Evans Head Wastewater Treatment Plant

POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN 2023

INTRODUCTION

Council as holders of environment protection licences must comply with the requirements introduced in 2012 by the *Protection of the Environment Legislation Amendment Act 2011* (POELA Act) to prepare and implement a pollution incident response management plan.

Based on the EPA guidelines the plan must set out specific requirements regarding the preparing, keeping, testing and implementation of these plans.

The POELA Act introduced several changes to improve the way pollution incidents are reported, managed and communicated to the general community. The Act includes a requirement under Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act) to prepare, keep, test and implement a pollution incident response management plan.

The objectives of these plans are to:

- Ensure comprehensive and timely communication about a pollution incident to staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Act (such as local councils, NSW Ministry of Health, Work Cover NSW, and Fire and Rescue NSW) and people outside the facility who may be affected by the impacts of the pollution incident.

- Minimise and control the risk of a pollution incident at the facility by requiring identification of risks and the development of planned actions to minimise and manage those risks

- Ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

Document History

Version	Date	Author	Description of Change
1.1	21/04/2014	Carla Dzendolet	Nil – Test only
1.2	23/07/2014	Latoya Cooper	Update of External Contacts & Internal Role Clarification
1.3	25/06/2015	David Cash	Update Internal Roles, Contacts & Reticulation Map. Tested scenario action plan added.
1.4	20/01/2016	David Cash	Update details of nutrient overload test & add relevant pre-emptive / response actions
1.5	18/07/2016	David Cash	Update Council Media Policy. Add UV system failure with response actions.
1.6	12/072017	David Cash	Reticulation overflow scenario and map of EPA Points added
1.7	25/07/2018	David Cash	Review and test for 2018. Pollutant volumes added. UV Failure scenario revised.
1.8	17/07/2019	David Cash	Contacts updated. STP changed to WWTP. Reference to RVC Disaster Plan removed.
1.9	10/07/2020	David Cash	Reference of Knowledge Management System (KMS) removed
2.0	15/07/2021	David Cash	References to HR replaced with P&C.
2.1	15/07/2022	David Cash	Reference to diesel high volume pump replaced with submersible high-volume pump
2.2	15/06/2023	David Cash	Internal/external contacts updated and includes Safe Food NSW Shellfish Quality Assurance. Reference to onsite confined space entry equipment removed.
2.3	14/02/2024	David Cash	Addition of Bush Fire response plan.

Approvers List

Name	Role	Approval / Review Date
David Cash	Operations Officer - Water and Sewer Services	23/07/2014
Aidan Macqueen	Coordinator – Water and Sewer Services	16/07/2015
Aidan Macqueen	Coordinator – Water and Sewer Services	20/1/2016
Aidan Macqueen	Coordinator – Water and Sewer Services	18/07/2016
Aidan Macqueen	Coordinator – Water and Sewer Services	14/07/2017
Aidan Macqueen	Coordinator – Water and Sewer Services	28/08/2018
Sandeep Chugh	Coordinator – Water and Sewer Services	01/08/2019
Sandeep Chugh	Coordinator – Water and Sewer Services	20/07/2020
Sandeep Chugh	Coordinator – Water and Sewer Services	27/07/2021
Sandeep Chugh	Coordinator – Water and Sewer Services	20/07/2022
Sandeep Chugh	Coordinator – Water and Sewer Services	19/06/2023

Plan Testing

Date	Scenario(s) Tested	Test Coordinator
8/07/2015	EAT sequence failure – Catch/Balance Tank full of untreated influent	David Cash
19/01/2016	Elevated nutrient load on EAT	David Cash
18/07/2016	UV Reactor failure	David Cash
12/07/2017	Reticulation Overflow	David Cash
10/11/2017	Effluent Above EPA License Limits	David Cash
25/07/2018	UV System Failure	Adrian O'Rourke
17/07/2019	EAT sequence failure – Catch/Balance Tank full of untreated influent	David Cash
14/07/2020	All Elements	Adrian O'Rourke
13/07/2021	All Elements	Adrian O'Rourke
15/07/2022	All Elements	Adrian O'Rourke
14/06/2023	All Elements	Rebekah McClelland

The objective of the test is to verify that the functionality of the Pollution Incident Response Management Plan is according to the specifications in this document.

The test will execute and verify the contact details, mapping information, description and likelihood of hazards, pre-emptive actions to be taken, inventory of pollutants, safety equipment, communications with adjoining properties and the community, minimising harm to persons on the premise, actions to be taken during or immediately after pollution incident and a record of staff training.

LEGISLATIVE REQUIREMENTS

The specific requirements for pollution incident response management plans are set out in Part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation). In summary, this provision requires the following:

Council as holders of environment protection licences must prepare a pollution incident response management plan (section 153A, POEO Act).

