEMS
- WATER EARLY IN THE MORNING AND USE A WATERING CAN (NOT A HOSE) FOR POT PLANTS
- NEVER WATER IN THE HEAT OF THE DAY OR WHEN VERY WINDY
- MULCH YOUR GARDEN
- USE WATER EFFICIENT APPLIANCES
- FIX LEAKING TAPS, HOSES AND PIPES
- DON'T WASH DISHES UNDER A RUNNING TAP
- DON'T USE THE DISHWASHER UNTIL IT IS FULL
- DON'T USE THE WASHING MACHINE UNTIL IT IS FULL
- ADJUST THE WATER LEVEL IN THE WASHING MACHINE TO SUIT THE LOAD
- WASH YOUR CAR ON THE LAWN AND USE A BUCKET (NOT A RUNNING HOSE)
- TAKE A SHOWER INSTEAD OF A BATH - A SHORT SHOWER USES ABOUT A THIRD AS MUCH WATER AS A BATH.

### AT WORK?

- REPORT LEAKING HOSES AND TAPS TO YOUR SUPERVISOR
- TURN OFF TAPS AND HOSES WHEN NOT IN USE
- DON'T OVERFLOW WATER TRUCKS WHEN FILLING UP
- ONLY PLACE WATER WHERE NEEDED
- DON'T OVER WATER THE ROADS
- WATER THE ROAD AT A SPEED THAT SUITS THE CONDITIONS
- MINIMISE THE USE OF WATER AND DETERGENT IN THE WORKSHOP AND FUEL BAY
- MINIMISE SPILLS THAT REQUIRE WATER TO CLEAN UP.







# IMPORTANT INFORMATION

## WATER CONSUMPTION & WATER RATES

There are two costs for water

- Property owners will receive an annual fixed service charge (referred to as 'water & sewerage rates'). The sewerage service charge isn't the same for everyone, it depends on the rateable value of your property.
- Property tenants receive a charge for the water used. The rate begins at a lower rate per kilolitre and goes up as you use more water. This is the normal water regulation pricing system for North Country areas. It aims to encourage water conservation and discourage excessive use of water (and it works!).

## WATER REBATE

A Water Rebate is paid to compensate for the extra watering demands of gardens in the Pilbara. It is paid according to the table below and will be paid to all Iron Ore staff tenants through the payroll in July each year. You will receive a pro-rata rebate in your first and final year.

	Kls / annum
Dampier	300
Tom Price	350
Paraburdoo	450
Karratha	377.4

The Water Rebate is based on the requirements of a house or duplex and is not applicable to other types of dwellings such as town houses, flats and home units.



## CONTACT DETAILS

Rio Tinto Customer Service  
Parker Point  
PO Box 21  
Dampier WA 6713  
Freecall: 1800 992 777

## WATER CONSUMPTION - YEAR TO DATE

Water consumption is charged on a Year to Date basis. You are charged on a tier level according to what level of consumption you are using.

(kL)	(\$/kL)
Up to 150	\$0.392
Over 150 but under 350	\$0.634
Over 350 but under 550	\$0.634
Over 550 but under 650	\$0.715
Over 650 but under 750	\$0.891
Over 750 but under 1150	\$1.435
Over 1150 but under 1550	\$2.063
Over 1550 but under 1950	\$2.377
Over 1950	\$2.763

Rio Tinto's Iron Ore group reserves the right to vary these rates, subject to the approval of the Economic Regulation Authority.

## ACCOUNTS

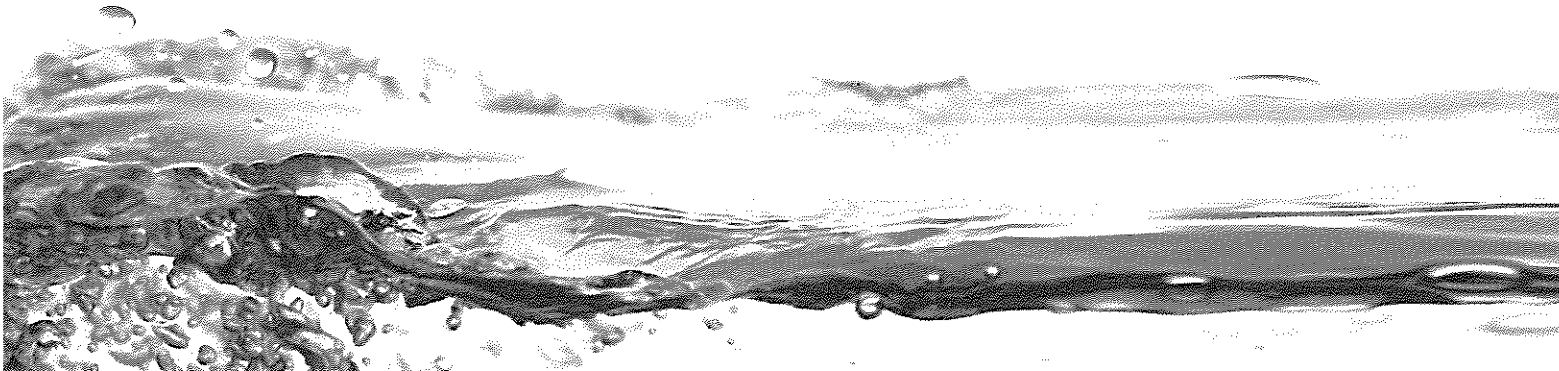
You will be sent water-usage accounts in the months following our quarterly reads. Meters are read at the end of February, May, August and November.

## WE NEED YOUR FEEDBACK

Our annual customer questionnaire will be coming to your letterboxes shortly so keep your eye out. The survey allows you to provide comment on the water and sewerage systems currently provided in your town. Please take the time to fill this out and return it as your feedback is very valuable in ensuring we efficiently manage these systems.

## GENERAL INFORMATION

Sometimes our meter readers may not be able to access your meter — for example if there is a dog on the property, or you have locked gates etc. If you receive a card saying 'We could not access your meter today' please call us on 1800 992 777 as soon as possible so we can obtain an accurate reading, and you can avoid an assessed consumption.



Received  
15/12/09

## WATER AND SEWERAGE SERVICES QUESTIONNAIRE



You are invited to provide comment on the water and sewerage services currently provided to you. This information will only be used to assess customers' expectations of levels of customer service, and to allow customers to notify the supplier of any water and sewerage service problems that they may be experiencing. Please note that the information will remain confidential.

### WATER SERVICES

1. **Do you know which organisation supplies you with water?**  
(please tick)

- ☐ Water Corporation  
☐ Rio Tinto (Hamersley Iron)  
☐ Water Authority  
☐ Other (please specify) \_\_\_\_\_  
☐ Don't know

2. **Which of the following statements best describes how much you know about your water supplier's minimum standards of service?** (please tick)

- ☐ I know nothing about my water supplier's minimum standards of service  
☐ I am aware of the standards of service but know very little about them  
☐ I know some of the aspects of the standards of service  
☐ I know a lot about the standards of service

**WATER SERVICES continued**

3. Do you have any issues or concerns over the water supply in your area? (tick as many as required)

**Quality**

Dirty water/ Color

Bad smell

Bad taste

Hardness

Too much sediment

Other (please specify) \_\_\_\_\_

**Pressure and Flow**

Water pressure

Water flow

Other (please specify) \_\_\_\_\_

**Interrupted supply**

Prime time interruption

Lack of notification

Other (please specify) \_\_\_\_\_

**Other (please specify)**

\_\_\_\_\_

4. Has your water service been below expectations on any of the following matters during the last six months? (please tick)

YES	NO	DON'T KNOW
-----	----	---------------

Water quality - cloudiness, taste, odour etc

Water hardness

Water pressure and flow

Reliability of supply

Have unrestricted access and usage

The cost of your water

Easy to understand accounts

Helpful and courteous staff

Dealing with the problem promptly

**SEWERAGE SERVICES**

5. Do you know which organisation supplies you with sewerage services? (please tick)

Water Corporation

Rio Tinto (Hamersley Iron)

Water Authority

Other (please specify) \_\_\_\_\_

Don't know

6. Which of the following statements best describes how much you know about your sewerage supplier's minimum standards of service? (please tick)

I know nothing about my sewerage supplier's minimum standards of service

I am aware of the standards of service but know very little about them

I know some of the aspects of the standards of service

I know a lot about the standards of service

7. Do you have any issues or concerns over the sewerage supply in your area? (tick as many as required)

Sewerage odours

Sewerage overflow

Sewerage pipe blockage

Pollution of natural waterways

Concerns over where sewerage ends up

Treatment and disposal of sewerage wastes

Problems with sewerage system at your premises (leaks etc)

Problems in getting connected to sewerage/supply interruptions

Other (please specify) \_\_\_\_\_

8. Has your sewerage service been below expectations on any of the following matters during the last six months? (please tick)

YES	NO	DON'T KNOW
-----	----	---------------

Overflows

Blockages

Odours

**CUSTOMER SERVICES**

9. Do you know if your water / sewerage service provider has a Customer Charter? YES / NO

10. Do you know if your water / sewerage service provider has a Customer Complaints procedure? YES / NO

**RESPONSE**

To make sure we have responses from a good cross section of the community could you please answer the following:

SEX (please tick)

MALE

FEMALE

AGE (please tick)

18 - 25

26 - 35

36 - 45

46 - 60

60+

NAME (optional):

ADDRESS (optional):

Thank you for your time. Please return this questionnaire in the return envelope provided.





## WATER CONSUMPTION TIER RATES

### Dampier, Paraburdoo and Tom Price 2001/2002

(kL)	(\$/kL)
Up to 150	\$0.392
Over 150 but under 350	\$0.634
Over 350 but under 550	\$0.634
Over 550 but under 650	\$0.715
Over 650 but under 750	\$0.891
Over 750 but under 1150	\$1.435
Over 1150 but under 1550	\$2.063
Over 1550 but under 1950	\$2.377
Over 1950	\$2.763

Hamersley Iron reserves the right to vary these rates, subject to the approval of the Office of Water Regulation.

#### Dampier

Hamersley Iron  
Utilities  
PO Box 21  
DAMPIER WA 6713  
Ph: 1800 992 777  
Fax: (08) 9143 5280

#### Perth-Accounts Receivable

Hamersley Iron  
Accounts Receivable  
GPO Box K829  
PERTH WA 6843  
Ph: 1800 992 777  
Fax: (08) 9327 2422



**HAMERSLEY IRON**

A member of the Rio Tinto Group

## USING OUR CUSTOMER TELEPHONE SYSTEM

# Dial – 1800 992 777

### Welcome to the Hamersley Iron Utilities Telephone System

**Press 1: for Service Difficulties and Faults (24 Hours)**

Make this choice when you have a water or sewerage service fault or difficulty.

\*Please remember, if a water service problem appears to be on your side of the water meter then the fault is your responsibility.

**Press 2: for Bill Enquiries (Mon-Fri 8.00am – 3.30pm)**

Make this choice if you require assistance with the amount charged on your bill and for late payments. Your call will be directed to Accounts Receivable, Perth.

**Press 3: for Other Enquiries (Mon-Fri 8.00am – 3.30pm)**

Make this choice for all other enquiries except complaints. Your call will be directed to Customer Services, Dampier.

**Press 4: for Customer Complaints  
(Mon-Fri 8.00am – 3.30pm)**

Make this choice if you wish to make a complaint regarding your service. Your call will be directed to Customer Services, Dampier.

**Press 5: for Account Payments (24 Hours)**

Make this choice if you wish to make a payment by Australia Post Bill Payment System.



Things like grease, fat and food scraps aren't meant to go down kitchen sinks. They can cause blockages that require costly repairs, as well as have a negative impact on the environment. By binning these items instead, you'll ensure the community's wastewater system keeps running without a problem.

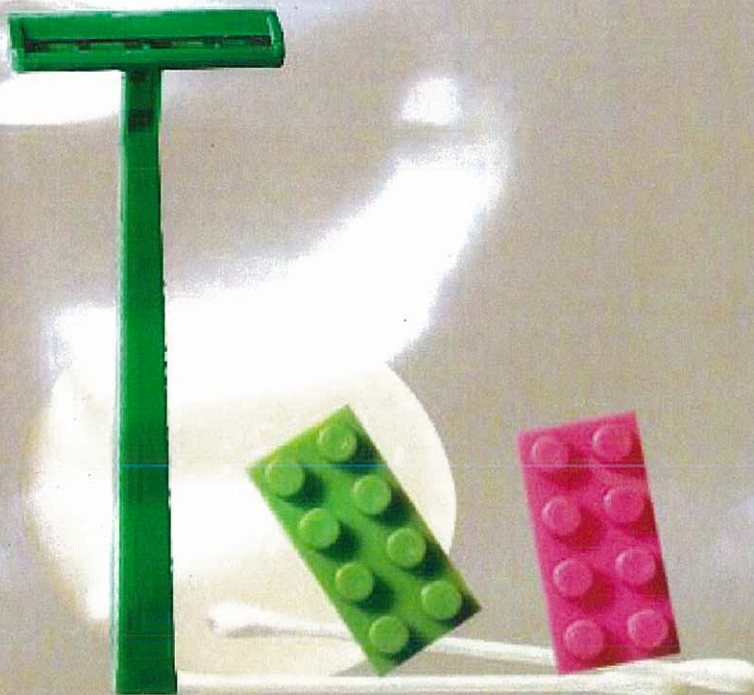
**RioTinto**



## **You'd be surprised what some people flush down the toilet.**

Disposable nappies, toys, cotton buds and sanitary products are just some of the items that congest our sewerage system. Not only can these blockages require costly repairs, they can impact the health of our community and environment. Remember: bag and bin these items and only flush human waste down the loo.

