

Woolgoolga WRP (Including Morgan's Rd Reservoir) PIRMP

Coffs Harbour City Council



April 2023

Document Control

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Revision	Date	Description	Prepared by	Approved by
1.0	4/09/20	Preparation of PIRMP in accordance with New Guideline March 2020	Andrew Miller	Angus Sharpe
2.0	15/03/21	Update following pollution incident (EPA Ref: C02833-2021)	Sam Towndrow	Andrew Miller
3.0	30/03/22	Reviewed Following M8 11357	Matt Gittoes	Michael Lynch
4.0	27/04/23	Reviewed and update contacts	Jason Rolff	Matt Gittoes

Contents

Document Control.....	1
Version Control	1
1. Purpose	3
2. Definition of a Pollution Incident.....	3
3. Details of Environmental Protection Licence.....	4
4. Notification of Relevant Authorities	4
5. Description and Likelihood of Hazards	5
6. Inventory of Potential Pollutants.....	11
7. Safety Equipment.....	11
8. Communicating with the Public.....	13
8.1 Communicating with Neighbours	13
8.2 Communicating with the Local Community.....	13
9. Minimising Harm to Persons on the Premises.....	14
10. Actions to be Taken During or Immediately After a Pollution Incident.....	15
10.1 Immediate Actions Following Sewer Overflow in the Reticulation System.....	16
10.2 Immediate Actions Following a WRP or Reservoir Pollution Incident	16
11. Staff Training	16
12. Testing and Updating the PIRMP	17
Appendix A – Maps	18
Woolgoolga WRP – Site Layout.....	19
Woolgoolga WRP Site Evacuation Plan	20
Morgans Road Reuse Reservoir	21
Woolgoolga Sewer Reticulation System	22
Woolgoolga Sewer Reticulation System – Overview	23
Woolgoolga Sewer Reticulation System – 1	24
Woolgoolga Sewer Reticulation System – 2	25
Woolgoolga Sewer Reticulation System – 3	26
Woolgoolga Sewer Reticulation System - 4	27
Woolgoolga Sewer Reticulation System – 5	28
Woolgoolga Sewer Reticulation System - 6	29
Appendix B – Council Contact List.	30
Appendix C – Coffs Harbour City Council Risk Assessment Matrix.....	31

1. Purpose

Coffs Harbour City Council holds an Environment Protection Licence (EPL 573) with the NSW Environment Protection Authority (EPA) for Woolgoolga WRP. As per the Protection of the Environment Operations Act 1997 (the POEO Act), the holder of an Environment Protection Licence must prepare, keep, test and implement a Pollution Incident Response Management Plan (PIRMP) that complies with Part 5.7A of the POEO Act in relation to the activity to which the licence relates.

If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, the person carrying out the activity must immediately implement this plan in relation to the activity required by Part 5.7A of the POEO Act.

A copy of this plan must be kept at the licensed premises and be made available on request by an authorised EPA officer and to any person who is responsible for implementing this plan.

Parts of the plan must also be available either on a publicly accessible website, or if there is no such website, by providing a copy of the plan to any person who makes a written request. The sections of the plan that are required to be publicly available are set out in clause 98D of the Protection of the Environment Operations (General) Regulation 2009.

2. Definition of a Pollution Incident

Pollution Incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

Notification is required if a pollution incident causes or threatens to cause 'material harm to the environment'. Material harm is defined in section 147 of the POEO Act as:

(a) harm to the environment is material if:

(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

(ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and

(b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.'

Notification is required even where 'harm to the environment is caused only in the premises where the pollution incident occurs', as specified in section 147(2).

3. Details of Environmental Protection Licence

Table 3.1. Environmental Protection Licence Details

Environmental Protection Licence Details	
Name of licensee:	Coffs Harbour City Council ABN 79 126 214 487
EPL number:	EPL 573
Premises name and address:	Woolgoolga Water Reclamation Plant 14 CROSSLEY ROAD WOOLGOOLGA NSW, 2456
Company or business contact details	Name: COFFS HARBOUR CITY COUNCIL Business hours contact number/s: 02 6648 4400 After hours contact number/s: 02 6648 4000 Email: coffs.council@chcc.nsw.gov.au
Website address:	www.coffsharbour.nsw.gov.au
Scheduled activity/activities on EPL:	Sewage treatment
Fee-based activity/activities on EPL:	Sewage treatment processing by small plants.
Responsible person: PIRMP activation, Notifying relevant authorities and managing response to pollution incident.	
Name: Sam Pinnuck Position or title: Water and Sewer Section Leader Business hours contact number/s: 02 6648 4889 After hours contact number/s: 02 6648 4000 Email: sampinnuck@coastalworks.com.au A complete council contact list can be found in Appendix B.	

4. Notification of Relevant Authorities

Identify any persons or authorities required to be notified as per Part 5.7A of the POEO Act in the case of a pollution incident that causes or threatens to cause material harm to the environment.

Note: Each authority does not need to be contacted for every pollution incident, only those that are relevant to the incident which has occurred.

Table 4.1 Relevant Authorities

Authority	Contact number
EPA	131 555
NSW Health	6588 2750 / 0428 822 805
SafeWork NSW	Coffs Harbour 13 10 50
CHCC EHO	6648 4665 / 6648 4000
Fire & Rescue NSW / Rural Fire Service	000
Solitary Island Marine Park	6691 0600
Coffs Harbour District Fisheries	6652 3977

5. Description and Likelihood of Hazards

Table 5.1 provides a description of the hazards to human health or the environment associated with sewerage treatment. It also details the likelihood of each hazard occurring and pre-emptive actions taken to minimise or prevent harm to human health or the environment. Council has completed the below risk matrix in conjunction with the CHCC Risk Assessment Tool available in Appendix C.

Table 5.1 Description and likelihood of Hazards

Description of Hazard and Contributing Factors	Likelihood	Consequence	Risk	Pre-emptive actions	Response to Incident
Wet weather sewer overflow from the reticulation system due to excessive inflow and/or infiltration.	Almost Certain	Insignificant	Medium 11	I&I program Sewer jetting program Capital works renewal program Out of hours' staff roster	Council staff attend site and make safe. This may include the erecting of fences, signage, etc. Follow tasks outlined in section 10.
Dry weather sewer overflow from reticulation system due to choke, blockage or pipe failure.	Almost Certain	Minor	High 16	Sewer jetting program Capital works renewal program Out of hours' staff roster Telemetry system	Council staff attend site and clear blockage or repair pipe. Follow tasks outlined in section 10.
Dry weather sewer overflow due to rising main break	Likely	Moderate	High 17	Capital works renewal program	Shutdown affected sewer pump station.