The plan must include the information detailed in the POEO Act (section 153C) and be in the form required by the POEO(G) Regulation (clause 98B).

As Licensees Council must keep the plan at the premises to which the environment protection licence relates and where the relevant activity takes place (section 153D, POEO Act).

Council must test the plan in accordance with the POEO (G) Regulation (clause 98E).

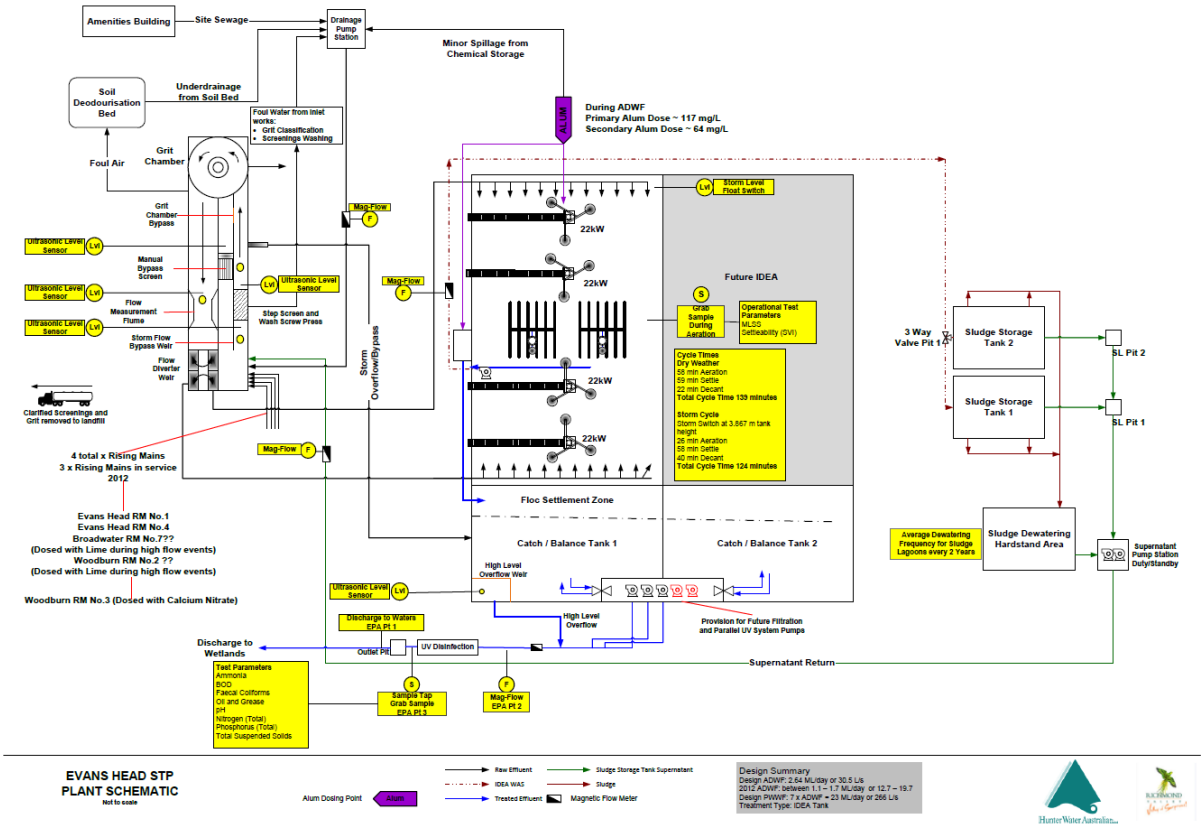
If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, licensees must immediately implement the plan (section 153F, POEO Act).

The plan must include the following requirements

1. Description and likelihood of hazards
2. Pre-emptive actions to be taken
3. Inventory of pollutants
4. Safety Equipment
5. Contact details
6. Communications with adjoining properties and the community
7. Minimising harm to persons on the premise
8. Maps
9. Actions to be taken during or immediately after pollution incident
10. Staff training

1. Site Background

Evans Head WWTP was constructed in 1942 and augmented in 1970. Secondary treated effluent is discharged via an open drain to Salty Lagoon (a designated SEPP 14 wetland located in Broadwater National Park). A recent augmentation, completed in 2007, was required to accommodate the growth in the area, treat additional sewage from Broadwater, meet stringent license requirements and allow for future effluent reuse opportunities.



