

## Pollution Incident Response Management Plan

### Wardell Wastewater Treatment Plant and Reticulation

Environmental Protection Licence # 5785

#### Document Control

Trim Ref 12/52481

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| 2       | 08/04/2013 | Updated NSW Health contact numbers   | T Partridge |            |
| 3       | 22/07/2014 | Updated contact details  | J Ransom    |            |
| 4       | 22/08/2014 | Updated NSW Shellfish Richmond River Co-ord #                                  | J Ransom    | T Mackney  |
| 5       | 12/05/2015 | Updated Contacts   | M Tomkins   |            |
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| 7       | 19/05/2017 | Updated Contacts   | G Meredith  | T Lees     |
| 8       | 26/07/2018 | Updated Contacts   | G Meredith  | T Lees     |
| 9       | 16/07/2019 | Updated Contacts   | G Meredith  | T Lees     |
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## 1. Introduction

This plan has been developed to document the processes required to prepare for and respond to pollution incidents for the Wardell Wastewater Treatment Plant (WWTP) and associated reticulation (EPA Licence No. 5785) and ensure that hazards to the environment, human health and safety are reduced, if not eliminated. It has been prepared in accordance with the requirements of the Protection of the Environment Operations Act 1997 and Protection of the Environment Operations (General) Regulation 2009.

## 2. Scope

This Pollution Incident Response Management Plan applies to Wardell WWTP and Reticulation (EPA Licence No. 573). For site plans, refer Appendix 2 – Site Plans.

## 3. Pollution Incident Response Management Plan

The town of Wardell is serviced by approximately 12km of sewer mains and 8 pump stations which transfers sewage to the Wardell WWTP. Wardell WWTP treats approximately 450kL of sewage daily in dry weather, potentially reaching 5 times this flow during heavy rain periods. During sewage treatment, chemicals and by-products are produced which, if they are spilt or incorrectly managed, may contaminate the environment or threaten human health. A register of the chemicals is contained in Appendix 3 – Site Chemical Register.

### 3.1 Potential Incidents

The potential hazards to the environment include:

- Sewage overflow (raw or partially treated) – potentially caused by:
  - Storms (lightning/heavy rainfall/wind) causing power failure or infrastructure damage
  - Reticulation blockages
  - Damage to reticulation (contractors or other damage during excavations etc)
  - Infrastructure failure due to age
  - SCADA/Communications failure
  - Excessive flows
  - Mechanical break down
  - Power outage
  - Treatment plant blockage
- Chemical or Bio-solids spill – potentially caused by:
  - Tank/storage failure
  - Delivery incident
  - Damage to chemical reticulation
  - Vandalism
  - Inappropriate chemical use
  - Bund failure

A detailed assessment of risks is provided in Appendix 5 – Risk Assessment and Actions. For detail on actions to reduce risks see Section 3.5 Pre-emptive Measures and Appendix 6 – Action Plans to Minimise Harm

## 3.2 Incident Response

This section details the response requirements in the event of an incident.

During working hours the emergency number for Ballina Shire Council is **1300 864 444**

These calls are taken by staff on the Ballina Shire Council Switch.

After working hours the emergency number for Ballina Shire Council is **(02) 6626 6954**

This call is answered by Immediate Reception, who informs appropriate personnel of issues and incidents.

Containing, minimising and cleaning up hazardous substances may involve the following processes as required:

- Attempt to stop the flow of the substance at the source.
- Place sand or soil in the shape of a bund around the spill to contain it.
- Place absorbent material (preferably from a spill kit) over the spill to soak up the substance and store in a container.
- In the event of a pump station overflow, upstream flows need to be managed and isolated using SCADA to extend the sewer holding/storage time.
- If a large quantity has been spilt, provide a bund or cut off walls at points along the flow direction to prevent the substance entering stormwater drains or waterways, this may need to be done in several places to store the quantity spilt.
- Remove any excess sewage spills using a pump out or vacuum tanker where practical.
- Remove any solid wastewater material and contaminated soil and dispose of to landfill.
- Public areas contaminated with wastewater (not waterways) may require disinfection (confirm with the Environmental Health Officer).
- Seek advice from senior staff on method of removal that could involve specialist clean up.

| Follow-up actions   | Responsibility  |
|---|---|
| If directed by the EPA or Environmental Health Officer, investigate and organise sampling of surrounding waterways and/or soils and notify the treatment plant engineer of outcomes.  | Treatment Plants and Capital Works Engineer, Project and Operations Engineer, Operations Engineer to engage EHO's to collect samples. |
| Contaminated land is to be disinfected, ponded sewage pumped out and faecal coliforms are to be monitored until background levels are reached. Council will publish this monitoring data on its website (environment >> published environment monitoring data). | Team Leader Water and Wastewater, Supervisor Water and Wastewater Treatment   |
| Provide the EPA with a written report of the incident within 7 days in accordance with the POEO Act. To likely be drafted by the Engineer that raised the PIRMP.  | Treatment Plants and Capital Works Engineer, Project and Operations Engineer, Operations Engineer                                     |

Refer to **Appendix 1 – Stakeholder Contact Details** for a comprehensive list of contact details.