				<p>Out of hours' staff roster</p> <p>Telemetry system</p>	<p>Arrange tankers or bypass to manage incoming sewer.</p> <p>Council staff repair rising main.</p> <p>Follow tasks outlined in section 10.</p>
<p>Sewer Pump Station failure due to power outage</p>	Likely	Minor	Medium 12	<p>Portable generators.</p> <p>Onsite emergency storage.</p> <p>Telemetry System for early indication.</p> <p>Out of hours' staff roster (including on call fitter and electrician).</p>	<p>Monitor pump station on telemetry system.</p> <p>Organise generators for extended outage.</p> <p>Organise tankers to pump down pump station if required.</p> <p>Follow tasks outlined in section 10.</p>
<p>Sewer Pump Station failure due to electrical/mechanical breakdown</p>	Likely	Minor	Medium 12	<p>Mechanical/Electrical preventative maintenance program.</p> <p>Onsite emergency storage.</p> <p>Out of hours' staff roster (including on call fitter and electrician).</p> <p>Telemetry System.</p>	<p>Monitor pump station on telemetry system.</p> <p>Organise tankers to pump down pump station if required.</p> <p>Maintenance staff to attend site and rectify problem.</p> <p>Follow tasks outlined in section 10.</p>

				Redundancy- All SPS have two pumps where only one is required to keep up with dry weather flows.	
Sewer pump station failure due to blockage in pumps	Likely	Minor	Medium 12	<p>Redundancy- All SPS have two pumps where only one is required to keep up with dry weather flows.</p> <p>Mechanical/Electrical preventative maintenance program.</p> <p>Onsite emergency storage.</p> <p>Out of hours' staff roster (including on call fitter and electrician).</p> <p>Telemetry System.</p>	<p>Monitor pump station on telemetry system.</p> <p>Organise tankers to pump down pump station if required.</p> <p>Maintenance staff to attend site and rectify problem.</p> <p>Follow tasks outlined in section 10.</p>
Bypass of Sewage Treatment due to wet weather resulting in untreated or partially treated effluent discharge.	Possible	Moderate	High 15	<p>Telemetry system.</p> <p>Large wet weather storage for inflow diversion.</p>	<p>Follow tasks outlined in section 10.</p> <p>Notify re-use customers of incident, instruct them to cease usage.</p>

<p>Bypass of Sewage Treatment due to power outage resulting in untreated or partially treated effluent discharge.</p>	<p>Unlikely</p>	<p>Moderate</p>	<p>Medium 9</p>	<p>Telemetry system.</p> <p>Generator onsite.</p> <p>Large wet weather storage for inflow diversion.</p> <p>Out of hours' staff roster (including on call fitter and electrician).</p>	<p>Follow tasks outlined in section 10.</p> <p>Generator refuelled for prolonged outage.</p> <p>Notify re-use customers of incident, instruct them to cease usage.</p>
<p>Bypass of Sewage Treatment due to electrical/mechanical failure resulting in untreated or partially treated effluent discharge</p>	<p>Unlikely</p>	<p>Moderate</p>	<p>Medium 9</p>	<p>Telemetry system.</p> <p>Mechanical/Electrical preventative maintenance program.</p> <p>Ability to divert influent to wet weather storage.</p> <p>Out of hours' staff roster (including on call fitter and electrician).</p>	<p>Maintenance staff to attend site and rectify problem.</p> <p>Follow tasks outlined in section 10.</p> <p>Notify re-use customers of incident, instruct them to cease usage.</p>
<p>Chemical Spill at Treatment Plant</p>	<p>Unlikely</p>	<p>Major</p>	<p>Medium 13</p>	<p>Chemical bunds and tanks have level alarms connected to SCADA.</p> <p>Chemical bunds provided for bulk chemical storage.</p>	<p>Maintenance staff contain and clean up spill as per the SDS.</p> <p>Follow tasks outlined in section 10.</p>

				<p>Chlorine gas system operates under a vacuum with alarms.</p> <p>SDS and chemical manifesto available onsite.</p>	
<p>Poor effluent quality due to failure of treatment process. This could be caused by poor quality raw sewage or illegal dumping.</p>	Possible	Major	High 18	<p>Trade Waste Monitoring program.</p> <p>Auto sampler on plant inlet works for influent quality benchmarking.</p> <p>Operational monitoring, processes for discharge of effluent/septic.</p>	<p>Isolation/containment of contaminant and pump out where practical.</p> <p>Sewer staff to monitor treatment process and restore treatment process (re-seed etc.).</p> <p>Organise sampling of effluent as required by licence conditions.</p> <p>Follow tasks outlined in section 10.</p> <p>Notify re-use customers of incident, instruct them to cease usage.</p>
<p>Significant adverse environmental impact from irrigation in utilisation areas.</p>	Likely	Minor	Medium 12	<p>Re-use management plans.</p> <p>Site audits.</p> <p>Effluent quality monitoring.</p>	<p>Follow tasks outlined in section 10.</p> <p>Notify re-use customers of incident, instruct them to cease usage.</p>

<p>Chlorine system failure – uncontrolled release of chlorine gas at Morgans Rd Reservoir</p>	<p>Rare</p>	<p>Catastrophic</p>	<p>High 15</p>	<p>ChlorGuard System. Emergency control valve.</p> <p>System operates Under a Vacuum.</p> <p>Offsite Monitoring, SCADA Alarms.</p>	<p>Routine maintenance completed by specialist contractor.</p> <p>Site inspections.</p> <p>Follow tasks outlined in section 10.</p>
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6. Inventory of Potential Pollutants.

Table 6.1 details the chemicals stored at Woolgoolga WRP to enable to sewer treatment process;

Table 6.1 Chemical Register

Chemical Name	Maximum Volume	Storage Method	SDS Location
Aluminium Sulphate	50,000L	Tank in Bund	Control Building
Sodium Hypochlorite	12,000L	Tank in Bund	Control Building
Diesel	850L	Generator fuel tank and bund	Control Building
Polymer 4498	1000kg	15kg bags in Alum pump room	Control Building
Chlorine Gas	4 x 70kg Cylinders	Morgans Rd Reservoir. 70kg Cylinders in Chlorine dosing shed.	Morgans Rd Reservoir Chlorine dosing shed.