**RIO  
TINTO**





## Conditions for Connection

Version 2 – June 2009

### Rio Tinto Utilities - Your Local Water Utility

#### Water Service Connections

If our water main is available to your property and has enough capacity, we will install your new water service connection within 10 business days after receiving your application and payment.

In all other cases, applications for water service connections will be considered subject to engineering and financial assessment. An outcome will be provided within 10 business days of your application.

Applications for water services can be made at our Dampier Customer Services Office.

The following notes apply to your application:

- The area where the water meter is to be installed is to be clear of obstructions.
- The water service connection will be installed 500mm from the side boundary that you nominate on your application.
- Where the main is located on the far side of any road, the water supply connection will not be installed opposite a tee junction or private driveway.
- If you wish to relocate your service (and if it is possible to do so), all costs will be charged to you.

#### Wastewater Connections

If our sewer main is available to your property and has enough capacity, we will install your new sewer service connection within 10 business days after receiving your application and payment.

Applications for wastewater connections can be made at our Dampier Customer Services Office.

The following notes apply to your application:

- You will need a licenced plumber to carry out your plumbing work.

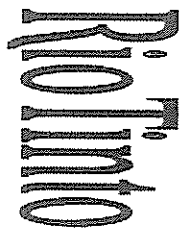
#### Commercial / Industrial Wastewater

If you wish to discharge industrial or commercial wastewater, you will need to contact the Dampier Customer Services Office.

Rio Tinto will enter into an agreement with you, which will ensure that the wastewater complies with regulations.

#### Contact Details

**Rio Tinto Utilities Customer Service**  
**Parker Point**  
**PO Box 21**  
**Dampier WA 6713**  
**Freecall: 1800 992 777**



UTILITIES DIVISION

## WATER SERVICES ASSET MANAGEMENT SYSTEM

# WATER QUALITY MANAGEMENT MANUAL

### Document Control

Issue	Revision	Prepared By	Reviewed By	Approved By	Signed	Date	Reason for Changes
A	0	H Bennett	P Promnitz	A Mughal		16/3/05	First Print Draft
A	1	H Bennett	P Promnitz	P Promnitz		26/8/05	Brockman, Marandoo, Rhodes Ridge and Yandi information inserted
B	0	H Bennett	D Stevens	D Stevens		14/9/06	Cape Lambert / Pannawonica added
C	0	H Bennett	D Stevens	D Stevens		29/12/06	Annual review - Laboratory details amended
D	0	H Bennett	D Stevens	D Stevens		18/12/07	<ol style="list-style-type: none"><li>1. Substitute Dept of Water for Waters and Rivers Commission at Clause 4.2.4.2.</li><li>2. Substitute House 699 for House 700 for Paraburdoo in sampling points (page 15)</li></ol>
E	0	H Bennett	P White	P White		30/9/08	Complete revision for full adoption of 2004 Australian Drinking Water Guidelines
F	0	H Bennett	P White	P White		4/1/2010	Revise sampling regime 4.7.1

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APPENDIX 8 – Training package	

# WATER QUALITY MANAGEMENT PLAN

## DISTRIBUTION LIST

General Manager Utilities

Manager Networks

Superintendent Networks Inland

Superintendent Networks Coastal

Supervisor Networks Dampier

Supervisor Networks Paraburdoo

Supervisor Networks Tom Price

Supervisor Networks Pannawonica

Supervisor Networks Cape Lambert

Planner Networks Dampier

Planner Networks Paraburdoo

Planner Networks Tom Price

Jones and Paull Plumbers Dampier

Byblos Construction Tom Price / Paraburdoo

Specialist Reliability Engineer Networks

Specialist HSE Utilities

# **WATER QUALITY MANAGEMENT PLAN**

## **1.0 INTRODUCTION**

The Water Quality Management Manual has been developed as part of the requirements of the Water Services Operating Licence (town water supply systems) and Asset Management Plan, for compliance with the Mines Inspectors directives with regard to Mine site potable water quality, and for control of Legionella in accordance with Rio Tinto Standard B8.

This manual was prepared to provide guidance information on characteristics which are to be tested, sampling procedures and frequencies, testing regimes and water quality monitoring procedures required to comply with the requirements of the 2004 Australian Drinking Water Guidelines.

### **1.1 Purpose**

The purpose of the manual is to ensure that a safe and reliable water quality supply is provided to town customers within Utilities Networks licence area, and to mine and ports supplied by Utilities Networks.

### 4.3 Preventative measures

#### 4.3.1 Existing measures / multiple barriers

Multiple barriers are used for the progressive reduction of risk to the water source and to prevent contamination of the water supply. Each barrier commences at the water source and progresses through abstraction, treatment, and distribution.

The selection of barriers is dependent on risk assessment, practicality, potential cost and benefits and impacts on other stakeholders. A number of barriers are used by Rio Tinto Utilities as follows:

##### 1. Catchment management

All raw water is abstracted from groundwater bores, where the risk of contamination is low.

##### 2. Groundwater management

Groundwater management is controlled by the Department of Water.

Groundwater management is administered by Rio Tinto by 'Groundwater Operating Strategies', which are agreements between Pilbara Iron and Department of Water detailing abstraction and monitoring requirements, and reporting by both parties (refer IEMS system and Appendix I0).

New water sources are determined by testing by hydrogeological consultants or Rio Tinto hydrogeological staff.

All bores are constructed by experienced drilling contractors.

Bores are constructed so as to prevent contamination of the water supply and aquifers.

##### 3. Water treatment processes / disinfection

Water treatment in Tom Price, Paraburdoo and Pannawonica is limited to disinfection by chlorine, with the exception of Paraburdoo bore PTP9, which uses pressure filters for the removal of iron and manganese.

The water supply to Dampier and Cape Lambert is treated and disinfected by the Water Corporation.

Levels of chlorine in the water are monitored using online instrumentation and regular testing.

Marandoo water supply is disinfected by ultraviolet light.

##### 4. Detention in protected storage tanks

Following disinfection, water is temporarily stored in roofed storage tanks.

Access to storage tanks is controlled. Unauthorised access is controlled by security fences and locked gates.

Tanks are sealed to prevent access by birds and vermin.

## 5. Protection and maintenance of the distribution system

The structural integrity and cleanliness of water mains are managed using the SAP system, and includes procedures for preventative and corrective maintenance (eg chlorine system effectiveness – refer PMO1).

The disinfection process imparts a residual level of disinfection in the water mains, and this is monitored through regular testing. Chlorine testing is carried out on water taken from the designated sample points on a weekly basis. The testing is carried out in-house on equipment held at the Paraburdoo, Tom Price and Dampier offices. Two test methods exist; a simple colour test based upon addition of an indicator, and an electronic analyser and can be used for cross checking purposes. In addition, continuous online monitoring of chlorine levels is recorded on CITECT at Paraburdoo and Tom Price.

This testing indicates the effectiveness of the disinfection process.

Operational and maintenance manuals are available for all chlorination sites.

A dedicated team of Rio Tinto Maintainers is responsible for operational monitoring and maintenance at Pannawonica, Paraburdoo and Tom Price. Contract Maintainers are responsible for operational monitoring and maintenance at Cape Lambert and Dampier.

Annual leak detection programs are used to determine potential leaks and bursts in the town mains systems.

Diesel backup pumps are being purchased to prevent outages in the case of a power failure.

New mains are disinfected following construction.

## 6. Consumers

High risk services (as identified by the requirements of AS3500) are fitted with RPZD (reduced pressure zone device) backflow prevention devices, which are tested annually (refer **Backflow Prevention file and PMO1**).

# Safe Work Procedure

Rio Tinto

UTILITIES  
NETWORKS

IronSafe

Title: POTABLE WATER SAMPLING (MICROBIOLOGICAL)

Page: 2

Doc Ctrl No: W&S 6.03

Revision:1

Date: 18.5.2008

2. **Aims and Objectives** The aim of this SWP is to provide an accurate method for the sampling of Potable Water (Microbiological)
3. **Safety Notes**
- 3.1 **Safety** Australian Standards 5667
- 3.2 **PPE Requirements** Safety Glasses, Steel Toe Cap Boots, Long Sleeve Shirt, Long Pants, Sun Hat, Chlorine Tester (with DPD Tablets), 2 Foam Eskies, 3 Custody Forms (1 per Esky, 1 Rio Tinto Copy) 1 Roll of masking Tape, Sample Bottles ( 2 per sample point) Ballpoint Pen (not felt tip), Propane heating Torch, 2 Plastic Bags, 1 Freezer Brick (wrapped in paper towel), 1 Airfreight Con Note, PathWest label
- 3.3 **Training Required** HWP/ Driver Awareness
4. **Procedure**

Job Steps	Critical Safety/ Environmental/ Efficiency Steps
1. Prior to commencing ensure enough	Sampling to be carried out only on Mondays, Tuesday or Wednesdays. (to ensure samples are analysed next day)
2. Check sample bottles have the correct sample ID	Sample ID with the suffix "A" is for Amoeba & Naegleria
3. Run the tap for 3 minutes	
4. Flame sterilise sample point (tap)	Direct the flame around the outside and inside of the outlet. To ensure complete sterilisation.
5. Run the tap for 3 minutes	
6. Measure total Chlorine level	
7. If total chlorine level is less than 0.2ppm, run sample tap for 2 minutes, and then repeat step 5. Continue running tap and measuring chlorine until minimum chlorine readings of 0.2ppm is achieved	
8. Record chlorine level on custody form	



# Safe Work Procedure

RioInfo

UTILITIES  
NETWORKS

IronSafe

Title: POTABLE WATER SAMPLING (MICROBIOLOGICAL)

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## 4. Procedure Continued.....

Job Steps	Critical Safety/ Environmental/ Efficiency Steps
<p>9. Draw off sample immediately</p> <p>10. Pack all coliform samples in Esky with freezer brick</p> <p>11. Pack all amoeba / naeglaria samples in Esky <u>without</u> freezer brick</p> <p>12. Fill out custody forms, seal in plastic bag and place one in each Esky</p> <p>13. Seal up both eskies with masking tape</p> <p>14. Fix self adhesive label and con note to sides of each Esky</p> <p>15. Deliver eskies to Airfreight agent</p>	<p>Fill the sample bottle leaving a small air space in the bottle. Do not over flow the bottle as this may displace the sodium thiosulphate</p> <p>Custody forms must be protected from moisture</p> <p>Tape Eskies together to prevent loss in transit</p> <p>Return 3<sup>rd</sup> custody form and con note copy to team administrator</p>

Title: POTABLE WATER SAMPLING (MICROBIOLOGICAL

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- 5. Reference**
- AS/NZS 5667.5: 1998 Water quality – Sampling
  - 1987 NHMRC Guidelines for Drinking Water
  - 1996 Australian Drinking Water Guidelines
  - Water Sampling doc.  
*U: Utilities/Water*
  - Water Sampling Program doc.  
*U: Utilities/Water/Water Sampling program*
  - Water Quality Management Manuel  
(infrastructure) Issue D 18.12.07

**6. Appendices**

Potable Water Microbiological Testing Guidelines			
Parameter to test for	Guideline limits	Who is to be notified of the results	Who is to be notified if the results exceed the guidelines
Total coliforms. Thermo tolerant coliforms. Amoeba. Naegleria.	Total coliforms = <1 Thermo tolerant coliforms = <1 Amoeba = 0 Naegleria = 0	Specialist Reliability Engineer – Utilities Networks  Quarterly – Economic Regulation Authority (ERA) & Health Department of WA (HDWA)	Superintendent Utilities Networks.  Dependent on characteristics – ERA & HDWA
Legionella Colour Turbidity	<10		

Collect samples and prepare for transportation as follows:

#### Cape Lambert

Collect the samples on a Tuesday and prepare for transportation, drop off at the Main Warehouse prior to 13:30 for pickup by TNT Express for delivery to the Karratha airport.

Attach an orange TNT Domestic Prepaid consignment document to the esky's using a Rio Tinto Service Order number as the Customer Reference, enter 21375897 (Rio Tinto account number) in the Account Number section of the document.

#### Dampier

Attach an orange TNT Domestic Prepaid consignment document to the esky's using a Rio Tinto Service Order number as the Customer Reference, enter 21375897 (Rio Tinto account number) in the Account Number section of the document.

Deliver the esky's to the Dampier Post Office before 14:00 hours on the day the samples were collected, the esky's must be on the first available flight to Perth for the samples to be tested the next day.

#### Pannawonica

The method of transportation between Pannawonica and Karratha is to be determined.

Attach an orange TNT Domestic Prepaid consignment document to the esky's using a Rio Tinto Service Order number as the Customer Reference, enter 21375897 (Rio Tinto account number) in the Account Number section of the document.

The samples are to be on the first available flight to Perth on the day the samples are taken for testing the next day.

#### Paraburdoo

Attach an Australian Air Express consignment document to the esky's using a Rio Tinto Service Order number as the Customer Reference, enter 21375897 (Rio Tinto account number) in the Account Number section of the document.

Deliver the esky's to the Paraburdoo Post Office before 14:00 hours on the day the samples were collected, the esky's must be on the first available flight to Perth for the samples to be tested the next day.

#### Tom Price

Attach a TNT consignment document to the esky's using a Rio Tinto Service Order number as the Customer Reference.

Deliver the esky's to the Lestok yard in the LIA, before 14:00 hours on the day the samples were collected, as the esky's must be on the first available flight to Perth for the samples to be tested the next day.

Further information can be found in the Pathwest Microbiology document attached at Appendix 1.

Sample locations are listed below.

Residual chlorine data is to be entered on the Pathwest Chain of Custody Sheet.