### 3.2.1 Human health or Safety Incident

If there is immediate threat to Human health or Safety, call triple zero “000” (try “112” if call is unsuccessful) and implement the following process:

- 1) Implement the EMERGENCY RESPONSE PROCEDURE
- 2) If required, evacuate the site.

- 3) Contact Team Leader (Garry Meredith **0428 811 277**) and/or Manager Water and Wastewater (Bridget Walker **0474 009 041**)
- 4) Report the incident to the Coordinator of Risk Management (Stuart Roach **0408 245 502**)

### 3.2.2 Pollution incident

During a pollution incident which involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, Ballina Shire Council must verbally notify the following authorities immediately:

- 1) Immediate supervisor
- 2) EPA Environment Line (written report to be provided within 7 days) **131 555**
- 3) NSW Health (Local Health District Public Health Unit) **1300 066 055**  
or AH: **0428 882 805**
- 4) Fire & Rescue NSW **1300 729 579**
- 5) SafeWork NSW **131 050**
- 6) BSC Environmental Health Officer **(02) 6686 1210**  
or AH: **(02) 6626 6954**

All communications with emergency response agencies due to incidents that apply to this plan must be made through the **Team Leader Water and Wastewater**.

Ballina Shire Council should also consider contacting the following as soon as practical:

- 1) The staff member's Supervisor, Coordinator and Manager
- 2) Affected neighbours
  - a. Rob McDonald (Turf Farm) **0402 411 633**
- 3) NSW Shellfish Program Manager **(02) 9741 4749**  
or AH: **0407 078 269**

**and email [nswsp@foodauthority.nsw.gov.au](mailto:nswsp@foodauthority.nsw.gov.au)**

- 4) NSW Shellfish Richmond River Coordinator **((02) 6686 3394)**
- 5) Oyster Farmers (update annually)

|    | <u>Name</u>  | <u>Location</u> | <u>Home</u>           | <u>Mobile</u>       | <u>Work</u>           |
|----|--------------|-----------------|-----------------------|---------------------|-----------------------|
| a) | Ray Hunt     | North Creek     |                       | <b>0414 884 274</b> |                       |
| b) | Geoff Lawler | North Creek     | <b>(02) 6686 7163</b> |                     | <b>(02) 6686 3394</b> |
| c) | Ian Cardow   | Serpentine      |                       | <b>0438 237 359</b> | <b>(02) 6686 3270</b> |

- 6) Cape Byron Marine Park Authority **(02) 6620 9300**
- 7) Fisheries **1800 043 536**
- 8) Life Guards **0432 217 500**
- 9) Chemical supplier **Refer to the SDS**
- 10) Aboriginal Land Council **(02) 6686 7055**
- 11) Police **(02) 6681 8699**
- 12) Rous Water **(02) 6621 8055**

### 3.2.3 Contained Overflows

During a pollution incident in which Council staff respond within sufficient time to fully contain the spill and prevent an incident of actual or potential harm to the health or safety of human beings or to ecosystems, the following notification should be made as soon as practicable (within 24 hours):

- 1) Team Leader Water and Wastewater
- 2) Operations Engineer, Water and Wastewater via email

In all situations where there is damage and/or loss to private property or a member of the public due to an incident related to this plan, contact:

- 1) Stuart Roach (Coordinator of Risk Management) **(02) 6686 1406**

The incident response required depends on the type of incident that has occurred.

### 3.3 Community notification

Impacts on the community due to sewage distribution and treatment incidents are variable and depend on location, volumes of spills or other factors. Communication methods will be used on a case by case basis and in all situations Ballina Shire Council will attempt to provide early warning to directly affected premises (either upstream or downstream depending on tidal impacts where relevant) by phone call or site visit. Early warning is to include details of what the incident is, how those affected can prepare and respond, and provide important advice such as avoiding contact and use of affected waterways.