7. Safety Equipment

Table 7.1 is an inventory of the safety equipment which is readily available at Woolgoolga WRP and sewer maintenance vehicles.

Table 7.1 Safety Equipment Register

Equipment	Location
Water Reclamation Plant	
Ear/hearing protection	Control Building
Sun screen	Control Building
Apron/disposal overalls	Control Building
Rubber Gloves	Control Building
Safety glasses	Control Building
Gumboots	Control Building
Spill Kit	Laboratory
Steel capped Boots	Standard PPE
Gas monitor	

Gas calibration equipment	
Emergency shower	Chemical loading areas
First aid kit	Control building- Lunch Room
Bunds	Chemical storage areas
Alarms	Various
Fire blanket	Control Building Lunch Room
Fire extinguishers	Various
Fire detection	Various
Morgans Rd Reservoir	
Chlorine Gas Evacuation Masks	Storage Room
Water & Sewerage reticulation response truck	
Goggles/eye protection	On truck
Hearing protection	On truck
Apron/disposable overalls	On truck
Rubber gloves	On truck
Gumboots	On truck
Gas monitor	On truck
First aid kit	On truck
Fire extinguishers	On truck
Sun screen	On truck

8. Communicating with the Public

8.1 Communicating with Neighbours

The Woolgoolga WRP is in the south east of Woolgoolga township approximately 1 km away from the CBD. The Woolgoolga WRP services as far north as Corindi with an extensive network of both gravity and pressure sewer pipelines and pump stations. Almost any property in the service area could be impacted by sewer overflow from the network. However, it is unlikely that any property within the township would be impacted by an incident at the WRP.

The nearest neighbours to the Woolgoolga WRP are:

- Residential properties on the north west boundary (350 m from the plant);
- A single residence on the south east boundary (250 m away from the plant);
- An aged care facility 200m north of the site boundary (500 m away from the plant); and
- Sporting fields 200m north of the site boundary (500 m away from the plant).

There is nothing onsite that would likely create an emergency for any of these neighbours as they are all uphill except for the resident on the south east boundary. If an incident were to impact this resident, CHCC would notify them according to Section 8.2.

The Morgan's Road Reuse Reservoir is approximately 2.5 km south west of Woolgoolga and 2 km north west of Sandy Beach. This site has a 5ML Reuse Reservoir which is treated with chlorine gas for disinfection. The chlorine gas is stored in 4 x 70kg cylinders. The dosing system operates under a vacuum to prevent chlorine gas leak and is monitored via a Chlorguard system with emergency valve closure for gas leaks. This system provides feedback and alarms to the operator via SCADA.

There are residences approximately 500m south (downhill), a farm approximately 200m west (uphill) and a hydroponics farm approximately 580 m west (downhill). If the cylinders were to rupture or leak the gas would stay at ground level and disperse in the direction that the wind is blowing. If a leak were to occur, then the processes listed in Section 8.2 would be implemented as required.

If an incident did occur and any community members or neighbours were affected, then the processes listed in section 8.2 below would be implemented as required.

8.2 Communicating with the Local Community

This section details how the neighbours/community will be informed of the incident, including early warnings and regular updates (e.g. door knock, phone call, emergency alert).

Impacts on the community due to sewage network and treatment incidents are variable and depend on location, volumes of spills, weather, or other factors. Communication methods will be used on a case by case basis and in all situations Coffs Harbour City Council will attempt to provide early warning to directly affected premises by phone call or site visit. Early warning is to include details of what the incident is and how those affected can prepare and respond.

In the event of a chlorine gas incident residents downhill and downwind of the site may be notified of the incident via telephone and asked to vacate the potential affected area as a precaution. Council will maintain close communication with those affected.

Where early warning is not possible Coffs Harbour City Council will provide notification and communication during and after an incident to advise those affected with information, advice and updates. Notification and communication methods will be determined on a case by case basis and the following methods may be used:

- Site visits/door knocking
- Phone calls
- Warning signs
- Media releases (radio/television/newspaper/internet/social media as required)
- Letter drops
- Other methods as the situation requires

In the event of a chemical or sewage spill into stormwater or waterway, Coffs Harbour City Council staff will go to prominent and/or high use areas of the affected waterway to advise users and erect signage. The signs are to warn water users of the contamination and advise them to avoid activities such as swimming, fishing, shell fish collection and boating until contamination has cleared.