Colour and turbidity results are to be analysed in accordance with attached Appendix 3 and 4.

## Sample Locations – all sites

Site	ID	Sample Location
Cape Lambert	CL01	Main Administration
	CL02	Control Room
	CL03	Power Station
	CL04	Ore Wharf
	CL05	Gatehouse
	CL06	F Troop
Dampier	DAM01	Parker Point main
	DAM02	Parker Point dumper
	DAM03	Town Training centre
	DAM06	EII Dumper
	DAM07	7 Mile
	DAM08	Dampier town main
Pannawonica		11 Maitland St
		7 Harding Way
		27 Peedamulla Way
		Town Office
		Town Workshop
		Mine Admin
		Mine Warehouse
		Mine Alpha 16
Paraburdoo		Laydown area
		Collector tank 1
		Town tanks
		Robe Ave
		House 699
		Airport
		PS2 outlet
		Gas turbine office
		ER main tank
		Channar collector tank
		Channar MOC pre filter
		Channar MOC post filter
		Turee Creek collector tank
Tom Price		Southern Fortescue collector tank
		Town tanks
		Golf Club
		Area W
		Hardy River collector tank 1
		Mine Tank
		Mine – Utilities
		Mine – MOC
		Mine – Concentrator
		Mine – BME camp
Marandoo		Turee Creek collector tank
		Marandoo bore
		Main tank
		Crib room
		Lab sink
		Workshop kitchen



**ISOLATIONS:** None

**PPE REQUIREMENTS:**

**SAFETY NOTES:**

Clear flammable materials from around the sample point before using the blowtorch.

**MATERIALS:**

First aid kit  
Gas blowtorch  
Hot work permits  
Sample bottles  
Esky  
Freezer bricks

## **b) Chlorine**

Test the disinfection free chlorine levels at the test points as below and as shown on the Maintenance Order.

Tests are to be completed every week (fortnightly at Cape Lambert and Pannawonica).

Sample locations are as follows:

Site	ID	Sample Location
Cape Lambert	CL01	Main Administration
	CL02	Control Room
	CL03	Power Station
	CL04	Ore Wharf
	CL05	Gatehouse
	CL06	F Troop
Dampier	DAM01	Parker Point main
	DAM02	Parker Point dumper
	DAM03	Town Training centre
	DAM06	EII Dumper
	DAM07	7 Mile
	DAM08	Dampier town main
Pannawonica		11 Maitland St
		7 Harding Way
		27 Peedamulla Way
		Town Office
		Town Workshop
		Mine Admin
		Mine Warehouse
		Mine Alpha 16
Paraburdoo		Laydown area
		Town tanks
		Robe Ave
		House 699
		Airport
		PS2 outlet
		Gas turbine office
		Channar PS outlet
Tom Price		Channar MOC
		Town tanks
		Golf Club
		Area W
		Mine Tank
		Mine – Utilities
		Mine – MOC
		Mine – Concentrator
		Mine – BME camp

Carry out the test using the Palintest Pooltest 3 Photometer test instrument, or other approved device. Refer Appendix 2.

The test results are to be sent to:

Specialist Reliability Engineer  
Pilbara Iron  
PO Box 114  
Paraburdoo WA 6754

Ph 08 91434410  
Mob 0409 291013  
Fax 08 91434976  
Email [heath.bennett@riotinto.com](mailto:heath.bennett@riotinto.com)

See Table 2 for licence limit values, contacts for the notification of routine test results or of results which exceed licence limits/guidelines.

Contact for ordering Pooltest 3 equipment and tablets:

D4 Data Pty Ltd  
2/29 Parrs Road  
Croydon Vic 3136  
Phone +61 3 9725 6637  
Fax +61 3 9723 7283  
web [d4data.com.au](http://d4data.com.au)  
email [email@d4data.com.au](mailto:email@d4data.com.au)

**LOCATION**

Refer to Site map if unsure of location.

**MATERIALS:**

First Aid Kit  
Key WSR202  
Palintest Pooltest 3 Photometer Test Instrument  
Palintest DPD No 1 Tablets – Photometer Grade  
Round Test Tubes, 10ml glass (PT 515)  
White rod for crushing the tablet

Table 2

Potable Water Chlorine Testing Guidelines			
Parameter to test for	Guideline limits	Who is to be notified of the results	Who is to be notified if the results exceed the guidelines
Disinfection free chlorine	Range 0.5 – 2.0ppm at point of treatment.  Minimum at consumer outlet 0.2ppm.	Specialist Reliability Engineer	Superintendent Utilities Networks.

## Appendix 1

# PATHWEST LABORATORY MEDICINE WA INSTRUCTION SHEET

## 1.0 INTRODUCTION

All water samples for microbiological analysis must be collected in the bottles supplied by PathWest, unless the sample is of commercial prepackaged water or a similar product.

When collecting samples for different parameters (i.e. chemical, physical etc) from the same sampling point, always collect the samples for microbiological examination first. Prelabel bottles with a waterproof pen prior to sampling and keep bottles unopened until sample collection is performed.

To assist in the sorting of samples at the laboratory, the letter "A" should be placed after the sender number on the amoebae bottle. (See W-A request form)

## 2.0 COLLECTION

**NOTE:** At no time should the sampler's hand come into contact with the cap or neck of the bottle.

The following sample types are collected into a 250ml plastic bottle.

Samples requiring analysis for:

- Total Coliforms
- Thermotolerant Coliforms
- Thermophilic Amoeba
- Thermophilic Naegleria



All samples must be transported in eskies. If samples are suspected to have a high bacterial count (i.e. sewerage, drains, effluents etc) they must be transported in separate eskies to drinking and pool water samples.

Samples for bacteriological analysis are to be transported with ice brick(s). One or more ice bricks need to be added depending on the climatic conditions as the sample MUST maintain a temperature of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . This is to prevent the multiplication of bacteria which may result in false bacterial counts.

For samples requiring analysis for amoebae, the samples must be sent at ambient (room) temperature. The esky must not contain an ice-brick as the chilling of the sample will kill any viable amoebae.

## PATHWEST LABORATORY MEDICINE WA INSTRUCTION SHEET

Whenever possible, samples should arrive at the laboratory on the day of collection, preferable before PM. Whilst this is possible for samples collected in the vicinity of the metropolitan area, it is clearly not always feasible if samples are from country areas. Samples from country areas must arrive no later than the day after collection, i.e. within 24 hours.

## 3. DOCUMENTATION

Samples are to be accompanied by a correctly filled out and appropriate request form as detailed below:

- i) Green (WA) form, which is used when samples are to be tested for amoebae and bacteria, or amoebae only. (The letter "A" indicates Amoebae).
- ii) Blue (WB) form, which is used when samples are to be tested for bacteria only. (The letter "B" indicates Bacteriology).



<b>INFORMATION REQUIRED ON REQUEST FORM</b>	<b>INFORMATION REQUIRED ON THE BOTTLE</b>
The boxes on the top of the request form must be ticked.	Sender No. or Sender's own reference number.
Senders Authority and address in full.	Site Code (if given)
Any relevant senders comments or fax number	Point of Collection/Source
Tests required	Description of site and source of water
Date collected	Site location details (e.g. name of swimming pool)
Signature	Date & Time of Collection
Site code (if given)	Transportation Temperature (4* C or ambient)
Point of collection	Sender's Name (Shire, City council etc.)
Treatment, temperature and pH (if relevant)	

**NOTE:**

- a) Separate forms must accompany samples from each swimming location.
- b) Potable waters and effluents must not be written on the same request form.
- c) The information on the bottle must be the same as on the request form.

#### **4. EQUIPMENT**

Sample bottles, eskies and ice bricks can be obtained by sending a facsimile transmission to PathWest Supply Department [Fax No. (08) 9224 7036]. Please state the number of each item required, a return postal address (as a post office box number is not sufficient), with your name and phone number and the Courier company you wish to use. Request forms can be obtained by writing a message on a request form accompanying sample delivery.

Alternatively, sampling equipment and documentation may be collected directly from the laboratory.

#### **5. CONTACT PERSON**

For a full set of instructions or assistance please contact the Senior Scientist in charge of the laboratory on (08) 9346 2583.

## CHAIN OF CUSTODY FORM



U:\Utilities Division\  
Utilities\Utilities - Netv



5KG

DC V01/05

Sender

PILLBARA IRON

Address

P.O. BOX 21 DAMPIER

City

DAMPIER

State

WA

Postcode

6713

Contact Name

PLANNING OFFICER

Phone

08 91435650  
08 91435556

Description of Contents

EXTENDED WARRANTY NOT AVAILABLE

476592884

DATE OF GOODS

This consignment must NOT be used for shipping DANGEROUS OR HAZARDOUS goods. Contact your nearest TNT office for further information.

Agreement We submit the goods described above for carriage and agree that the Standard Terms and Conditions of Contract of Carriage and TNT's Rate Agreement (if applicable) apply to the carriage of these goods.

Sender's Signature

Date

Total Cubic Measurement

cmX

cmX

cm<sup>3</sup>

m<sup>3</sup>

WE ARE NOT COMMON CARRIERS. The Standard Terms and Conditions of Contract on the back govern this Contract. TNT Express, a division of TNT Australia Pty Limited ABN 41 000 495 269

Product No. 833952



Receiver

WATER EXAM/LAB PATH CENTRE

Address

CHARLES GARDENER HOSP, K BLOC

City

MEDLANDS

State

WA

Postcode

6009

Contact Name

TECH IN CHGE

Phone

08 93462583

SAMEDAY  
UPGRADE



Saturday or weekend delivery or after hours pick up services are only available using "Sameday Upgrade". Please complete special instructions. Additional charges will apply for light bulky items (cubic 250m<sup>3</sup>) and items exceeding weight limits.

Special Instructions

Insert Svc Order # Here

Received in good order Receiver's Signature

Date

Time

Account Number

21375097

TNT USE ONLY

Time

Delivery car no.

Time

WE ARE NOT COMMON CARRIERS. The Standard Terms and Conditions of Contract on the back govern this Contract. TNT Express, a division of TNT Australia Pty Limited ABN 41 000 495 269

Product No. 833952

REVENUE COPY

REVENUE COPY

A Division of TNT Australia Pty Limited ABN 41 000 495 269

TNT Express

A Division of TNT Australia Pty Limited ABN 41 000 495 269



AUSTRALIA WIDE PICK UPS 13 11 50



## ***SENDER'S INSTRUCTION AND ADDITIONAL INFORMATION ON SUBMISSION OF SAMPLES***

1. This request form W-A is to be used for all samples that require investigation for amoebae. Samples for bacteriological analysis only should be submitted on form W-B.
2. Please write clearly in black biro.
3. Forward samples in insulated containers to arrive at the laboratory no later than 16.00 hours Monday-Friday. Samples for amoebae investigations must be submitted at ambient temperature. The corresponding samples for bacteriological analysis must be submitted chilled (below 5°C). This can be achieved by using ice-bricks. Samples must not be frozen.
4. Whenever possible the elapsed time between collection and microbiological analysis should not exceed 6 hours. Where problems with sample collection and transport exist, the elapsed time may exceed 6 hours but should not exceed 24 hours.
5. Samples with potentially high bacterial counts (e.g. sewage, effluent and drains) must not be transported in the same container as drinking water or swimming pool samples.
6. For routine analysis, the range of tests undertaken will be based on existing standards or guidelines, information provided by the sender and previous laboratory findings. Any non-routine test parameter required must be requested in writing in 'Sender's Comments,' or by direct communication with a scientist at the laboratory.
7. If the water or effluent has received any disinfection treatment, please specify the method or combination of methods used, i.e. chlorine, chloramines, bromine, ozone, UV, etc, in the space provided on the form.
8. For samples of treated and untreated drinking water, the laboratory may report background counts of non-coliform organisms that proliferate into visible colonies on the culture medium. The bacteria enumerated in this way may represent only a small fraction of the total bacteria likely to be present and should not be confused with heterotrophic/standard plate count. Background counts per 100 ml are reported according to the following key:

- = 0 ± = 1-50 + = 50-125 ++ = 125-250 +++ = >250

\* = Due to a high background the count may be underestimated.

9. For repeat samples, or where unsatisfactory laboratory results have been obtained, please indicate previous laboratory numbers, dates or sampling and site codes in 'Senders Comments' space.
10. Please use correct site codes/reference numbers whenever possible. This speeds up the processing of the samples and reduces the chance of errors.
11. If the water or effluent contains high levels of copper, zinc, or is thought to contain high levels of heavy metals please advise the laboratory so that a chelating agent may be incorporated in the sampling bottle.



## **PRT1 - FOR WEEKLY WATER QUALITY SAMPLING**

REVISION	WRITTEN BY	CHECKED BY	DATE	REASON FOR CHANGES
0	J Taylor	W Power	Jan03	Original
1	J Taylor	D Pampano	Dec05	Change contact details
2	H Bennett	J Taylor	Sept 08	Revision for 2004 ADWG

### **INSTRUCTIONS**

#### **a) Microbiological**

Refer to SJP W&S 6.03 – Potable Water Sampling Microbiological.

Collect the water samples for testing from the locations shown below and on the Maintenance Order.

The samples are to be collected weekly (fortnightly for Cape Lambert and Pannawonica).

Collect the samples as detailed in SJP W&S6.03 Potable Water Sampling, ideally on the 1<sup>st</sup> working day of the week, as samples are to be tested by PathWest within 24 hrs of them being collected.

If the samples are taken later than Wednesday PathWest will need to be contacted directly to allow them make arrangements for the testing to be carried out in the required time frame.

Issue a Hot Work Permit before applying heat to the sample point piping, ensure all flammable materials have been cleared from the sample point site.