Premises
EVANS HEAD WASTEWATER TREATMENT PLANT
BROADWATER ROAD
EVANS HEAD NSW 2473

Environment Protection Licence
Licence Number: 2386
Online at
http://www.richmondvalley.nsw.gov.au/content/Document/Environment/EPA/Licence%202386%20Evans%20Head%20Oct%202015.pdf

2. Description and likelihood of hazards

The main hazards to human health and the environment associated with activities at the treatment plant are listed below;

Site Hazards	Likelihood of Occurring	Control Measures
Effluent Overflow • Excessive Rainfall • Equipment or Operator Failure • Storms • Reticulation Blockages • Damage to Reticulation • Aging Infrastructure • Telemetry Failure • Mechanical Breakdown • Power Outage • Blockage within treatment plant	Possible	• Use of Standard Operations Procedures & Safe Work Method Statements • Preventative Maintenance Programs • Monitoring & Maintenance Programs • Extra storage capacity within system • Backup generators • Lightening Protection • Spare Equipment Onsite • Telemetry Alarming & Regular Testing • Site Security Cameras
Heavy Nutrient Load Threatening Licence Limit • Holiday season • Illegal dumping to sewer	High	• Adjust treatment in EAT • Bypass effluent to storage • Tanker effluent off site • Eliminate return of supernatant from sludge storage tanks to head of works
Chemical Spill • Tank/Storage Failure • Inappropriate Use • Vandalism • Delivery Incident • Damage to chemical reticulation • Bund Failure	Low	• Use of Standard Operations Procedures & Safe Work Method Statements • Inspections & Maintenance of Storage Areas • Bunding Where Required • PPE • Site Security Cameras • Telemetry Alarms Operator onsite during deliveries
Hydrogen Sulphide Gas Exposure • Confined Space Entry • Faulty Equipment • Incorrect Work Practices	Possible	• Use of Standard Operations Procedures & Safe Work Method Statements • Equipment Testing & Maintenance

3. Pre-emptive actions to be taken

Pre-emptive actions to prevent, minimise and manage any pollution incidents at the treatment plant include –

1. Telemetry monitoring & alarms
2. Preventative maintenance
3. Effluent monitoring programs
4. Spill Kits available onsite
5. Site Security Cameras
6. Keeping Spare EAT empty for use as effluent storage
7. Keeping offline Sludge Tank level as low as possible for use as effluent storage

Relevant Pre-emptive documentation includes

- Standard Operating Procedure (SOP) – Sewage Spill in Public Areas
- Safe Work Method Statement (SWMS)WSC8(v1) Confined Space Entry
- Sewer Blockage/Overflow Report
- Council Treatment Plant Electronic Operations Manual

4. Inventory of pollutants

Evans Head WWTP doses liquid alum as part of its treatment process; It has a 35000L storage tank onsite. The plant also has the capacity to dose magnesium hydroxide however currently do not do so. The storage tank is 5000L. A complete hardcopy SDS chemical register folder is located at the plant.

The pollutants identified by the current EPA licence are listed below. The licence identifies the pollutants to be monitored, limit conditions and trigger levels for reporting.

POINT 1 – Discharge to Waters (Effluent Quality Monitoring)

Ammonia 5mg/L –	Tested Fortnightly
Oil & Grease 6mg/L –	Tested Fortnightly
pH 6.5-8.5 –	Tested Fortnightly
Faecal Coliforms CFU/100ml –	Tested Fortnightly
Total Suspended Solids 30mg/L –	Tested Fortnightly
Biochemical Oxygen Demand 20mg/L –	Tested Fortnightly
Nitrogen (total) 20mg/L –	Tested Fortnightly
Phosphorus (total) 1mg/L –	Tested Fortnightly
Nitrogen (ammonia) 5mg/L –	Tested Fortnightly

Maximum Quantities of Potential Pollutants Stored

IDEAT	2385.45 kL
Storm Tank	2385.45 kL
Catch Balance Tank	427 kL
Sludge Tanks	4340 kL
Aluminium Sulphate	35 kL

5. Standard Safety Equipment Available Onsite

- Gloves
- Gumboots
- Steel Cap Boots
- Gas Detectors
- Hats
- Hearing Protection
- Sunscreen
- Disposable Overalls
- Safety Glasses/Goggles
- First Aid Kit
- Fire Extinguishers, Reels & Blankets

If any further specific safety equipment is required for a job it will be obtained from Council's Store prior to any works commencing.

6. Incident contact details

This section details the response requirements in the event of any incident. In all situations the 24hour emergency number for Richmond Valley Council is (02) 66600300. During work hours, these calls are taken by staff on the Richmond Valley Council Switch. If the call is after hours, the call is redirected to Immediate Reception, who informs appropriate Council personnel of issues and incident.

If the incident poses an immediate threat to human health or safety call triple zero "000"

Any environmental or pollution incidents must be reported immediately to 6660-0300 in line with Procedure 15.10 Reporting Environmental & Pollution Incidents. Then, if a supervisor is not already aware of the incident, immediately call a supervisor or manager by making calls in the order listed under Internal Contacts.

Reporting continues up the line until the level of Coordinator where a decision is made on whether to notify external authorities.