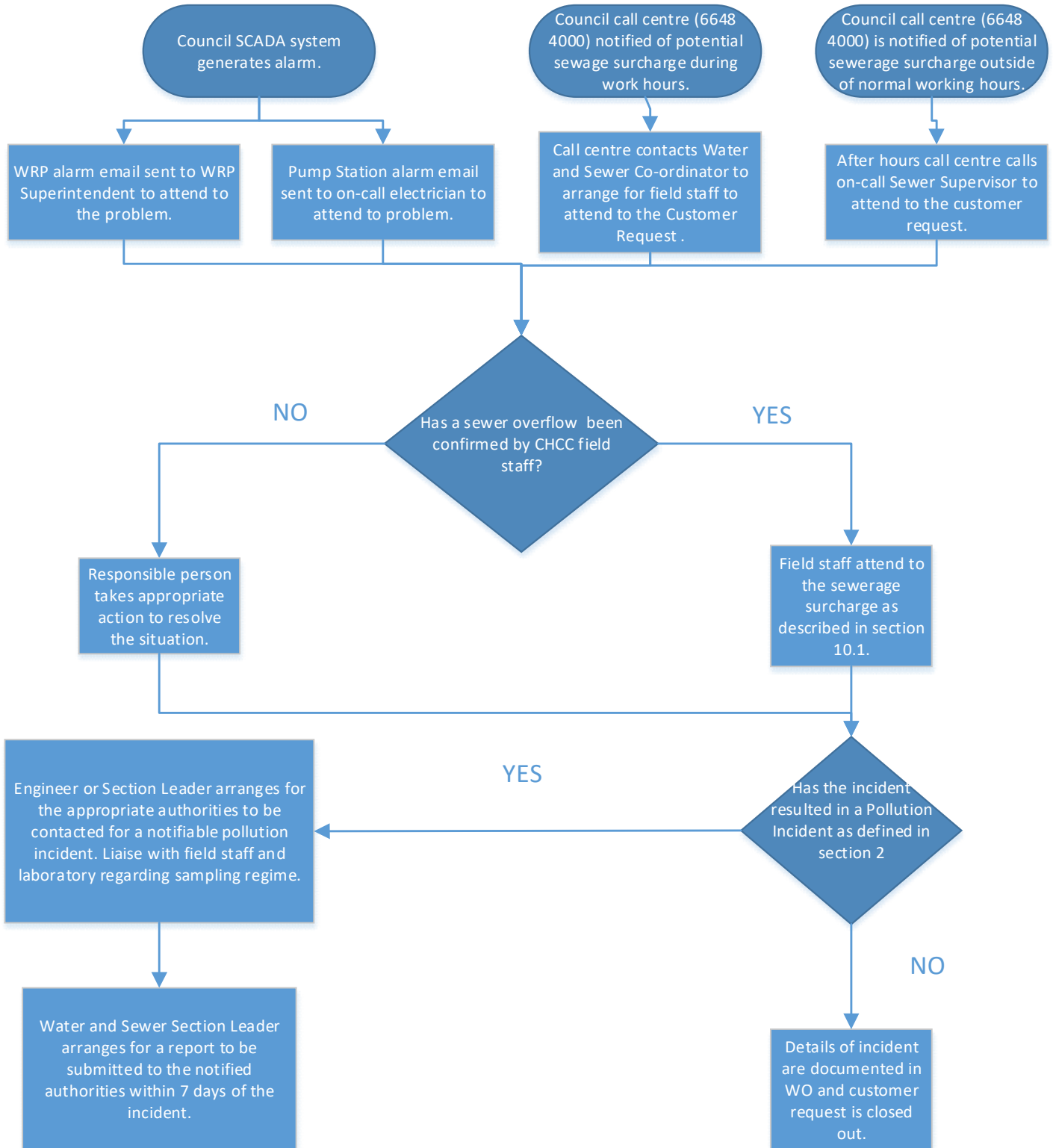
Regular communication and notification is to be provided until the incident and clean-up of impacted site and affected areas has been complete (e.g. faecal coliforms have returned to background levels of <math><500\text{cfu}/100\text{mL}</math>). Coffs Harbour City Council will take signs down and advise the public when regular activities can be resumed.

9. Minimising Harm to Persons on the Premises

There is a low risk of a pollution incident occurring on site that would harm the operational staff other than chlorine gas. Chlorine gas training is provided to operators of the site every 2 years and operators are provided with chlorine gas evacuation masks. PPE is provided for tasks involving exposure to raw/partially treated sewage. Hepatitis vaccinations are offered to all staff whose work involves potential contact with raw sewage. PPE and safety showers are provided for staff working with chemicals on site. In the event of an emergency, staff will gather at the Emergency Assembly Point.

10. Actions to be Taken During or Immediately After a Pollution Incident

The following flow chart details the procedure for responding to pollution incidents relating to EPL 573.



10.1 Immediate Actions Following Sewer Overflow in the Reticulation System

As soon as Coffs Harbour City Council is advised of a sewer overflow, operational staff will attend the site. Council staff will complete the following steps when attending to potential incident.

1. The source of the pollution shall be identified and isolated if possible.
2. Wastewater shall be prevented from contaminating additional land or water areas. This may require a bund where practicable.
3. The cause of the overflow will be rectified and the infrastructure returned to operation. This may involve clearing a sewer choke, pulling a pump or repairing a main.
4. If a Pollution Incident has occurred, attending staff will notify either the relevant Engineer or Section Leader, whom will then notify the relevant authorities and coordinate the incident recovery.
5. Contaminated or possibly contaminated waterways shall be sampled (Laboratory sampling for faecal contamination) as soon as practical. Monitoring will continue until background levels of < 500.
6. Any pooling areas of wastewater will be removed via pump out or vacuum tanker where practical.
7. Any solid wastewater material which remains in open land or water areas shall be removed and disposed of to landfill.
8. Contaminated areas (not waterways) may be sprayed with a disinfecting agent in accordance with the manufacturer's instructions and Work Health and Safety considerations.
9. Depending on the extent and magnitude of the incident affected property owners, neighbours and the local community may be notified.

10.2 Immediate Actions Following a WRP or Reservoir Pollution Incident

As soon as the WRP Superintendent becomes aware of a potential overflow or pollution incident council staff will take the following steps.

1. Isolate or limit the source of pollution, wherever possible.
2. If a Pollution Incident has occurred, attending staff will notify either the relevant Engineer or Section Leader, whom will then notify the relevant authorities and coordinate the incident recovery.
3. Communicate with affected neighbours and the community, as required.
4. Implement remedial action, as appropriate and as required by the EPA.

11. Staff Training

The objectives of the training program shall be as follows:

1. To ensure that employees are knowledgeable of their roles and responsibilities concerning the plan.
2. To ensure that employees are knowledgeable of the plan's procedures to complete a safe and thorough response to pollution incidents.

3. To ensure that employees are knowledgeable of legislative requirements related to how pollution incidents are reported and managed.

All staff listed as contacts in Appendix B will be trained in this Pollution Incident Response Management Plan, and records of this training will be kept in Council’s ECM system.

12. Testing and Updating the PIRMP

The PIRMP will be tested, reviewed and updated at least once every 12 months to ensure accuracy and effectiveness. A review must also be undertaken within one month of any pollution incident occurring. Testing can be in the form of a desktop simulation or a practical exercise or drill.