See Table 1 for licence limit values, contacts for the notification of routine test results or of results which exceed licence limits/guidelines.

Attach the printed PathWest address document to the esky's.

The test results will be sent to the “Specialist Reliability Engineer” in Paraburdoo by PathWest. The test results will be entered into the database by the engineer.

Cross out any items not required when reordering water sampling equipment from PathWest using the standard fax form.

PathWest Stores contact details:

Phone: 08 9346 2167

Fax: 08 9381 7092

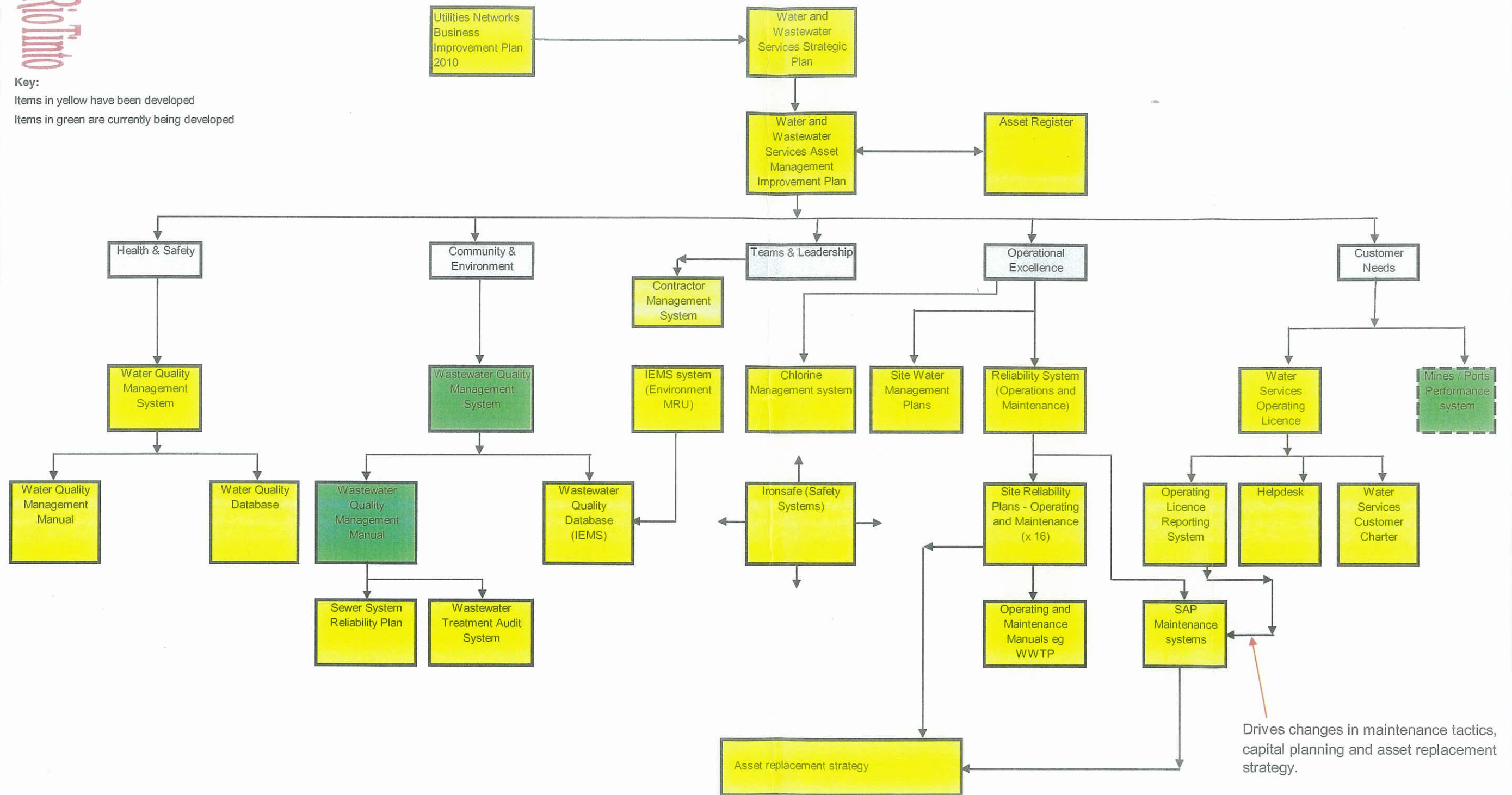
PathWest Technologist in Charge phone number is: 08 93462583.

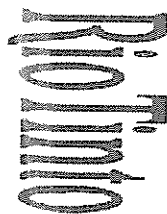
Table 1

# RIO TINTO NETWORKS WATER AND WASTEWATER SERVICES ASSET MANAGEMENT SYSTEM OVERVIEW (Version 4 - 4/1/2010)



**Key:**  
 Items in yellow have been developed  
 Items in green are currently being developed





**RIO TINTO UTILITIES NETWORKS**  
**ASSET MANAGEMENT IMPROVEMENT PLAN**  
**WATER AND WASTEWATER SERVICES**

**2010**

**Document Control – Change Register**

Issue	Revision	Prepared By	Reviewed By	Approved By	Approver sign	Date	Description of Change
A	0	D Piatto	P Promnitz	G Will		28/9/01	First print
B	0	H Bennett	P Promnitz	P Promnitz		11/6/04	Update to Section 4.2, 5.1, Insert Section 8.0
C	0	H Bennett	P Promnitz	P Promnitz		18/11/04	Insert Section 4.3, Appendix D, Appendix E
D	0	H Bennett	A Mughal	A Mughal		15/3/05	Insert Asset Effectiveness flowcharts – Section 4.1
E	A	H Bennett	D Stevens / A Nuttman	D Stevens		17/9/06	Complete Revision to Pilbara Iron Asset Management Manual format
E	A – Q1	H Bennett	P White	D Stevens		27/4/07	2007 Quarter 1 review completed
E	A – Q2	H Bennett	P White	D Stevens		29/6/07	2007 Quarter 2 review completed
E	A – Q3	H Bennett	P White	D Stevens		4/10/07	2007 Quarter 3 review completed
E	A – Q4	H Bennett	P White	D Stevens		3/1/2008	2007 Quarter 4 review completed
E	A – Q1 2008	H Bennett	P White	D Stevens		2/4/08	2008 Quarter 1 review completed
E	A – 2009/10	H Bennett	P White	P White		2/2/09	Annual revisions to be completed
E	B	H Bennett	P White	P White		4/1/2010	Annual review and update for 2010



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Appendix 1 – Asset Management Process Flowchart

Appendix 2 – System Description

Appendix 3 – Hazard Identification and Risk Estimation summary

Appendix 4 - References

### Distribution List

Position	Location
Manager Networks Services	Dampier
Networks Superintendent – Inland	Tom Price
Networks Superintendent – Coastal	Dampier
Specialist Reliability Engineer	Paraburdoo
Networks Supervisor (Water / CMS)	Dampier
Networks Supervisor	Pannawonica
Networks Supervisor	Paraburdoo
Networks Supervisor	Tom Price
Planner	Dampier
Planner	Paraburdoo
Planner	Tom Price
Asset Management Team	Perth

## **INTRODUCTION**

### **Rio Tinto Networks – Strategic Asset Management Plan for Water Services**

The Utilities Networks division was formed in 2008 from the former divisions of the old Utilities MRU, and is responsible for the provision of water, wastewater, electricity, air services, site communications, hydrocarbon management, housing and customer relations for the following sites:

- Cape Lambert Port
- Channar mine
- Dampier town
- Dampier ports (Parker Point and East Intercourse Island)
- Eastern Ranges mine
- Pannawonica town
- Paraburdoo mine
- Paraburdoo town
- Tom Price mine
- Tom Price mine
- Wickham town (not water and wastewater services)

The regulation of water and wastewater services for town services is provided by the Economic Regulation Authority (ERA), by a Water Services Operating Licence which was issued to Hamersley Iron in 2003.

The regulation of water and wastewater services for mines and ports, and for Pannawonica town conducted under the Mines Act.

The regulation of water and wastewater services for Wickham town is by the ERA, by a Water Services Operating Licence issued to the Water Corporation.

### **Operating Environment**

The provision of mine and port water and wastewater services is required to maintain the operation (mineral processing, dust suppression etc) of Rio Tinto's iron ore mining activities. The maintenance of town services is required to provide appropriate levels of service to Rio Tinto employees and other residents who are housed in the towns.

Utilities Networks operates its water and wastewater services under two key performance areas:

- 1) Health, Safety and Environment (HSE)
- 2) Reliability

In relation to water and wastewater services, the HSE area covers water quality, wastewater quality, safe operation and maintenance of water and wastewater assets for customers, employees and other persons, the control of discharge to the environment, and the management of water services in a manner that does not adversely affect the environment.

The reliability area relates to the provision of water and wastewater services of a high standard of quality and continuity, with a minimum of breakdowns.

In this operating environment, Utilities Networks manages its systems to achieve these two goals, while not affecting the cost of water and wastewater services to its customers.

RIO TINTO NETWORKS ASSET REGISTER @ 2/1/2010

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
Paraburdoo Township	Paraburdoo Township	Northern borefield / CT1 / PS1	Water Supply	Northern borefield bores incl pumps / motors (x 11)						
		Northern borefield / CT1 / PS1		PTP1	1970					
		Northern borefield / CT1 / PS1		PTP2 - redrill	1988					
		Northern borefield / CT1 / PS1		PTP3	1970					
		Northern borefield / CT1 / PS1		PTP4	1970					
		Northern borefield / CT1 / PS1		PTP5 - redrill	1988					
		Northern borefield / CT1 / PS1		PTP7	1970					
		Northern borefield / CT1 / PS1		PTP8	1970					
		Northern borefield / CT1 / PS1		PTP9	1970					
		Northern borefield / CT1 / PS1		PTP10	1970					
		Northern borefield / CT1 / PS1		PTP11	1970					
		Northern borefield / CT1 / PS1		Chlorination facility - PTP2	2009					
		Northern borefield / CT1 / PS1		Chlorination facility - PTP9	2009					
		Northern borefield / CT1 / PS1		PTP9 air compressor	2009					
		Northern borefield / CT1 / PS1		PTP9 pressure filters	1982					
		Northern borefield / CT1 / PS1		Northern borefield collector mains - 200mm / 350mm dia steel - 5km	1970	MSCL				
		Northern borefield / CT1 / PS1		Bore electrical control cubicles	1970					
		Northern borefield / CT1 / PS1		Power supply to bores - pole / cables / TX	1970					
		Northern borefield / CT1 / PS1		Collector tank 1 (CT1) - 650m3	1970	Steel				
		Northern borefield / CT1 / PS1		Pump station 1 (PS1) - 2 x 200hp	1970			2010 / 2011		
		Northern borefield / CT1 / PS1		Power supply to PS1	1970					
		Northern borefield / CT1 / PS1		Chlorination facility - CT1	2009					
		Northern borefield / CT1 / PS1		Trunk main PS1 to Town Tanks - 350mm dia steel - 3.3km	1970	MSCL				
		Town tanks		Town Tanks - 2 x 9ML	1970	Steel				
		Town tanks		Power supply to town tanks	1970					
		Town tanks		Chlorination facility - Town Tanks	2009					
		Town tanks		Trunk main - Town Tanks to town - 500mm dia steel - 2.7km	1970	MSCL				
		Town tanks		Trunk main - Town Tanks to mine - 350mm dia steel - 3.1km	1970	MSCL				
		Town		Trunk main - town - 375mm dia steel - 2.7km	1970	MSCL				
		Town		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 29km	1970	MSCL / AC / PVC		2010 = valves, 2011 = mains		
		Town		Service connection pipework and water meters	1970					
		Town		Comms system for bores, PS, tanks etc	1970					
	Paraburdoo Airport	Paraburdoo Airport	Water Supply	Bore PAP1 incl pump / motor	1973					
		Paraburdoo Airport		Bore collector main - 100mm dia steel - 0.5km	1973					
		Paraburdoo Airport		Bore electrical control cubicle	1973					
		Paraburdoo Airport		Power supply to bore - pole / cables / TX	1973					
		Paraburdoo Airport		Collector / fire tank - 132m3	2004					
		Paraburdoo Airport		Pump station - 3 x 2.2kw	2004					
		Paraburdoo Airport		Fire pump	1973					
		Paraburdoo Airport		Distribution pipework - to terminal etc - 100mm steel / PVC - 0.2km	2004	MSCL / PVC				
		Paraburdoo Airport		Fire system pipework - 200mm dia polyethylene	2006					
		Paraburdoo Airport		Chlorination facility	2006					
		Paraburdoo Airport		Control system for bores, PS, tanks etc				2011		
	Paraburdoo Township	Para town sewer system	Sewerage	Sewer mains - gravity - 19km	1970 - 2009	VC / PVC / PE		Ongoing		
		Para town sewer system		I/O property connections	1970 - 2009			Ongoing		
		Para town sewer system		Sewer pump station No 2 (SPS2)	1970					
		Para town sewer system		SPS2 controller	2009					
		Para town sewer system		Power supply to SPS2	1970					
		Para town sewer system		Sewer pump station No 1 (SPS1)	1970			2010		
		Para town sewer system		SPS1 controller	2008					
		Para town sewer system		Power supply to SPS1	1970					
		Para town sewer system		Pressure main - SPS1 to WWTP	1970					
		Para town WWTP		Town wastewater treatment plant - Imhoff tank + 3 x waste stabilisation ponds	1970					
		Para town WWTP		Chlorination facility - WWTP	1980			2011		
		Para town WWTP		Power supply to WWTP	1970 / 2009					
		Para town WWTP		Wastewater treatment plant - trade waste facility	2008					
Paraburdoo Mine	Turee Creek borefield system	Water Supply		Turee Creek borefield bores x 6 incl pumps / motors						