Internal incident reports are investigated, and corrective actions instigated in accordance with Council procedures.

Notifying External Authorities

(i) Notification to all authorities is required immediately if any of the following circumstances occur as a result of a pollution incident;
(ii) There is actual or potential harm to the environment that is not trivial
(iii) There is actual or potential harm to human health or safety
clean-up costs are expected to be over $10,000

Generally, this will occur at the level of Coordinator (or someone delegated by the Coordinator). However, if personal contact cannot be made with any of the supervisors or

Managers listed then staff at the treatment plant are to immediately call the external authorities if there is a pollution incident causing (i) or (ii) or (iii). In these circumstances, all external authorities listed under External Contacts must be contacted promptly and, in the order, shown in the list.

External Contacts

To be contacted in the following order;

1.	Environment Protection Authority	13 15 55
2.	Public Health Unit – Lismore	662 07 585
	Infection & Disease	0439 882 752
	Environmental Health	0428 882 805
3.	Safe Food NSW Shellfish Quality Assurance	1300 552 406
4.	Work Cover	13 10 50
5.	Fire and Rescue NSW	000

Internal Contacts

To be contacted in the following order;

1. Operations Supervisor Water Sewer Services – David Cash 0417265057
2. Operations Coordinator Water & Sewer Services – Sandeep Chugh 0439411504
3. Manager Infrastructure Services – David Timms - 0475959715
4. Director - Infrastructure and Environment – Angela Jones – 0415299192
5. Council on 6660 0300

7. Communications with adjoining properties and the community

In the event of an incident the following methods of communication shall be employed depending on the severity and nature of the incident.

Phone calls

- Media releases (radio/television/newspaper/internet)
- Site visits/door knocking
- Letter box drops

The extent of the communications with the neighbours and the community will depend on the:

- The magnitude of the emission or discharge
- Type of pollutant
- What that pollutant may impact – water, land.
- The potentially impacted area.
- Weather conditions.
- Potential duration of the impact.

In all cases Council will attempt to provide early warning to directly affected premises by phone call or a site visit. Early warning will include details of what the incident is, how those affected will need to respond, as well as providing important advice such as avoiding contact and use of affected land/waterways. This information will be given on a case by case basis. If early warning is not possible Council will provide notification during and after an incident. Council will advise those affected with appropriate information, advise and updates.

In the event that the pollutant reaches the waterway, Council will erect signage in prominent locations to warn users of the possible contamination and to avoid activities within the waterway. Once the area affected has been cleaned up and deemed safe to the public, Council will inform the public and its staff that regular activities may resume in the area.

To comply with Council's Media Policy if a staff member is approached by a media representative the staff member should politely refer them to Council's Communications Manager or if urgent, the General Manager.

No staff members are to discuss Council matters with the media unless authorised to do so by the General Manager.

The most likely incidents to occur at the treatment plant are effluent overflows however, these Incidents are likely to be contained within the site boundary. If an incident did occur and any community members or neighbours were likely to be affected, then the steps above would be implemented.

8. Minimising harm to persons on the premise

The Evans Head treatment plant has an emergency plan & chart displayed in its site office detailing steps required in the case of an emergency and the location of its emergency evacuation point. The below Emergency Management Key responsibilities ensure that the risk of harm to staff is minimised.

Management is responsible including the Work Health and Safety Officer or delegate for;

- The effectiveness and accuracy of the emergency plan, procedures and relevant emergency documentation;
- Staff training in emergency preparedness;
- Co-ordination of evacuation exercises:
- Post-emergency / exercise review.

Supervisors /Work Health and Safety Representative Responsibilities include;

- Immediately responding to any emergency
- Ascertaining the nature of the emergency and determining appropriate actions
- Ensuring the appropriate emergency services have been notified
- Co-ordinating the deployment of staff and any internal specialist resources.
- Where safe to do so take steps to contain or control the hazard
- Ensuring that appropriate senior management are kept updated on the situation.
- Co-ordinating post-incident recovery strategies.
- Maintenance of staff training, emergency information lists and emergency-related plant and equipment necessary for emergency evacuation compliance.

Staff/Employees:

Responsibilities include:

- Attendance of any emergency preparedness training.
- Follow instructions given in the event of an emergency.
- Co-operate with emergency personnel in the event of an emergency.
- When safe to do so take steps to contain or control the hazard.
- Report all emergency incidents to either Senior Management, Immediate Supervisor and/or Work Health and Safety Officer.