Table 12.1 PIRMP Test Register

Date Tested	Participants	Details of test. Note: Testing must cover all components of the plan.	Outcomes of tests, including issues identified.	Next test date (within 12 months).
September 2020	Andrew Miller Angus Sharpe Sam Towndrow	Desktop simulation of effluent overflow at Woolgoolga WRP.	No issues found.	September 2021
March 2021	Andrew Miller Samuel Hawkins Matthew Gittoes Sam Towndrow	Review and update following pollution incident (EPA ref: C02833-2021)	Procured new larger coloured signage to improve visibility. Response flow chart placed in vehicles for quick reference for reticulation staff	March 2022
March 2022	Michael Lynch Matthew Gittoes	Review and update following pollution incident (M8 11357)	No issues found. Incident occurred due to higher than usual rainfall	March 2023

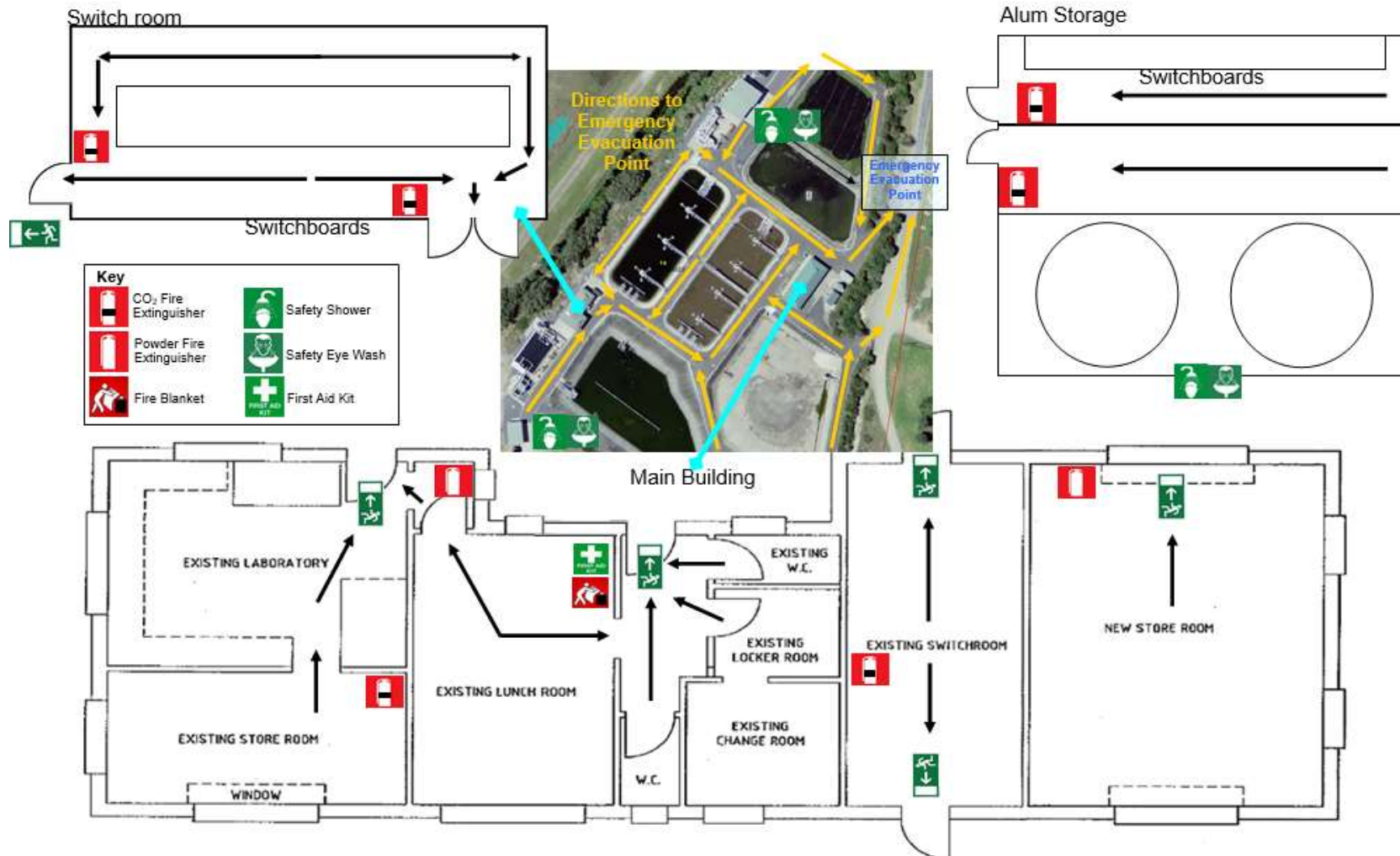
Appendix A – Maps

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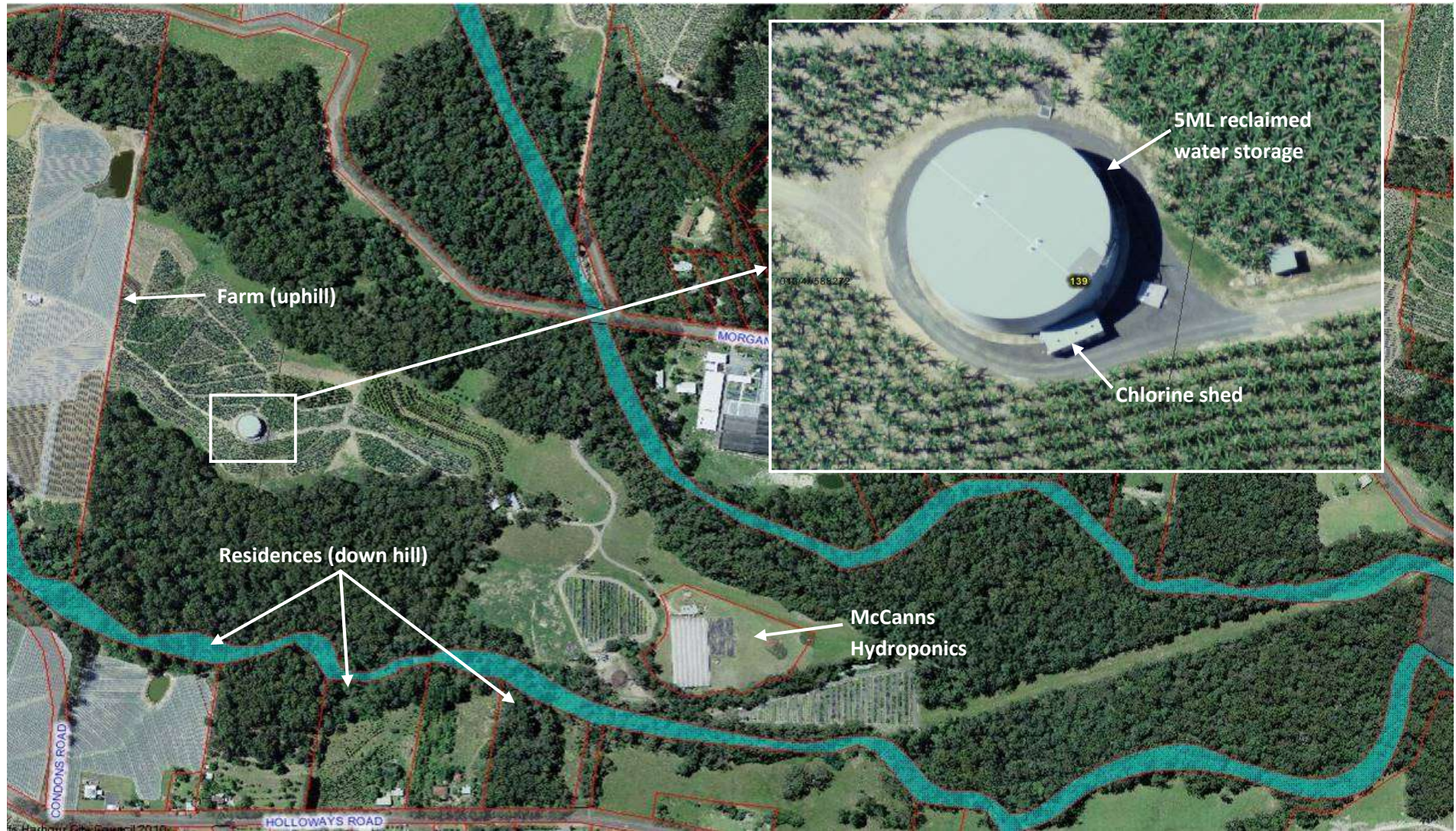
Woolgoolga WRP – Site Layout