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
Greater Paraburdoo		Turee Creek borefield system		PBO1	1996					
		Turee Creek borefield system		PBO2	1996					
		Turee Creek borefield system		PBO3	1996					
		Turee Creek borefield system		PBO4	1996					
		Turee Creek borefield system		PBO5	1996					
		Turee Creek borefield system		PBO7	1996					
		Turee Creek borefield system		Bore electrical control cubicles	1996					
		Turee Creek borefield system		Power supply to bores - pole / cables / TX	1996					
		Turee Creek borefield system		Trunk main - Turee Creek borefield to Fines Plant - 37km	1996			2010		
		Turee Creek borefield system		Turee Creek collector tank	1996					
		Turee Creek borefield system		Turee Creek pump station	1996					
		Turee Creek borefield system		Power supply to Turee Creek pump station	1996					
		Turee Creek borefield system		Turee Creek surge tanks x 2	2005 / 2006					
		4W / Southern borefield system		Southern borefield - PMP5 bore - redrill	1988					
		4W / Southern borefield system		Bore electrical control cubicle						
		4W / Southern borefield system		Power supply to bore - pole / cables / TX						
		4W / Southern borefield system		Southern borefield collector mains - 0.3km	2004					
		4W / Southern borefield system		Trunk main - Southern borefield / 4W to Collector tank 6 - 3.1km	2006					
		4W / Southern borefield system		Collector tank 6 (CT6)	2006					
		4W / Southern borefield system		Trunk main - CT6 to CT2 - 1.3km	2006					
		4W / Southern borefield system		Trunk main CT6 to branch ST6A/B - 0.5km	2006					
		CT2 / PS2		Collector tank 2 (CT2)	1985					
		CT2 / PS2		Pump station 2 (PS2)	2009					
		CT2 / PS2		Power supply to PS2	2009					
		CT2 / PS2		Chlorination facility - PS2	2004					
		CT2 / PS2		Trunk main - PS2 to plant areas - 0.6km	2006					
		PS3 / ST3		Pump station 3 (PS3)	1988					
		PS3 / ST3		Power supply to PS3	1988					
		PS3 / ST3		Storage tank 3 (ST3)	1988					
		PS3 / ST3		Main from PS3 to ST3 - 0.7km	1988					
		PS3 / ST3		1480 waterstand	1988					
		ST6 / PS6 / Fines Plant area		Collector tanks ST6A/B - 2 x 1ML	2006					
		ST6 / PS6 / Fines Plant area		Pump station 6 (PS6)	2006					
		ST6 / PS6 / Fines Plant area		Power supply to PS6	2006					
		ST6 / PS6 / Fines Plant area		Fines Plant interconnection pipework, control valves etc	2006					
		ST6 / PS6 / Fines Plant area		Mains - ST6A to Process water tank - 0.2km	2006					
		Para Plant area		Plant area distribution / reticulation mains, hydrants - 5.1km	1970					
		Para comms		Comms system for bores, PS, tanks etc						
	Paraburdoo Mine	Para mine sewer system	Sewerage	Sewer mains - gravity - 1km	1970-2009					
		Para mine sewer system		I/O building connections	1970-2009					
		Para mine sewer system		Sewer pump station No 3 (SPS3)						
		Para mine sewer system		SPS3 controller	2009					
		Para mine sewer system		Power supply to SPS3						
		Para mine sewer system		Sewer pump station No 4(SPS4)						
		Para mine sewer system		SPS4 controller	2009					
		Para mine sewer system		Power supply to SPS4						
		Para mine sewer system		Sewer pump station No 5 (SPS5)				2010		
		Para mine sewer system		SPS5 controller	2009					
		Para mine sewer system		Power supply to SPS5						
		Para mine sewer system		Pressure main - SPS5 to pit						
		Para mine sewer system		Pressure main - SPS4 to pit						
		Para mine sewer system		Pressure main - SPS3 to pit	2009					



Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
		Para mine WWTP SDU		Sewage disposal unit (WWTP) - extended aeration activated sludge package plant	1969					
		Para mine WWTP SDU		Chlorination facility - WWTP - tablet feeder	2005					
		Para mine WWTP SDU		Power supply to WWTP	1969					
		Plant MOC WWTP		Plant MOC WWTP sewage PS	2009					
		Plant MOC WWTP		Plant MOC WWTP	2009					
Channar Mine		Channar borefield	Water Supply	Channar bores x 3 incl pumps / motors						
		Channar borefield		CMP1	1986					
		Channar borefield		CMP2	1986					
		Channar borefield		CMP3	1986					
		Channar borefield		Bore collector mains - 4.2km	1986					
		Channar borefield		Bore electrical control cubicles	1986					
		Channar borefield		Power supply to bores - pole / cables / TX	1986					
		Channar borefield		Trunk main - Turee Creek main to Collector tank (emergency backup) - 0.25km	2006					
		Channar collector / PS		Channar collector tank - 200m3	1989					
		Channar collector / PS		Channar pump station	2008					
		Channar collector / PS		Power supply to PS	2009					
		Channar collector / PS		Chlorination facility - Channar PS	2007					
		Channar trunk main		Trunk main - Channar PS to main tank - 2.3km	1989					
		Channar main tank		Channar main tank - 4,200m3	1989					
		Channar main tank		Power supply to main tank	1989					
		Channar plant pipework		Distribution pipework - to Plant, offices, workshops etc - 2.2km	1989					
		Channar plant pipework		Plant areas pipwork - crusher, conveyors	1989					
		Channar plant pipework		Fire system pipework	1989					
		Channar plant pipework		Channar break tank - 22m3	2008					
		Channar 1 waterstand		Main to Channar 1 waterstand - 0.5km	1989					
		Channar 1 waterstand		Channar 1 waterstand - 60m3	1989					
		Channar 3 waterstand		Main to Channar 3 waterstand - 1km						
		Channar 3 waterstand		Channar 3 waterstand - 60m3						
		Channar 3 waterstand		Main to Channar from Channar 3 to 94E waterstand - 3.5km						
		Channar 94E		Channar 94E waterstand	2008					
		Channar 94E		Comms system for bores, PS, tanks etc						
		Midpoint bore		Midpoint bore CMP5	1986					
		Midpoint bore		Main to CMP5 - 0.6km	1986					
		Midpoint bore		Midpoint water / fire tank	2009					
		Midpoint bore		Midpoint pump station	2009					
		Midpoint bore		Distribution main to midpoint conveyors / transfer station - 0.1km	1986					
		Midpoint bore		Power supply to CMP5 and midpoint PS	1986					
Channar Mine		Channar mine sewer system	Sewerage	Sewer mains - gravity - 600m	1989 - 2007					
		Channar mine sewer system		I/O building connections	1989					
		Channar WWTP SDU		Sewage disposal unit (WWTP) - extended aeration activated sludge package plant	1989					
		Channar WWTP SDU		Chlorination facility - WWTP - tablet feeder	1989					
		Channar WWTP SDU		Power supply to WWTP	1989					
Eastern Range Mine		ER trunk main system	Water Supply	Trunk main - Turee Creek main to Transfer tank - 0.66km	2005					
		ER trunk main system		Transfer tank	2005					
		ER trunk main system		Transfer tank PS	2005					
		ER trunk main system		Power supply to Transfer tank PS	2005					
		ER trunk main system		Trunk main - Transfer tank to break tank - 1.3km	2005					
		ER break tank / PS		Break tank (incl fire water)	2007					
		ER break tank / PS		Process Plant PS	2007		To be replaced with PRV			
		ER break tank / PS		Turkeys nest tank PS	2007					

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
		ER break tank / PS		Fire PS	2007					
		ER break tank / PS		Power supplies to PS's	2007					
		ER plant main		Main to Process Plant - 0.2km	2007					
		ER Turkeys nest		Main to Turkeys nest (now tank) - 2.1km	2008					
		ER Turkeys nest		Turkeys nest tank	2008					
		ER Plant mains		Reticulation mains - Crib rooms, crusher - 0.2km	2005					
		ER Plant mains		UV disinfection - crib room	2005					
		ER Plant mains		Plant mains - sprays, waterstand, etc	2005					
		ER waterstand		ER waterstand	2008					
Tom Price Township										
		Southern Fortescue borefield system	Water Supply	Southern Fortescue borefield bores (x 10) incl pumps / motors						
		Southern Fortescue borefield system		SFP2	1969					
		Southern Fortescue borefield system		SFP4	1969					
		Southern Fortescue borefield system		SFP5	1969					
		Southern Fortescue borefield system		SFP6	1969					
		Southern Fortescue borefield system		SFP7	1969					
		Southern Fortescue borefield system		SFP8	1969					
		Southern Fortescue borefield system		SFP9	1969					
		Southern Fortescue borefield system		SFP10	1969					
		Southern Fortescue borefield system		SFP11	1969					
		Southern Fortescue borefield system		SFP12	1969					
		Southern Fortescue borefield system		Southern Fortescue borefield collector mains - 200mm / 300mm dia steel - 1.6km	1969	MSCL				
		Southern Fortescue borefield system		Bore electrical control cubicles	1969					
		Southern Fortescue borefield system		Power supply to bores - pole / cables / TX	1969					
		Southern Fortescue borefield system		Trunk main to Southern Fortescue Collector - 350mm dia steel - 11km	1969	MSCL		2011 ?		
		Southern Fortescue borefield system		Southern Fortescue Collector Tank - 2,300m3	1969	Steel				
		Southern Fortescue borefield system		Southern Fortescue Collector Pump Station - 5 x 156kw	1969					
		Southern Fortescue borefield system		Chlorination facilities - SF collector	2008					
		Southern Fortescue borefield system		Power supply to Collector PS	1969					
		Southern Fortescue borefield system		Trunk main to Southern Fortescue Booster - 350mm dia steel - 15.2km	1969	MSCL		2011 ?		
		Southern Fortescue borefield system		Southern Fortescue Booster Tank - 2,300m3	1969	Steel				
		Southern Fortescue borefield system		Southern Fortescue Booster Pump Station - 4 x 156kw	1969					
		Southern Fortescue borefield system		Power supply to Booster PS	1969					
		Southern Fortescue borefield system		Trunk main to Town Tanks - 350mm dia steel - 21km	1969	MSCL				
		TP Town tanks		Town Tanks - 2 x 9ML		Steel				
		TP Town tanks		Power supply to town tanks	1969					
		TP Town tanks		Chlorination facility - Town Tanks	2008					
		TP Town tanks		Trunk main - Town Tanks to town - 300mm dia steel - 1km	1969	MSCL				
		TP Town tanks		Trunk main - Town Tanks to mine - 300mm dia steel - 5km	1969					

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
Tom Price										
		TP Town mains		Trunk main - town - 250mm dia steel - 1km	1969	MSCL				
		TP Town mains		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 48km	1969	MSCL / AC / PVC				
		TP Town mains		Service connection pipework and water meters	1969					
		TP Comms		Comms system for bores, PS, tanks etc				2010 - IP		
	Tom Price Township	TP town Sewer system	Sewerage	Sewer mains - gravity - 43km	1969 - 2009	VC / PVC		Ongoing		
		TP town Sewer system		I/O property connections	1969 - 2009			Ongoing		
		TP town Sewer system		Sewer pump station No 2 (SPS2)	1969					
		TP town Sewer system		Power supply to SPS2	1969					
		TP town Sewer system		Sewer pump station No 1(SPS1)	1969					
		TP town Sewer system		Power supply to SPS1	1969					
		TP town WWTP		Town wastewater treatment plant - 3 x waste stabilisation ponds	1969					
		TP town WWTP		Chlorination facility - WWTP	2005					
		TP town WWTP		Power supply to WWTP	1969					
	Mount Tom Price Mine	Hardy/Mt Lionel borefield system	Water Supply	Hardy River borefield bores (x 14) incl pumps / motors						
		Hardy/Mt Lionel borefield system		HRP1	1969					
		Hardy/Mt Lionel borefield system		HRP2	1969					
		Hardy/Mt Lionel borefield system		HRP3	1969					
		Hardy/Mt Lionel borefield system		HRP4	1969					
		Hardy/Mt Lionel borefield system		HRP5	1969					
		Hardy/Mt Lionel borefield system		HRP6	1969					
		Hardy/Mt Lionel borefield system		HRP7	1969					
		Hardy/Mt Lionel borefield system		HRP8	1969					
		Hardy/Mt Lionel borefield system		HRP9	1969					
		Hardy/Mt Lionel borefield system		HRP10	1969					
		Hardy/Mt Lionel borefield system		HRP11	1969					
		Hardy/Mt Lionel borefield system		MLP3	1969					
		Hardy/Mt Lionel borefield system		Sec 10A	2008					
		Hardy/Mt Lionel borefield system		Sec 10B	2008					
		Hardy/Mt Lionel borefield system		Hardy River borefield collector mains - 200mm dia steel - 4.8km	1969					
		Hardy/Mt Lionel borefield system		Bore electrical control cubicles	1969					
		Hardy/Mt Lionel borefield system		Power supply to bores - pole / cables / TX	1969					
		Hardy/Mt Lionel borefield system		Trunk main to Hardy River Collector 3 - 200/250NB - 1.5km	1969					
		Hardy/Mt Lionel borefield system		Hardy River Collector Tank 3 - 1136m3	1969					
		Hardy/Mt Lionel borefield system		Hardy River Collector 3 Pump Station	1969					
		Hardy/Mt Lionel borefield system		Power supply to HRC3 PS	1969					
		Hardy/Mt Lionel borefield system		Trunk main to Hardy River Collector 1 - 392NB - 7.8km	1969			2010		
		Hardy/Mt Lionel borefield system		Hardy River Collector Tank 1 - 1136m3	1969					
		Hardy/Mt Lionel borefield system		Hardy River Collector 1 Pump Station	1969			2010		
		Hardy/Mt Lionel borefield system		Chlorination facilities - Hardy River Collector 1	2008					