9. Emergency Response and Evacuation Plan

Discovering a dangerous situation
Move persons away from danger if safe to do so.
Contact relevant emergency services (i.e. ambulance/fire/police)
Announce evacuation if dangerous situation requires
Contact Senior Management / Immediate Supervisor

Discovering a Reticulation Overflow
Notify immediate supervisor (will contact EPA) and request assistance (Jet Rodding Truck and possibly Sucker Truck)
Tape off effected receiving area to restrict access to members of the public
Inspect manholes downstream of overflow to identify the section of main that has the blockage
Obtain samples of overflowing material for laboratory analysis ensuring they are clearly marked and accompanied with chain of custody paperwork
Photograph the affected area and anything else of relevance for reporting purposes
When the blockage has been cleared, commence clean-up of receiving area and treat with hydrated lime
Complete the Sewer Blockage/Overflow Report

Discovering a release or potential to release effluent above EPA Licence limits
Notify Immediate Supervisor for assistance and to prompt reporting to external authorities
Locally isolate UV system to prevent effluent release to EPA discharge point
Investigate/rectify system failure causing effluent parameter failure
Then consider the following actions & implement them where appropriate generally in the order listed;

- Advise Overseer – Water and Sewer Services that Sewer Pump Stations feeding treatment plant may need to be isolated and monitored
- Locally isolate supernatant pump station until high level alarm is received
- Commence pump out of Catch Balance tank to the storm pond utilising submersible high-volume pump installed within the catch balance tank
- Consider adjusting EAT operations depending on the nutrient type over limit;
  - Ammonia: Sequence step to maximise aeration time and increase Dissolved Oxygen set point

- Nitrates: Reduce aeration by increasing aeration delays and decreasing DO set point (watch ammonia)
- Phosphates: Increase alum dosing (do not exceed 200mg/L alum). If sludge blanket level is higher than 1.40 metres increase Waste Activated Sludge pump run time in order to lower sludge age
- Low pH: Increase MHL dosing at Broadwater Sewage Pump Station (SPS) 1 and Woodburn SPS3 and slurry up hydrated lime for dosing at Treatment Plant drainage pump station
- High pH: Decrease MHL dosing at the above-mentioned dosing points. Aluminium Sulphate may be increased to assist in lowering pH

- Commence pump out of Catch Balance tank to the storm pond utilising submersible high-volume pump installed within the catch balance tank.
- As a last resort (due to the expense) contact sucker truck contractors for assistance

- Ballina Pumping Service	Jade Rose	0437 963 976
- Grelie Waste Services	Greg Trew	0412 794 357

Discovering UV Reactor failure – discharge or potential to discharge without disinfection

Notify Immediate Supervisor for assistance and to prompt reporting to external authorities
Locally isolate UV system to prevent effluent release to EPA discharge point
Report incident internally on 6660-0300
Investigate/rectify UV system failure – Council electricians may be required
Then consider the following actions & implement them where appropriate generally in the order listed;

- Advise Overseer – Water and Sewer Services that Sewer Pump Stations feeding treatment plant may need to be isolated and monitored.
- Commence pump out of Catch Balance tank to the storm pond utilising submersible high-volume pump installed within the catch balance tank.
- Should the UV system still be offline when the storm pond is half full proceed with the below procedure.
- Contact operators at Casino WTP and request they commence filling suitably labelled 20 L containers with chlorine. A minimum of 120 Litres will be required for initial treatment of effluent in the catch balance tanks. Casino WTP staff will also need to supply a chlorine test kit.
- Test residual chlorine after a contact time of 45 minutes to ensure a free chlorine concentration between 0.2mg/L and 1.00mg/L. This will ensure complete disinfection.
- Leaving the UV system isolated, manually start one effluent pump from within the main switch room. This will deliver approximately 40 L/second.
- Test free chlorine level at EPA discharge point – maintain free chlorine between 0.2 mg/L and 1.00 mg/L.

Reporting an emergency
When reporting an emergency, the following information should be included:

- Name of organisation
- Exact nature of emergency (any casualties?)
- Exact location (including address, near cross street, area level and room no.)
- Name of person reporting emergency
- Contact number (where applicable)

Assembly areas
In the event of an evacuation, persons should assemble at the nearest safe assembly area.

First Aid
If First Aid assistance is required contact the relevant First Aid Attendant.
First Aid Attendant lists can be found erected in the site office.
Any injured people who can be moved safely should be taken to the nearest assembly area (whichever is more appropriate) for treatment. Those people who are trapped or unable to be removed immediately must be protected and given first aid on the spot (providing it is safe to do so).

In the event of a Bushfire

Operators

Call Triple Zero (000) if you are in danger and unable to reach a safe location.

Notify Operations Supervisor that a bushfire is approaching your facility.
Ensure all building doors and windows are closed prior to evacuating site.
Ensure emergency generator is in automatic mode and available in event of mains power loss prior to evacuating site.