Woolgoolga WRP Site Evacuation Plan



Morgans Road Reuse Reservoir




Woolgoolga Sewer Reticulation System

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Woolgoolga Sewer Reticulation System – Overview



	MapArea_Woolgoolga_grid
	Overflow Lines
	Rising Main
	Private Rising Main
	Ocean Outfall - Christmas Bells Road to Ocean
	Sewer Catchments
	Recreational Surfaces
	Coffs Harbour Water Reclamation Plant

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Coffs Harbour Sewer Reticulation
Map Index
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 Coffs Harbour City Council
 User: admalstair
 Creation Date: 11/12/2018

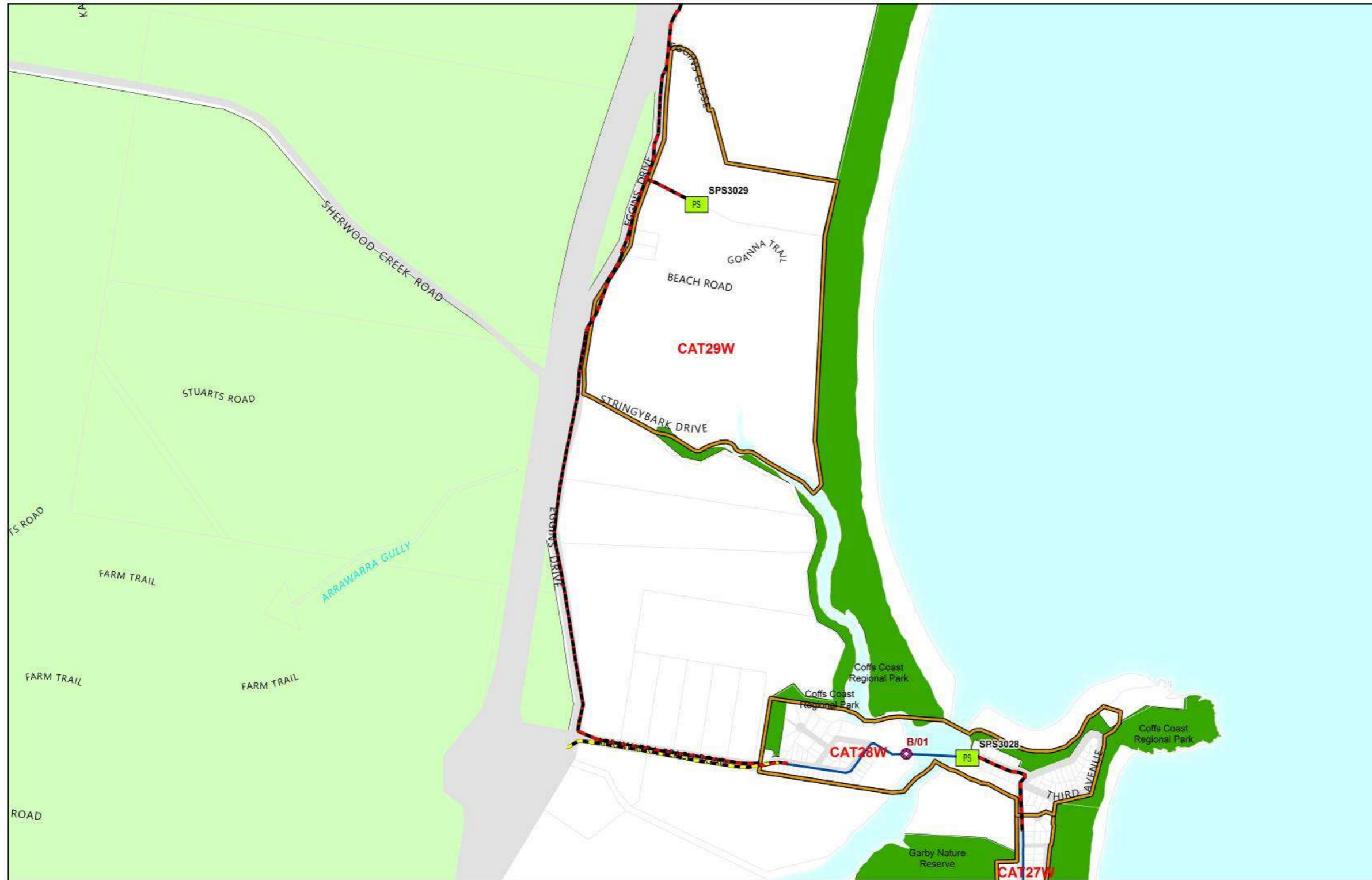
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 Metres