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
		Hardy/Mt Lionel borefield system		Power supply to HRC1 PS	1969					
		Hardy/Mt Lionel borefield system		Trunk main to Mine Tank - 392NB - 14.2km	1969					
		Southern Ridge system		Southern Ridge pump station	1969 ?			2010 ?		
		Southern Ridge system		Main to Southern Ridge tank - 315NB - 2km	1969 ?					
		TP Mine tank		Mine Tank - 4,200m3	1969					
		TP Mine tank		Trunk main - Mine Tank to CMUST - 392NB - 2.2km	1969					
		TP CMUST		CMUST - 8,500m3	1969					
		TP CMUST		Main CMUST to Clarified water tank - 315NB - 0.4km	1969					
		TP CMUST		Main CMUST to 3APS - 300mm - 1km	2008					
		TP 2APS system		Trunk main - Town Tanks to 2APS - 392NB - 3.3km	1969					
		TP 2APS system		2A pump station (2APS) - 2 x 185kw	1969					
		TP 2APS system		Trunk main - 2APS to Mine Tank - 392NB - 1.8km	1969					
		TP 4APS trunk main		Trunk main - Mine Tank to 4APS - 392NB - 2.3km	1978					
		TP 4APS trunk main		4A pump station - 2 x 185kw, 2 x 70kw, 2 x 30kw	1979			2010		
		TP Box Cut system		Main - 4APS to Box Cut tank - 315NB polyethylene - 1km	?					
		TP Box Cut system		Box Cut tank - 2 x 200m3	?					
		TP Prongs system		Main - 4APS to Prongs tank - 315NB polyethylene - 0.5km	1986					
		TP Prongs system		Prongs tank - 2270m3	1986					
		TP 1120 system		Main - 4APS to 1120 tank - 315NB polyethylene - 1km	?					
		TP 1120 system		1120 tank	?					
		TP 1120 system		1120 waterstand	?					
		TP Mine pipework		Mine reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants	1969					
		TP 3A PS		3A pump station - 4 x 30kw (Plant ???)						
		TP 3B PS		Main North Deposit to 3B pump station (Mine Ops ???)						
		TP 3B PS		3B pump station	2006					
		TP 3B PS		Main 3BPS to 4APS outlet - 1km	2006					
		TP PS2		PS2 Plant (Crusher)						
		TP Reclaim dam		Reclaim dam (25ML) and associated supply and return pipework						
		TP Comms		Comms system for bores, PS, tanks etc				2010		
		TP Chlorine store		Central chlorine store						
	Mount Tom Price Mine	TP mine Sewer system	Sewerage	Sewer mains - gravity - 800m	1969					
				I/O building connections	1969					
		TP MOC WWTP		Mine MOC WWTP - extended aeration activated sludge package plant	1977					
				Chlorination facility - MOC WWTP (tablet feeder)	2009					
				Power supply to MOC WWTP	1977					
		TP Concentrator WWTP		Mine Concentrator WWTP - extended aeration activated sludge package plant	1979					
				Chlorination facility - Concentrator WWTP	1980					
				Power supply to Concentrator WWTP	1979					
	Marandoo mine	Marandoo bore	Water supply	Supply bore x 1 incl pump / motor / control						
				Power supply to bore						
	Dampier Township	Dampier town water mains	Water Supply	Trunk main - town - 1km	1968	MSCL				
				Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 28km	1968	MSCL / PVC				
				Service connection pipework and water meters	1968					



Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
Coastal				Standby tank - Kangaroo Hill	1968					
	Dampier Township	Dampier town sewer system	Sewerage	Sewer mains - gravity - 21km	1968 - 2006	MSCL / PVC/ VC		2011 onwards		
				I/O property connections	1968 - 2006					
				Sewer pump station No 3 (SPS3)	1968					
				SPS3 controller	2006					
				Power supply to SPS3	1968					
				Sewer pump station No 2 (SPS2)	1968					
				SPS2 controller	2006					
				Power supply to SPS2	1968					
				Sewer pump station No 1(SPS1)	1968					
				SPS1 controller	2006					
				Power supply to SPS1	1968					
				Pressure main - SPS1 to pit	1968					
		Dampier town WWTP		Town wastewater treatment plant - 2 x Imhoff tanks, 3 x trickling filters	1968					
				Chlorination facility - WWTP	2009					
				Power supply to WWTP	1968					
	Dampier Ports	Dampier PP Water mains	Water Supply	Trunk main - Parker Port - 1km	1968					
				Reticulation mains Parker Point - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 5km	1968					
				Process water / fire tank - Parker Point	1968					
				Process water tank pump station - Parker Point	1968					
				Fire pump system - Parker Point	1968					
				Power supply to PS - Parker Point	1968					
				Plant area pipework - Parker Point	1968					
				Plant area fire mains - Parker Point	1968					
				Pipework to ore wharf - Parker Point	1968					
		Dampier EII water mains		Trunk main - EII - 2.5km						
				Reticulation mains EII -150mm, 100mm dia, incl associated valves and hydrants - 4km						
				Process water / fire tank - EII						
				Process water tank pump station - EII						
				EII backup tank						
				EII diesel backup pump						
				Fire pump system - EII						
				Power supply to PS - EII						
				Plant area fire mains - EII						
				Pipework to 2 Mile Rail - maintenance area / ballast washer						
	7 Mile	7 Mile water		Storage tank						
				Diesel pump						
				Main supply (from WC main)			Duplicate ?			
				Distribution mains						
	Dampier Ports	Dampier ports WWTP	Sewerage	Aerobic treatment units x 12	2000					
				Septic tanks						
	7 Mile	7 Mile Sewer system		Pump stations	1979					
				Sewer mains						
				WWTP - Imhoff tank / oxidation ponds	1979					
	Cape Lambert Port	CL Water mains	Water Supply	Trunk main - 400mm dia - 4.5km						
				Distribution mains to various site areas						
				Water / fire storage tank						
				Water pump station						
				Fire pump system						
				Power supply to PS						
	Cape Lambert Port	CL Septic systems	Septic	Septic tanks x 12						
	Pannawonica Township	Panna town borefield	Water Supply	Town bores x 4 incl pumps / motors						
				Bore 24	1971					
				Bore 26	1971					
				Bore 35	1971					
				Bore 36	1971					

Location	Major Asset	Area	Category	Asset description / type	Installation / upgrade date	Material	Condition	Planned replacement		
				Borefield collector mains - 7km	2009					
				Bore electrical control cubicles	1971					
				Power supply to bores - pole / cables / TX	1971					
		Pann town tanks		Town tanks x 2	1971					
				Chlorination facility - Town tanks						
		Pann town mains		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 12km	1971					
				Service connection pipework and water meters	1971					
		Panna town water comms		Comms system for bores						
	Pannawonica Township	Pann town sewer system	Sewerage	Sewer mains - gravity	1971					
				I/O property connections	1971					
				Sewer pump station No 1(SPS1)	1971					
				Power supply to SPS1	1971					
				Pressure main - SPS1 to pit	1971					
		Panna town WWTP		Town wastewater treatment plant - sequencing batch reactor /ponds	2007					
				Power supply to WWTP	2007					
	Pannawonica mine	Panna Mine borefield	Water Supply	Supply bores x 2 incl pumps / motors	1996					
				Borefield collector mains - 4.4km	1996					
				Bore electrical control cubicles	1996					
		Panna Alpha 16		Alpha 16 storage tank	1978					
				Alpha 16 pump station	1978					
				Chlorination facility - Alpha 16 tank	1978			2010		
		Panna plant pipework		Distribution pipework to Admin, Workshops, Laydown - 6km	1978					
	Pannawonica mine Mesa J	Panna mine septic systems	Sewerage	Septic tanks x 4	1978					
		Panna mine sewer system		Sewer mains - gravity - 200m	1978					
		Panna mine WWTP		WWTP - Admin	1978			2010		
	Pannawonica mine Mesa A	Panna Mesa A mine		TBA	2009					

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Location	Major Asset	Area	Category	Asset description / type	
Paraburdoo Township	Paraburdoo Township	Northern borefield / CT1 / PS1	Water Supply	Northern borefield bores incl pumps / motors (x 11)	
		Northern borefield / CT1 / PS1		PTP1	
		Northern borefield / CT1 / PS1		PTP2 - redrill	
		Northern borefield / CT1 / PS1		PTP3	
		Northern borefield / CT1 / PS1		PTP4	
		Northern borefield / CT1 / PS1		PTP5 - redrill	
		Northern borefield / CT1 / PS1		PTP7	
		Northern borefield / CT1 / PS1		PTP8	
		Northern borefield / CT1 / PS1		PTP9	
		Northern borefield / CT1 / PS1		PTP10	
		Northern borefield / CT1 / PS1		PTP11	
		Northern borefield / CT1 / PS1		Chlorination facility - PTP2	
		Northern borefield / CT1 / PS1		Chlorination facility - PTP9	
		Northern borefield / CT1 / PS1		PTP9 air compressor	
		Northern borefield / CT1 / PS1		PTP9 pressure filters	
		Northern borefield / CT1 / PS1		Northern borefield collector mains - 200mm / 350mm dia steel - 5km	
		Northern borefield / CT1 / PS1		Bore electrical control cubicles	
		Northern borefield / CT1 / PS1		Power supply to bores - pole / cables / TX	
		Northern borefield / CT1 / PS1		Collector tank 1 (CT1) - 650m3	
		Northern borefield / CT1 / PS1		Pump station 1 (PS1) - 2 x 200hp	
		Northern borefield / CT1 / PS1		Power supply to PS1	
		Northern borefield / CT1 / PS1		Chlorination facility - CT1	
		Northern borefield / CT1 / PS1		Trunk main PS1 to Town Tanks - 350mm dia steel - 3.3km	
		Town tanks		Town Tanks - 2 x 9ML	
		Town tanks		Power supply to town tanks	
		Town tanks		Chlorination facility - Town Tanks	
		Town tanks		Trunk main - Town Tanks to town - 500mm dia steel - 2.7km	
		Town tanks		Trunk main - Town Tanks to mine - 350mm dia steel - 3.1km	
		Town		Trunk main - town - 375mm dia steel - 2.7km	
		Town		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 29km	
		Town		Service connection pipework and water meters	
		Town		Comms system for bores, PS, tanks etc	
	Paraburdoo Airport	Paraburdoo Airport	Water Supply	Bore PAP1 incl pump / motor	
		Paraburdoo Airport		Bore collector main - 100mm dia steel - 0.5km	
		Paraburdoo Airport		Bore electrical control cubicle	
		Paraburdoo Airport		Power supply to bore - pole / cables / TX	
		Paraburdoo Airport		Collector / fire tank - 132m3	
		Paraburdoo Airport		Pump station - 3 x 2.2kw	
		Paraburdoo Airport		Fire pump	
		Paraburdoo Airport		Distribution pipework - to terminal etc - 100mm steel / PVC - 0.2km	
		Paraburdoo Airport		Fire system pipework - 200mm dia polyethylene	
		Paraburdoo Airport		Chlorination facility	
		Paraburdoo Airport		Control system for bores, PS, tanks etc	
	Paraburdoo Township	Para town sewer system	Sewerage	Sewer mains - gravity - 19km	
		Para town sewer system		I/O property connections	
		Para town sewer system		Sewer pump station No 2 (SPS2)	
		Para town sewer system		SPS2 controller	
		Para town sewer system		Power supply to SPS2	
		Para town sewer system		Sewer pump station No 1 (SPS1)	
		Para town sewer system		SPS1 controller	
		Para town sewer system		Power supply to SPS1	
		Para town sewer system		Pressure main - SPS1 to WWTP	
		Para town WWTP		Town wastewater treatment plant - Imhoff tank + 3 x waste stabilisation ponds	
		Para town WWTP		Chlorination facility - WWTP	
		Para town WWTP		Power supply to WWTP	
		Para town WWTP		Wastewater treatment plant - trade waste facility	
	Paraburdoo Mine	Turee Creek borefield system	Water Supply	Turee Creek borefield bores x 6 incl pumps / motors	