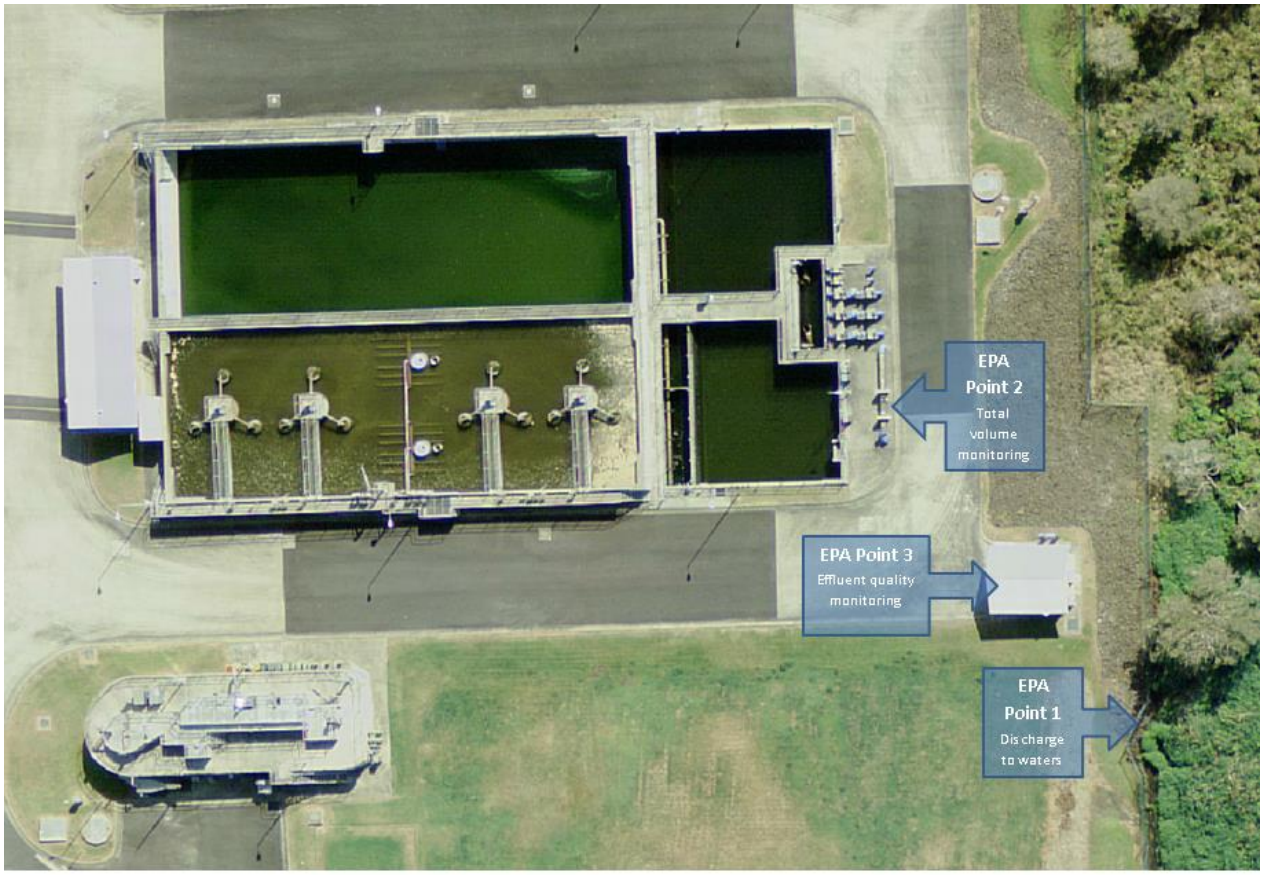
If safe to do so, wait onsite for the arrival of firefighting appliances and Operations Supervisor.
Relocate all internal washdown hoses to the water connections closest the emergency generator, main switch room and amenities building.

Operations Supervisor

Call NSW RFS Casino Fire Control Centre -**02 6663 0000.**
State the facility location and request the attendance of the closest appliances to protect a critical asset.
Mobilise to impacted facility and liaise with/direct Council staff and emergency response appliances to best prepare and protect the asset.