Where early warning is not possible Ballina Shire 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 should be made in conjunction with input from Council's Public and Environmental Health and Communication Teams.

- 1) Kerri Watts (Manager Public and Environmental Health) **(02) 6686 1265**
- 2) Caroline Klose (Manager Communications and Customer Service) **(02) 6686 1296**

In the event of a chemical or sewage spill into stormwater or waterway, Ballina Shire Council staff are to go to prominent and/or high use areas of the affected waterway 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. Additionally, if the event occurred or was occurring during dry weather, Ballina Shire Council staff are to attend popular sites and advise users directly.

Contaminated land is to be disinfected, ponded sewage pumped out and faecal coliforms are to be monitored until background levels are reached. Council will publish this monitoring data on its website (environment >> published environment monitoring data).

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). Ballina Shire Council is to take signs down and advise the public that regular activities can be resumed by (as required):

- Phone calls
- Media releases (radio/television/newspaper/internet/social media as required)
- Letter drops
- Other methods as the situation requires

### 3.3.1 Incidents at the Wastewater Treatment Plant

The township of Wardell is approximately 1.5 km away from the Wardell WWTP. The nearest neighbour from the Wardell WWTP is approximately 600 metres away. There is nothing onsite that would create an emergency for any neighbours. Additionally, the inflow into this plant and the available storage means that even at peak wet weather flows the potential of an overflow from this plant is low. However, if an incident did occur it would result in a spill onto the turf farm and be unlikely to impact on the environment or health and any community members or neighbours were affected then the processes listed in Section 3.3 Community notification above would be implemented as required.

### 3.4 Incident Investigation

All emergencies must be investigated. For all other incidents, the manager (with guidance from review personnel) will decide whether an incident investigation will be conducted. When an incident investigation is required, the relevant manager is responsible for:

- Forming the investigation team
- Co-ordinating the investigation

A de-brief is to be conducted for all emergency incidents. However, the responsible manager may also initiate de-briefs for other incidents where they feel it is appropriate.

### 3.5 Pre-emptive Measures

#### 3.5.1 Physical and preventative measures

First priority for pre-emptive measures is to eliminate substances that can become potential pollutants. If this is not possible, physical barriers should be installed to prevent pollutants from entering the environment such as bunding and spill drainage containment. At Wardell WWTP, all chemical storages are bunded to ensure that if the storage fails the pollutant is contained and treatment process bypasses are installed to prevent partially treated sewage spills due to reticulation issues. Additionally, the reticulation, pump stations, and Wardell WWTP have multiple alarm systems to alert operators of conditions that may result in incidents, which include:

- High level alarms
- Communication failure
- Chemical bund alarms
- Motor issue alarm
- No flow/high flow alarms

In the event that these systems fail, Ballina Shire Council has portable bypass pumps and other containment options available.

#### 3.5.2 Preventative monitoring and maintenance

Ballina Shire Council uses monitoring and preventative maintenance to reduce the potential for incidents at both the WWTP and for the reticulation and pump stations. These separated in the following timeframes:

- Daily
- Weekly
- Monthly to Annually
- Longer term (capital works and maintenance programs)
- *Daily:*
  - The WWTP is to be attended daily and the following inspected:
  - Maintenance requirements
  - Chemical quantities
  - Plant performance data
  - House keeping issues that requiring attention

- Vandalism and/or thefts
- Issues with bunds
- Check bund valves are closed
- Alarms workings
- **Weekly:**  
For the reticulation and associated pump stations staff are to conduct weekly pump station checks using the **Weekly Sewage Pump Station Maintenance Form**.
- **Monthly to Annually:**  
The following is to be checked monthly for the reticulation and pump stations:
  - Alarm testing – power fail, critical float
  - Rain gauges – Electricians

The following is to be checked or conducted every three months:

- All valve operations - exercising, maintenance
- Inlet Valves - exercising, maintenance
- Isolation Valves - exercising, maintenance
- Spray and exercise locks

The following is to be checked or conducted every six months:

- Backup Batteries
- Fire Extinguishers
- Odour Beds and Sprinkler System - inspection
- Overflow Plugs - inspection
- Remove grit with suck truck - Vacuum Truck
- Stink Pipe - cartridges and whirly bird - inspection
- Sump Pumps - Dry Well PS's
- Vermin/Insect Protection

The following is to be checked or conducted annually:

- Lopping and pruning of trees surrounding PS's
- Painting
- Prune trees around odour beds
- Pump Performance Testing (Citect and Draw-down tests)
- RPZ Testing
- Team Training - New Technologies and Upgrades
- Trade waste system inspections
- CCTV and Jetting for repeat chokes
- Tree removal where there are repeat chokes
- Inspection and mowing of pipeline easements
- Condition assessment of above ground rising mains
- Bund integrity (WWTP)

Other checks include manhole inspection, maintenance, repair and resealing (as required) safety net checks (bi-annually), renewing woodchips and gravel (as required) and inspecting and exercising Overflow Flaps (after heavy rainfall).