Location	Major Asset	Area	Category	Asset description / type	
Greater Paraburdoo		Turee Creek borefield system		PBO1	
		Turee Creek borefield system		PBO2	
		Turee Creek borefield system		PBO3	
		Turee Creek borefield system		PBO4	
		Turee Creek borefield system		PBO5	
		Turee Creek borefield system		PBO7	
		Turee Creek borefield system		Bore electrical control cubicles	
		Turee Creek borefield system		Power supply to bores - pole / cables / TX	
		Turee Creek borefield system		Trunk main - Turee Creek borefield to Fines Plant - 37km	
		Turee Creek borefield system		Turee Creek collector tank	
		Turee Creek borefield system		Turee Creek pump station	
		Turee Creek borefield system		Power supply to Turee Creek pump station	
		Turee Creek borefield system		Turee Creek surge tanks x 2	
		4W / Southern borefield system		Southern borefield - PMP5 bore - redrill	
		4W / Southern borefield system		Bore electrical control cubicle	
		4W / Southern borefield system		Power supply to bore - pole / cables / TX	
		4W / Southern borefield system		Southern borefield collector mains - 0.3km	
		4W / Southern borefield system		Trunk main - Southern borefield / 4W to Collector tank 6 - 3.1km	
		4W / Southern borefield system		Collector tank 6 (CT6)	
		4W / Southern borefield system		Trunk main - CT6 to CT2 - 1.3km	
		4W / Southern borefield system		Trunk main CT6 to branch ST6A/B - 0.5km	
		CT2 / PS2		Collector tank 2 (CT2)	
		CT2 / PS2		Pump station 2 (PS2)	
		CT2 / PS2		Power supply to PS2	
		CT2 / PS2		Chlorination facility - PS2	
		CT2 / PS2		Trunk main - PS2 to plant areas - 0.6km	
		PS3 / ST3		Pump station 3 (PS3)	
		PS3 / ST3		Power supply to PS3	
		PS3 / ST3		Storage tank 3 (ST3)	
		PS3 / ST3		Main from PS3 to ST3 - 0.7km	
		PS3 / ST3		1480 waterstand	
		ST6 / PS6 / Fines Plant area		Collector tanks ST6A/B - 2 x 1ML	
		ST6 / PS6 / Fines Plant area		Pump station 6 (PS6)	
		ST6 / PS6 / Fines Plant area		Power supply to PS6	
		ST6 / PS6 / Fines Plant area		Fines Plant interconnection pipework, control valves etc	
		ST6 / PS6 / Fines Plant area		Mains - ST6A to Process water tank - 0.2km	
		Para Plant area		Plant area distribution / reticulation mains, hydrants - 5.1km	
		Para comms		Comms system for bores, PS, tanks etc	
	Paraburdoo Mine	Para mine sewer system	Sewerage	Sewer mains - gravity - 1km	
		Para mine sewer system		I/O building connections	
		Para mine sewer system		Sewer pump station No 3 (SPS3)	
		Para mine sewer system		SPS3 controller	
		Para mine sewer system		Power supply to SPS3	
		Para mine sewer system		Sewer pump station No 4(SPS4)	
		Para mine sewer system		SPS4 controller	
		Para mine sewer system		Power supply to SPS4	
		Para mine sewer system		Sewer pump station No 5 (SPS5)	
		Para mine sewer system		SPS5 controller	
		Para mine sewer system		Power supply to SPS5	
		Para mine sewer system		Pressure main - SPS5 to pit	
		Para mine sewer system		Pressure main - SPS4 to pit	
		Para mine sewer system		Pressure main - SPS3 to pit	



Location	Major Asset	Area	Category	Asset description / type	
		Para mine WWTP SDU		Sewage disposal unit (WWTP) - extended aeration activated sludge package plant	
		Para mine WWTP SDU		Chlorination facility - WWTP - tablet feeder	
		Para mine WWTP SDU		Power supply to WWTP	
		Plant MOC WWTP		Plant MOC WWTP sewage PS	
		Plant MOC WWTP		Plant MOC WWTP	
Channar Mine		Channar borefield	Water Supply	Channar bores x 3 incl pumps / motors	
		Channar borefield		CMP1	
		Channar borefield		CMP2	
		Channar borefield		CMP3	
		Channar borefield		Bore collector mains - 4.2km	
		Channar borefield		Bore electrical control cubicles	
		Channar borefield		Power supply to bores - pole / cables / TX	
		Channar borefield		Trunk main - Turee Creek main to Collector tank (emergency backup) - 0.25km	
		Channar collector / PS		Channar collector tank - 200m3	
		Channar collector / PS		Channar pump station	
		Channar collector / PS		Power supply to PS	
		Channar collector / PS		Chlorination facility - Channar PS	
		Channar trunk main		Trunk main - Channar PS to main tank - 2.3km	
		Channar main tank		Channar main tank - 4,200m3	
		Channar main tank		Power supply to main tank	
		Channar plant pipework		Distribution pipework - to Plant, offices, workshops etc - 2.2km	
		Channar plant pipework		Plant areas pipwork - crusher, conveyors	
		Channar plant pipework		Fire system pipework	
		Channar plant pipework		Channar break tank - 22m3	
		Channar 1 waterstand		Main to Channar 1 waterstand - 0.5km	
		Channar 1 waterstand		Channar 1 waterstand - 60m3	
		Channar 3 waterstand		Main to Channar 3 waterstand - 1km	
		Channar 3 waterstand		Channar 3 waterstand - 60m3	
		Channar 3 waterstand		Main to Channar from Channar 3 to 94E waterstand - 3.5km	
		Channar 94E		Channar 94E waterstand	
		Channar 94E		Comms system for bores, PS, tanks etc	
		Midpoint bore		Midpoint bore CMP5	
		Midpoint bore		Main to CMP5 - 0.6km	
		Midpoint bore		Midpoint water / fire tank	
		Midpoint bore		Midpoint pump station	
		Midpoint bore		Distribution main to midpoint conveyors / transfer station - 0.1km	
		Midpoint bore		Power supply to CMP5 and midpoint PS	
Channar Mine		Channar mine sewer system	Sewerage	Sewer mains - gravity - 600m	
		Channar mine sewer system		I/O building connections	
		Channar WWTP SDU		Sewage disposal unit (WWTP) - extended aeration activated sludge package plant	
		Channar WWTP SDU		Chlorination facility - WWTP - tablet feeder	
		Channar WWTP SDU		Power supply to WWTP	
Eastern Range Mine		ER trunk main system	Water Supply	Trunk main - Turee Creek main to Transfer tank - 0.66km	
		ER trunk main system		Transfer tank	
		ER trunk main system		Transfer tank PS	
		ER trunk main system		Power supply to Transfer tank PS	
		ER trunk main system		Trunk main - Transfer tank to break tank - 1.3km	
		ER break tank / PS		Break tank (incl fire water)	
		ER break tank / PS		Process Plant PS	
		ER break tank / PS		Turkeys nest tank PS	

Location	Major Asset	Area	Category	Asset description / type	
		ER break tank / PS		Fire PS	
		ER break tank / PS		Power supplies to PS's	
		ER plant main		Main to Process Plant - 0.2km	
		ER Turkeys nest		Main to Turkeys nest (now tank) - 2.1km	
		ER Turkeys nest		Turkeys nest tank	
		ER Plant mains		Reticulation mains - Crib rooms, crusher - 0.2km	
		ER Plant mains		UV disinfection - crib room	
		ER Plant mains		Plant mains - sprays, waterstand, etc	
		ER waterstand		ER waterstand	
Tom Price Township					
		ER Comms		Comms system for bores, PS, tanks etc	
		Southern Fortescue borefield system	Water Supply	Southern Fortescue borefield bores (x 10) incl pumps / motors	
		Southern Fortescue borefield system		SFP2	
		Southern Fortescue borefield system		SFP4	
		Southern Fortescue borefield system		SFP5	
		Southern Fortescue borefield system		SFP6	
		Southern Fortescue borefield system		SFP7	
		Southern Fortescue borefield system		SFP8	
		Southern Fortescue borefield system		SFP9	
		Southern Fortescue borefield system		SFP10	
		Southern Fortescue borefield system		SFP11	
		Southern Fortescue borefield system		SFP12	
		Southern Fortescue borefield system		Southern Fortescue borefield collector mains - 200mm / 300mm dia steel - 1.6km	
		Southern Fortescue borefield system		Bore electrical control cubicles	
		Southern Fortescue borefield system		Power supply to bores - pole / cables / TX	
		Southern Fortescue borefield system		Trunk main to Southern Fortescue Collector - 350mm dia steel - 11km	
		Southern Fortescue borefield system		Southern Fortescue Collector Tank - 2,300m3	
		Southern Fortescue borefield system		Southern Fortescue Collector Pump Station - 5 x 156kw	
		Southern Fortescue borefield system		Chlorination facilities - SF collector	
		Southern Fortescue borefield system		Power supply to Collector PS	
		Southern Fortescue borefield system		Trunk main to Southern Fortescue Booster - 350mm dia steel - 15.2km	
		Southern Fortescue borefield system		Southern Fortescue Booster Tank - 2,300m3	
		Southern Fortescue borefield system		Southern Fortescue Booster Pump Station - 4 x 156kw	
		Southern Fortescue borefield system		Power supply to Booster PS	
		Southern Fortescue borefield system		Trunk main to Town Tanks - 350mm dia steel - 21km	
		TP Town tanks		Town Tanks - 2 x 9ML	
		TP Town tanks		Power supply to town tanks	
		TP Town tanks		Chlorination facility - Town Tanks	
		TP Town tanks		Trunk main - Town Tanks to town - 300mm dia steel - 1km	
		TP Town tanks		Trunk main - Town Tanks to mine - 300mm dia steel - 5km	

Location	Major Asset	Area	Category	Asset description / type	
Tom Price					
		TP Town mains		Trunk main - town - 250mm dia steel - 1km	
		TP Town mains		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 48km	
		TP Town mains		Service connection pipework and water meters	
		TP Comms		Comms system for bores, PS, tanks etc	
	Tom Price Township	TP town Sewer system	Sewerage	Sewer mains - gravity - 43km	
		TP town Sewer system		I/O property connections	
		TP town Sewer system		Sewer pump station No 2 (SPS2)	
		TP town Sewer system		Power supply to SPS2	
		TP town Sewer system		Sewer pump station No 1(SPS1)	
		TP town Sewer system		Power supply to SPS1	
		TP town WWTP		Town wastewater treatment plant - 3 x waste stabilisation ponds	
		TP town WWTP		Chlorination facility - WWTP	
		TP town WWTP		Power supply to WWTP	
	Mount Tom Price Mine	Hardy/Mt Lionel borefield system	Water Supply	Hardy River borefield bores (x 14) incl pumps / motors	
		Hardy/Mt Lionel borefield system		HRP1	
		Hardy/Mt Lionel borefield system		HRP2	
		Hardy/Mt Lionel borefield system		HRP3	
		Hardy/Mt Lionel borefield system		HRP4	
		Hardy/Mt Lionel borefield system		HRP5	
		Hardy/Mt Lionel borefield system		HRP6	
		Hardy/Mt Lionel borefield system		HRP7	
		Hardy/Mt Lionel borefield system		HRP8	
		Hardy/Mt Lionel borefield system		HRP9	
		Hardy/Mt Lionel borefield system		HRP10	
		Hardy/Mt Lionel borefield system		HRP11	
		Hardy/Mt Lionel borefield system		MLP3	
		Hardy/Mt Lionel borefield system		Sec 10A	
		Hardy/Mt Lionel borefield system		Sec 10B	
		Hardy/Mt Lionel borefield system		Hardy River borefield collector mains - 200mm dia steel - 4.8km	
		Hardy/Mt Lionel borefield system		Bore electrical control cubicles	
		Hardy/Mt Lionel borefield system		Power supply to bores - pole / cables / TX	
		Hardy/Mt Lionel borefield system		Trunk main to Hardy River Collector 3 - 200/250NB - 1.5km	
		Hardy/Mt Lionel borefield system		Hardy River Collector Tank 3 - 1136m3	
		Hardy/Mt Lionel borefield system		Hardy River Collector 3 Pump Station	
		Hardy/Mt Lionel borefield system		Power supply to HRC3 PS	
		Hardy/Mt Lionel borefield system		Trunk main to Hardy River Collector 1 - 392NB - 7.8km	
		Hardy/Mt Lionel borefield system		Hardy River Collector Tank 1 - 1136m3	
		Hardy/Mt Lionel borefield system		Hardy River Collector 1 Pump Station	
		Hardy/Mt Lionel borefield system		Chlorination facilities - Hardy River Collector 1	

Location	Major Asset	Area	Category	Asset description / type	
		Hardy/Mt Lionel borefield system		Power supply to HRC1 PS	
		Hardy/Mt Lionel borefield system		Trunk main to Mine Tank - 392NB - 14.2km	
		Southern Ridge system		Southern Ridge pump station	
		Southern Ridge system		Main to Southern Ridge tank - 315NB - 2km	
		TP Mine tank		Mine Tank - 4,200m3	
		TP Mine tank		Trunk main - Mine Tank to CMUST - 392NB - 2.2km	
		TP CMUST		CMUST - 8,500m3	
		TP CMUST		Main CMUST to Clarified water tank - 315NB - 0.4km	
		TP CMUST		Main CMUST to 3APS - 300mm - 1km	
		TP 2APS system		Trunk main - Town Tanks to 2APS - 392NB - 3.3km	
		TP 2APS system		2A pump station (2APS) - 2 x 185kw	
		TP 2APS system		Trunk main - 2APS to Mine Tank - 392NB - 1.8km	
		TP 4APS trunk main		Trunk main - Mine Tank to 4APS - 392NB - 2.3km	
		TP 4APS trunk main		4A pump station - 2 x 185kw, 2 x 70kw, 2 x 30kw	
		TP Box Cut system		Main - 4APS to Box Cut tank - 315NB polyethylene - 1km	
		TP Box Cut system		Box Cut tank - 2 x 200m3	
		TP Prongs system		Main - 4APS to Prongs tank - 315NB polyethylene - 0.5km	
		TP Prongs system		Prongs tank - 2270m3	
		TP 1120 system		Main - 4APS to 1120 tank - 315NB polyethylene - 1km	
		TP 1120 system		1120 tank	
		TP 1120 system		1120 waterstand	
		TP Mine pipework		Mine reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants	
		TP 3A PS		3A pump station - 4 x 30kw (Plant ???)	
		TP 3B PS		Main North Deposit to 3B pump station (Mine Ops ???)	
		TP 3B PS		3B pump station	
		TP 3B PS		Main 3BPS to 4APS outlet - 1km	
		TP PS2		PS2 Plant (Crusher)	
		TP Reclaim dam		Reclaim dam (25ML) and associated supply and return pipework	
		TP Comms		Comms system for bores, PS, tanks etc	
		TP Chlorine store		Central chlorine store	
	Mount Tom Price Mine	TP mine Sewer system	Sewerage	Sewer mains - gravity - 800m	
				I/O building connections	
		TP MOC WWTP		Mine MOC WWTP - extended aeration activated sludge package plant	
				Chlorination facility - MOC WWTP (tablet feeder)	
				Power supply to MOC WWTP	
		TP Concentrator WWTP		Mine Concentrator WWTP - extended aeration activated sludge package plant	
				Chlorination facility - Concentrator WWTP	
				Power supply to Concentrator WWTP	
	Marandoo mine	Marandoo bore	Water supply	Supply bore x 1 incl pump / motor / control	
				Power supply to bore	
	Dampier Township	Dampier town water mains	Water Supply	Trunk main - town - 1km	
				Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 28km	
				Service connection pipework and water meters	