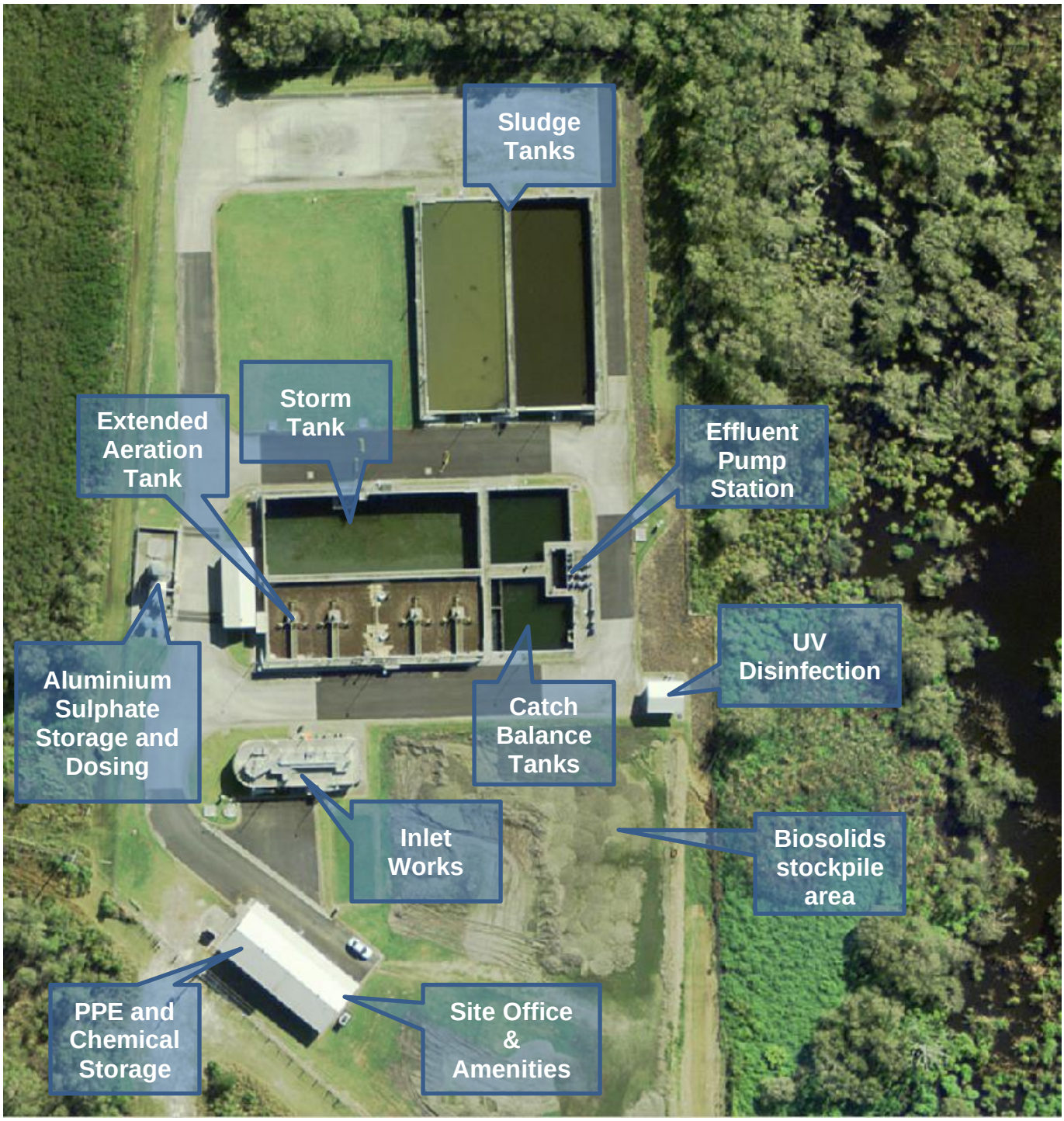
In the event of a complete evacuation from site, the facility is to be remotely monitored for any signs of systems failure.
A full facility assessment will be completed only once the fire front has passed and it is safe to do so.