Coordinate System: GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1994



Our Ref: WoolgoolgaSewageReticulation_20181206 CoffsHarbourMapBook_index_10k_3

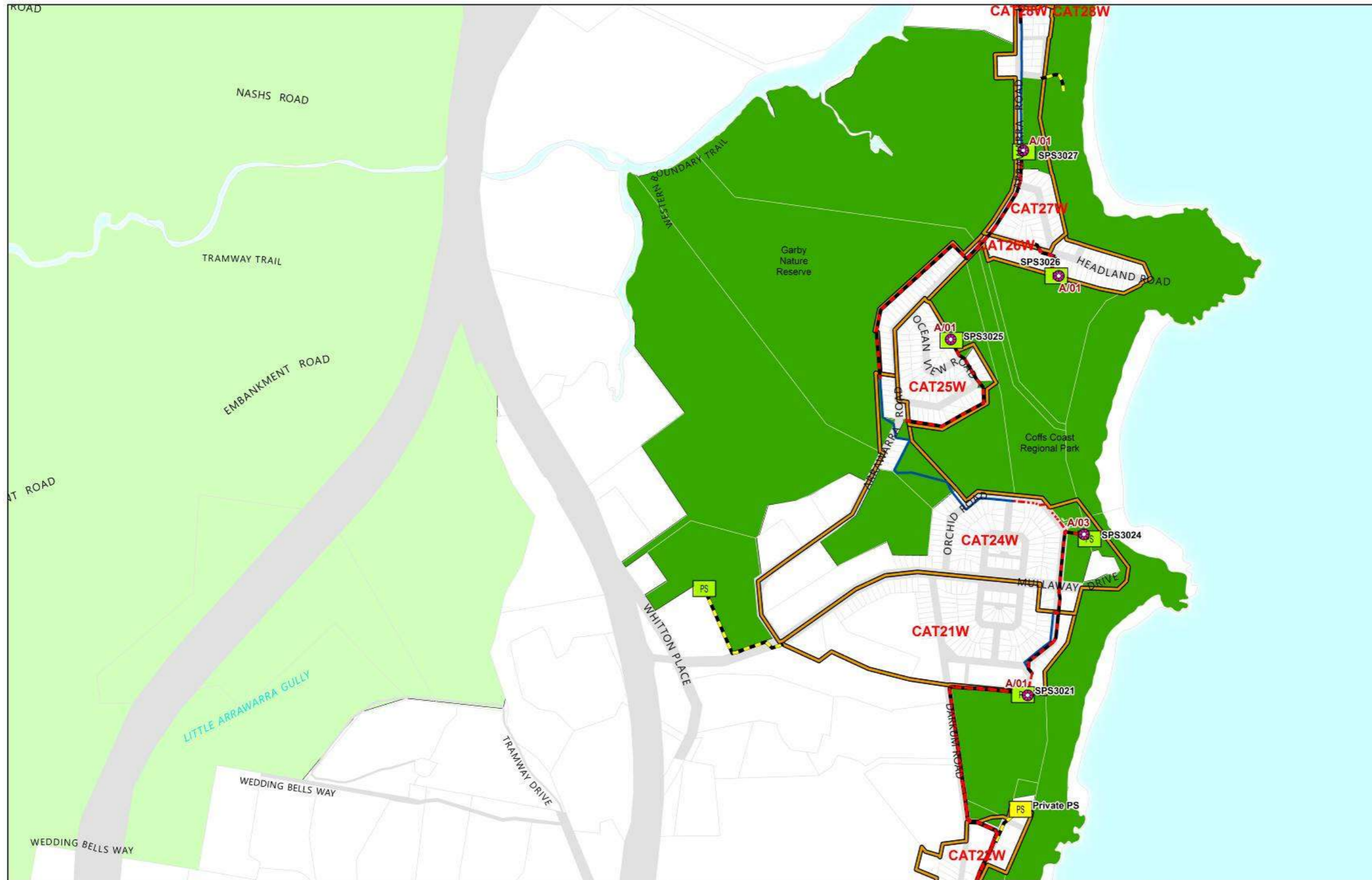
Woolgoolga Sewer Reticulation System – 1



<p>Coffs Harbour Sewer Reticulation Map - Woolgoolga A1 This map produced by GIS Section Coffs Harbour City Council User: admalstar Creation Date: 31/12/2018</p>	<p>SCALE 1:10000 0 50 100 200 300 Meters Coordinate System: GDA 1994 MGA Zone 58 Projection: Transverse Mercator Datum: GDA 1994</p> <p>GRID NTH</p>	<table border="0"> <tr> <td>○ Oxygen Dosing</td> <td>⊕ Manhole - Overflows</td> <td>PS Pump Station - CHCC</td> <td>— Overflow Lines</td> <td>▭ Sewer Catchments</td> </tr> <tr> <td>⊕ Manhole - Designed Overflow</td> <td>⊕ Manhole - Rising Main Discharge</td> <td>PS Pump Station - PRIVATE</td> <td>— Rising Main</td> <td>▭ Recreational Surfaces</td> </tr> <tr> <td></td> <td></td> <td></td> <td>— Private Rising Main</td> <td>— Ocean Outfall - Christmas Bells Road to Ocean</td> </tr> </table>	○ Oxygen Dosing	⊕ Manhole - Overflows	PS Pump Station - CHCC	— Overflow Lines	▭ Sewer Catchments	⊕ Manhole - Designed Overflow	⊕ Manhole - Rising Main Discharge	PS Pump Station - PRIVATE	— Rising Main	▭ Recreational Surfaces				— Private Rising Main	— Ocean Outfall - Christmas Bells Road to Ocean
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			— Private Rising Main	— Ocean Outfall - Christmas Bells Road to Ocean													

Our Ref: WoolgoolgaSewerReticulation_20181204_MayBost_L_18

Woolgoolga Sewer Reticulation System – 2



Coffs Harbour City Council
 Our Ref: WoolgoolgaSewerReticulation_20181204 MapBook_L_10K

Coffs Harbour Sewer Reticulation
Map - Woolgoolga B1
 This map produced by GIS Section
 Coffs Harbour City Council
 User: admalstar
 Creation Date: 5/12/2018

SCALE 1:10000

 Coordinate System: GDA 1984 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1984
 GRID NTH