Location	Major Asset	Area	Category	Asset description / type	
Coastal				Standby tank - Kangaroo Hill	
	Dampier Township	Dampier town sewer system	Sewerage	Sewer mains - gravity - 21km	
				I/O property connections	
				Sewer pump station No 3 (SPS3)	
				SPS3 controller	
				Power supply to SPS3	
				Sewer pump station No 2 (SPS2)	
				SPS2 controller	
				Power supply to SPS2	
				Sewer pump station No 1 (SPS1)	
				SPS1 controller	
				Power supply to SPS1	
				Pressure main - SPS1 to pit	
		Dampier town WWTP		Town wastewater treatment plant - 2 x Imhoff tanks, 3 x trickling filters	
				Chlorination facility - WWTP	
				Power supply to WWTP	
	Dampier Ports	Dampier PP Water mains	Water Supply	Trunk main - Parker Port - 1km	
				Reticulation mains Parker Point - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 5km	
				Process water / fire tank - Parker Point	
				Process water tank pump station - Parker Point	
				Fire pump system - Parker Point	
				Power supply to PS - Parker Point	
				Plant area pipework - Parker Point	
				Plant area fire mains - Parker Point	
				Pipework to ore wharf - Parker Point	
		Dampier EII water mains		Trunk main - EII - 2.5km	
				Reticulation mains EII -150mm, 100mm dia, incl associated valves and hydrants - 4km	
				Process water / fire tank - EII	
				Process water tank pump station - EII	
				EII backup tank	
				EII diesel backup pump	
				Fire pump system - EII	
				Power supply to PS - EII	
				Plant area fire mains - EII	
				Pipework to 2 Mile Rail - maintenance area / ballast washer	
	7 Mile	7 Mile water		Storage tank	
				Diesel pump	
				Main supply (from WC main)	
				Distribution mains	
	Dampier Ports	Dampier ports WWTP	Sewerage	Aerobic treatment units x 12	
				Septic tanks	
	7 Mile	7 Mile Sewer system		Pump stations	
				Sewer mains	
				WWTP - Imhoff tank / oxidation ponds	
	Cape Lambert Port	CL Water mains	Water Supply	Trunk main - 400mm dia - 4.5km	
				Distribution mains to various site areas	
				Water / fire storage tank	
				Water pump station	
				Fire pump system	
				Power supply to PS	
	Cape Lambert Port	CL Septic systems	Septic	Septic tanks x 12	
	Pannawonica Township	Panna town borefield	Water Supply	Town bores x 4 incl pumps / motors	
				Bore 24	
				Bore 26	
				Bore 35	
				Bore 36	

Location	Major Asset	Area	Category	Asset description / type	
				Borefield collector mains - 7km	
				Bore electrical control cubicles	
				Power supply to bores - pole / cables / TX	
		Pann town tanks		Town tanks x 2	
				Chlorination facility - Town tanks	
		Pann town mains		Town reticulation mains - 200mm, 150mm, 100mm dia, incl associated valves and hydrants - 12km	
				Service connection pipework and water meters	
		Panna town water comms		Comms system for bores	
Pannawonica Township	Pann town sewer system		Sewerage	Sewer mains - gravity	
				I/O property connections	
				Sewer pump station No 1(SPS1)	
				Power supply to SPS1	
				Pressure main - SPS1 to pit	
		Panna town WWTP		Town wastewater treatment plant - sequencing batch reactor /ponds	
				Power supply to WWTP	
Pannawonica mine	Panna Mine borefield		Water Supply	Supply bores x 2 incl pumps / motors	
				Borefield collector mains - 4.4km	
				Bore electrical control cubicles	
		Panna Alpha 16		Alpha 16 storage tank	
				Alpha 16 pump station	
				Chlorination facility - Alpha 16 tank	
		Panna plant pipework		Distribution pipework to Admin, Workshops, Laydown - 6km	
Pannawonica mine Mesa J	Panna mine septic systems		Sewerage	Septic tanks x 4	
		Panna mine sewer system		Sewer mains - gravity - 200m	
		Panna mine WWTP		WWTP - Admin	
Pannawonica mine Mesa A	Panna Mesa A mine			TBA	

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**Plan Co-ordinator:** Glenn McRobb

Refer to the **Company Decision Tool** Worksheet.

This date is taken to be the date that the **CEA** is fully approved in **CAPS**.

[illegible]



\* Please Enter in Whole Dollars (ie not millions of dollars or thousands of dollars) \* Please Enter in Whole Dollars (ie not millions of dollars or

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**All LME Replacements** to be planned by Asset Management. Contact Murray Penno or Shawn Greene.

Refer to the **IS&T Decision Tool Worksheet**.

[illegible]

## 2010 ASSET MANAGEMENT REVIEW

### 5.2

Risks are assessed in Site Reliability Plans, Water Quality Management manual, and IEMS risk registers, and then used to prioritise operational tasks ie

#### High priority / regularity

- Water quality testing
- Chlorine checks
- Sewer video and jetspray program
- Sewer run
- Sewer manhole replacement

#### Medium priority / regularity

- Water mains inspections
- Greasing runs
- Sewer root foaming (depending on risk)

#### Low priority / regularity

- Valve checks

# CONTRACTOR INFORMATION PACK

## WATER SERVICES OPERATING LICENCE

**REVISION 5  
DECEMBER 2008**

### Document Control – Change Register

Issue	Revision	Prepared By	Reviewed By	Approved By	Date	Description of Change
A	1	H Bennett	P Promnitz	P Promnitz		First print
	2	H Bennett	P Promnitz	P Promnitz	May 2006	
	3	H Bennett	P Promnitz	P Promnitz	April 2007	No changes
	4	H Bennett	P Promnitz	P White	August 2007	Update customer consultation and water sampling information
	5	H Bennett	R Mullins	P White	Dec 2008	Update to Rio Tinto format, insert outage proforma's, delete SJP for water sampling



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Attachments – Outage proforma's	

# **RIO TINTO**

## **CONTRACTOR INFORMATION PACK**

### **WATER SERVICES OPERATING LICENCE**

#### **SECTION 1 – GENERAL INFORMATION**

Rio Tinto (Networks) is responsible for the delivery of water supply and sewerage services to Dampier, Paraburdoo and Tom Price. These services are provided under an Operating Licence, which is issued and monitored by the Economic Regulatory Authority (ERA) Water Division.

Under the licence, Rio Tinto (Networks) must comply with a number of requirements in relation to levels of services provided to customers. These levels of service are currently as follows:

- Pressure at customers meter = Greater than 15 metres
- Flow at customers meter = Minimum of 20 litres per minute
- Time for provision of advice in response to a complaint / service enquiry = Within 1 hour
- Response to sewer overflows = Within 2 hours
- Provision of minimum notice for planned works (residential properties affected) = 48 hours
- Provision of minimum notice for planned works (commercial / industrial properties affected) = 7 days

In accordance with Schedule 3 of the Licence, Rio Tinto has developed a Customer Charter, which details customer's rights, and Rio Tinto's responsibilities with regard to levels of service to be provided to customers.

In accordance with Clause 6 of the Licence, Rio Tinto (Networks) can engage persons to provide water services which are the subject of the Licence. This practice is currently in place for the provision of contract services for water and wastewater system maintenance. Rio Tinto has a responsibility to ensure that those contractors employed are aware of the requirements under the Licence, and operate accordingly.

To ensure compliance with the Licence requirements, contractors who undertake water supply and sewerage system maintenance works which directly affect customers, and which are provided under service agreements, must comply with the performance indicators shown in the table shown overleaf.

## SECTION 2 – KEY PERFORMANCE INDICATORS

Item	Requirement	Comment
Provision of minimum notice for planned works (residential properties affected)	48 hours	1. Written notices to be provided – by Rio Tinto( Networks) 2. Addresses of affected properties and outage times are to be recorded and provided to Rio Tinto Networks following completion of works.
Provision of minimum notice for planned works (commercial / industrial properties affected)	7 days	1. Written notices to be provided – by Rio Tinto (Networks) 2. Addresses of affected properties and outage times are to be recorded and provided to Rio Tinto Networks following completion of works.
Provision of notice for unplanned / emergency works	As determined by job – contact Rio Tinto (Networks) and advise type and estimated outage / interruption period, and number of affected properties	1. Verbal notification is to be provided. 2. Addresses of affected properties and outage times are to be recorded and provided to Rio Tinto Networks following completion of works.
Time for provision of advice in response to a complaint / service enquiry	Within 1 hour from receipt of complaint / enquiry	Customer charter requirement
Interruption to water supply or sewerage service	Every effort to be made to limit to a maximum of 6 hours	
Provision of drinking water for water supply interruption	To be provided after 6 hours	
Customer complaints	Must be submitted within 24 hours to the contracting companies Rio Tinto representative or Customer Services	
Reporting of incidents	Incident Report must be submitted within 24 hours to the contracting companies Rio Tinto representative for:  1) Overflows from wastewater / sewerage infrastructure  2) Major incidents which have a significant impact on the delivery of water or sewerage services	Standard format available from Rio Tinto
Response to serious water supply bursts and leaks	Respond within 1 hour Commencement of work within 1.5 hours of notification Completion of work within 6 hours	
Response to moderate water supply bursts and leaks	Respond within 1 hour Commencement of work within 3 hours of notification Completion of work within 6 hours	
Response to minor water supply bursts and leaks	Respond within 24 hours Rectification within 3 days of notification	
Interruption during peak times	No plans to interrupt supply between 5am to 7am, and 6pm to 11pm	

Attached for your information are copies of Rio Tinto's Water Services Customer Charter and Operating Licence.

If you have any questions in relation to the Customer Charter, Operating Licence, or levels of customer service, please **contact your Rio Tinto Networks Contractor Management representative.**

## ATTACHEMENTS



*PLEASE CONTACT OUR  
FRIENDLY OFFICE STAFF AT  
LYONS & PEIRCE FOR  
FURTHER INFORMATION. WE  
ARE ALWAYS MORE THAN*

*Brett Hardingham—Manager*

*Senior Administrator – Emily Giles*

*Supervisor – Kane Wilson*

*Administrator – Shari Callum*

*Plumber – Dale Warren*

*Plumber – Simon Mahady*

*Plumber – Darren Blake*

*Plumber – Aldo Gobo*

*Plumber – Mathew Solly*

*Plumber – Anthony Fawcett*

*Plumber – Nathan Donegan*

*Carpenter – Greg McFarlane*

*Apprentice – Brad Ciancotti*

*Apprentice – Tom Giles*



*Lyons & Peirce Karratha Tom Price Branch  
Lot 35 Boonderoo Rd, Tom Price  
WA 6751*

*Phone: (08) 9189 3709  
Fax: (08) 9189 3712  
E-mail: [brett.hardingham@lpk.com.au](mailto:brett.hardingham@lpk.com.au)*



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*Ph: (08) 91 89 3709  
Mob: 0417 774 131*

# LYONS AND PEIRCE HISTORY

Lyons and Peirce was established in April 1993 after being purchased from the 'Vac Tech Group.

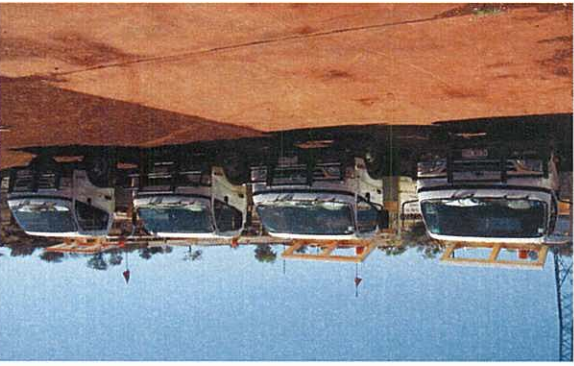
Head Office is situated in Karratha together with the Karratha, Northwest, Asset Management and Pump Out Division branches. The Tom Price Branch was opened in 2004. It is a 24 hour, 7 day a week operation, however normal office hours are 0730—1600 Mon-day to Friday. The office phone is diverted to a mobile phone after hours.

The partnership of Lyons and Peirce consists of:

Lou Samson who is the main supervisor of all works and coordinator of all major plumbing works. Kerry Samson is the office manager and the Occupational Health, Safety and Environment Coordinator.

- 25T Low-loader
- 12T Tipper/Hiab
- 6T Tray Top
- 4T Tradesman/Tray Top
- Excavator 25T Backhoe
- Excavator 1.8T Bobcat
- Grader 12H
- Front end loader 1725B Concrete Batchmixer
- Rockbreaker (25T Excavator)
- Polywelder 160
- Solid Barricading
- Jirdrill (246 Bobcat)

We offer a wide range of plant equipment for you to hire. These are just a few:



Installing a Hot Water System



Mini Excavator in action



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E-mail: [brett.hardingham@lfpk.com.au](mailto:brett.hardingham@lfpk.com.au)