10. Maps

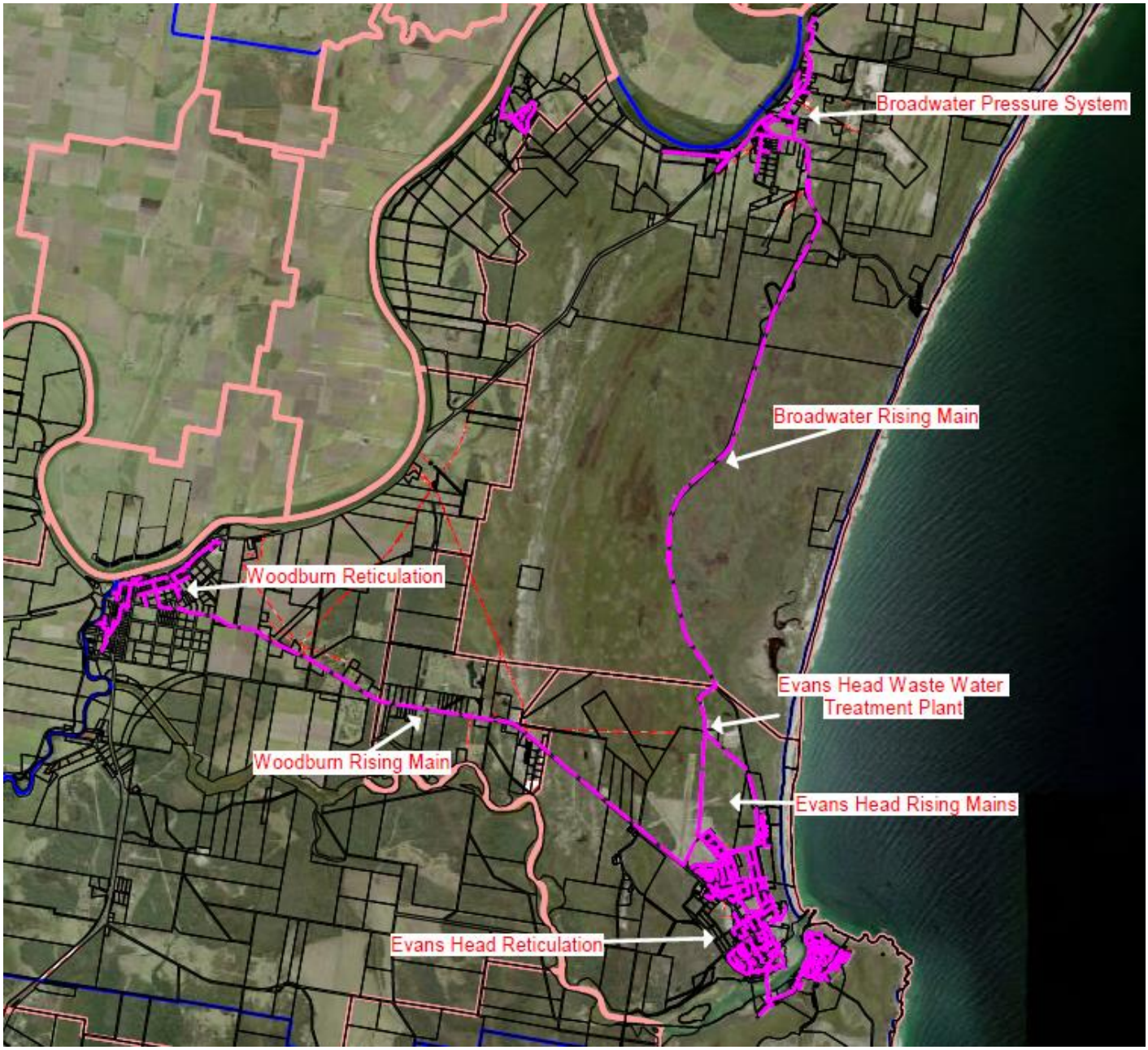


Evans Head Treatment Plant EPA Points

Surrounding Area



Site Plan Descriptions



Reticulation Network

Reticulation constructed overflows

11. Actions to be taken during or immediately after pollution incident

During a pollution incident

All actions taken during and after a pollution incident will vary depending on the nature of the properties of the pollutant/s and severity of the incident.

Any action taken shall be in accordance with any Work Health and Safety, EPA & Work Cover requirements.

Detailed records/evidence collection shall be carried out provided it is safe to do so. Evidence may include photographs/ samples taken and written notes.

Follow all directives given by the person/s in charge.

Follow only safe work practises as detailed in Council's SOP & SWMS.

Emergency Termination.

Only Richmond Valley Council management shall deem the emergency terminated. This action shall take place once all emergency services have concluded their involvement.

Post Incident Reporting

Reporting of the incident to the EPA shall include the following information.

The time, date, nature, duration and location of the incident.

The location of the place where the pollution is occurring or is likely to occur.

The nature, the estimated quantity or volume and the concentration of any pollutants involved if known.

The circumstances in which the incident occurred (including the cause of the incident if known).

The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution if known.

12. Staff training

Management aim to ensure staff are competent in key functional areas, that ongoing training will be provided, and currency of training monitored throughout their period of employment with Richmond Valley Council.

Records of training currency are maintained by the Council's People & Culture (P&C) section. P&C tracks expiry dates and arranges appropriate training as necessary and annual employee reviews are conducted to identify all required training needs.

All staff are trained in Richmond Valley Council general and site-specific Safe Work Method Statements & Standard Operating Procedures

Daily toolbox meetings are undertaken by treatment plant staff.

Practise emergency response training events are held at least annually. These events are utilised to demonstrate readiness and refine responses to a specific scenario for which an Emergency Scenario Response has been documented. De-briefing after the training event allows for further staff consultation and procedural refinement of the response.

All staff required to implement this plan must have training in its use and be inducted into it. This is to ensure they are aware of the content, processes and requirements of the plan & can competently implement it if necessary.
Within one month of a pollution incident occurring an additional test of the PIRMP will be conducted to assess whether the relevant responses are able to be implemented in an effective manner.

In the event of a significant incident, an investigation and debrief will be conducted, documentation updated where required and staff re-inducted.

All documentation is to be registered into Council's record management system.