Oxygen Dosing	Manhole - Overflows	Pump Station - CHCC	Overflow Lines	Sewer Catchments
Manhole - Designed Overflow	Manhole - Rising Main Discharge	Pump Station - PRIVATE	Rising Main	Recreational Surfaces
		Private Rising Main	Ocean Outfall - Christmas Bells Road to Ocean	

Woolgoolga Sewer Reticulation System – 3



Woolgoolga Sewer Reticulation System - 4



<p>Coffs Harbour Sewer Reticulation Map - Woolgoolga D1</p> <p>This map produced by GIS Section Coffs Harbour City Council User: adm111111 Creation Date: 31/3/2018</p>	<p>SCALE: 1:10000</p> <p>0 50 100 200 300 Meters</p> <p>Coordinate System: GDA 1984 MGA Zone 56 Projection: Transverse Mercator Datum: GDA 1984</p> <p>GRID NTH</p>	<table border="0"> <tr> <td>○ Oxygen Dosing</td> <td>⊗ Manhole - Rising Main Discharge</td> <td>— Overflow Lines</td> <td>■ Recreational Surfaces</td> </tr> <tr> <td>⊗ Manhole - Designed Overflow</td> <td>PS Pump Station - CHCC</td> <td>— Rising Main</td> <td>— Ocean Outfall - Christmas Bells Road to Ocean</td> </tr> <tr> <td>⊗ Manhole - Overflows</td> <td>PS Pump Station - PRIVATE</td> <td>— Private Rising Main</td> <td>■ WOOLGOOLGA TREATMENT WORKS</td> </tr> <tr> <td></td> <td></td> <td>— Sewer Catchments</td> <td></td> </tr> </table>	○ Oxygen Dosing	⊗ Manhole - Rising Main Discharge	— Overflow Lines	■ Recreational Surfaces	⊗ Manhole - Designed Overflow	PS Pump Station - CHCC	— Rising Main	— Ocean Outfall - Christmas Bells Road to Ocean	⊗ Manhole - Overflows	PS Pump Station - PRIVATE	— Private Rising Main	■ WOOLGOOLGA TREATMENT WORKS			— Sewer Catchments	
○ Oxygen Dosing	⊗ Manhole - Rising Main Discharge	— Overflow Lines	■ Recreational Surfaces															
⊗ Manhole - Designed Overflow	PS Pump Station - CHCC	— Rising Main	— Ocean Outfall - Christmas Bells Road to Ocean															
⊗ Manhole - Overflows	PS Pump Station - PRIVATE	— Private Rising Main	■ WOOLGOOLGA TREATMENT WORKS															
		— Sewer Catchments																

Woolgoolga Sewer Reticulation System – 5



Woolgoolga Sewer Reticulation System - 6



Coffs Harbour Sewer Reticulation
 Map - Woolgoolga F1
 This map produced by GIS Section
 Coffs Harbour City Council
 User: admalstair
 Creation Date: 01/12/2018

SCALE: 1:10000
 0 50 100 200 300
 METRES
 Coordinate System: GDA 1994 MGA Zone 56
 Projection: Transverse Mercator
 Datum: GDA 1994

- Oxygen Dosing
- Manhole - Rising Main Discharge
- Overflow Lines
- Recreational Surfaces
- Manhole - Designed Overflow
- PS Pump Station - CHCC
- Rising Main
- Ocean Outfall - Christmas Bells Road to Ocean
- Manhole - Overflows
- PS Pump Station - PRIVATE
- Private Rising Main
- WOOLGOOLGA TREATMENT WORKS
- Sewer Catchments

Appendix B – Council Contact List.

Name	Job Title	Contact Numbers
Sam Pinnuck	Section Leader Water and Sewer	02 6648 4889 0419 738 264
Piers Everitt	Section Leader Mechanical and Electrical Services	02 6648 4455 0409 159 741
Matt Gittoes	Water and Sewer Engineer	02 6648 4453 0427 105 100
Manish Khadgi	Water and Sewer Engineer	02 6648 4534 0428 829 660
Colin Cassell	Coordinator Maintenance	0427 296 922
Roger Parkins	Supervisor Maintenance Repairs	0419 694 008
Jason Rolff	Superintendent WRP Woolgoolga	0427 393 852
Adam Henderson	Superintendent WRP Moonee	0427 956 394
Warren Nazzari	Superintendent WRP Coffs	0418 670 449
Trent Ralston	Leading Hand WRP	0407 204 177
Ben Farrell	Leading hand WRP	0419 633 647

Appendix C – Coffs Harbour City Council Risk Assessment Matrix

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COFFS HARBOUR CITY COUNCIL		CONSEQUENCE DEFINITIONS / TOLERANCE (SHADED BLUE)				
Risk Assessment Tool		Insignificant	Minor	Moderate	Major	Catastrophic
Decision Escalation Protocol		RISK CATEGORIES Strategic Objectives (e.g. Community Strat Plan & Delivery Prog objectives) Service Delivery / Operational (e.g. Operational & Business Plan objectives) Financial Environment & Heritage Compliance (Legal, Regulatory, Contractual) Reputation Human				
Risk Rating	Action Required					
Extreme 23-25	ACT IMMEDIATELY. Bring to attention of Department Director for immediate management and treatment to reduce the risk to an acceptable level.					
High 14-22	ATTENTION NEEDED. Bring to attention of Group Leader to manage planning, allocation & implementation of responsibilities, resources & regular monitoring of progress. Regular reporting to Departmental risk committee.					
Medium 6-13	MONITOR AND REVIEW. ID management responsibility, monitor & review response action as necessary. Oversight & monitoring of treatment by the Section/Team Leader.					
Low 1-5	DEAL WITH THROUGH BUSINESS AS USUAL. Manage through existing processes and procedures.					
		Consequence → Insignificant → Minor → Moderate → Major → Catastrophic				
Probability	Frequency	Insignificant	Minor	Moderate	Major	Catastrophic
> 50% chance	multiple times in a year	11	16	20	23	25
25% - 50%	once in 1 or 2 years	7	12	17	21	24
10% - 25%	at least once in 2 - 10 years	4	8	14	18	22
5% - 10%	less than once in 15 years	2	5	9	13	19
<5%	less than once in 20 years	1	3	6	10	15