### 3.6 Training & Competency

All staff required to implement this plan and associated documents 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 this plan and can competently implement it if necessary. Additionally, relevant staff will be involved in an annual



exercise/drill to test the implementation of the plan. In the event of a significant incident, an investigation and debrief will be conducted, documentation updated (if required) and staff will be re-inducted.

All, desktop exercises, drills and incidents are to be registered into Council's Document Management System (TRIM), and training records will be tasked through TRIM to Council's Risk & Human Resources Department who will record the training into Council's Human Resources Information System (HRIS).

#### 4. Responsibility

The Manager Water, Wastewater and Waste is responsible for the implementation of this Plan.

#### 5. References

- EPA NSW Environmental Guidelines: Preparation of pollution incident response plans
- Local Government Act 1993
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (General) Regulation 2009
- Protection of the Environment Operations Amendment Act 2011
- Protection of the Environment Operations Amendment Act 2014
- Protection of the Environment Operations Legislation Amendment (Schedule Activities) Regulation 2019
- Environmental Legislation Amendment Act 2022
- Public Health Act 1991
- Water Administration Act 1986

#### 6. Dictionary

**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 or odour (see the POEO Act 1997).

**Harm to the environment:** harm to the environment is material if:

- 1) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is **not trivial**, or
- 2) 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

**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.

## 7. Testing of the PIRMP

It is a legal requirement to test the plan every 12 months and within one month of any pollution incident. This testing should include simulation of desktop scenarios including practical exercises and incident drills. All contacts including names and numbers are to be reviewed and updated as required. Testing must cover all components of the plan. The PIRMP should be tested and updated within 1 month of a pollution incident. In this case it should be considered whether the information in the PIRMP is accurate and up to date and whether the plan is adequate and effective for managing the response to pollution incident.

| Date tested | Participants         | Details of test (e.g. nature of the test, involvement of other agencies) | Finding of test (including issues identified) | Next scheduled testing date |
|-------------|----------------------|--|---|-----------------------------|
| 31/05/2018  | Treatment Operations | Desktop  | No issues identified                          | May 2019                    |
| 31/05/2019  | Treatment Operations | Desktop  | No issues identified                          | May 2020                    |
| 31/05/2020  | Treatment Operations | Desktop  | No issues identified                          | May 2021                    |
| 31/05/2021  | Treatment Operations | Desktop  | No issues identified                          | May 2022                    |
|             |                      |  |   |                             |

## Appendix 1 – Stakeholder Contact Details

| Organisation   | Contact           | Phone                                    | Email   |
|--|-------------------|--|---|
| <b>NSW EPA Environment Line</b>                          |                   | <b>131 555</b>                           | <a href="mailto:info@environment.nsw.gov.au">info@environment.nsw.gov.au</a><br>and<br><a href="mailto:north.coast@epa.nsw.gov.au">north.coast@epa.nsw.gov.au</a> |
| <b>NSW EPA</b>   | Peter Lynch       | <b>(02) 6640 2502<br/>0438 208 131</b>   | <a href="mailto:peter.lynch@epa.nsw.gov.au">peter.lynch@epa.nsw.gov.au</a>  |
| <b>NSW EPA</b>   | Janelle Bancroft  | <b>(02) 6640 2513<br/>0447 139 638</b>   | <a href="mailto:janelle.bancroft@epa.nsw.gov.au">janelle.bancroft@epa.nsw.gov.au</a>  |
| <b>NSW Health</b>  |                   | <b>1300 066 055<br/>0428 882 805</b>     | <a href="mailto:NNSWLHD-NCPHU-EnvironmentalHealth@health.nsw.gov.au">NNSWLHD-NCPHU-<br/>EnvironmentalHealth@health.nsw.gov.au</a>                                 |
| <b>NSW Health</b>  | Paul Williamson   | <b>(02) 6620 7525<br/>0414 569 516</b>   | <a href="mailto:Paul.Williamson@health.nsw.gov.au">Paul.Williamson@health.nsw.gov.au</a>  |
| <b>SafeWork NSW</b>                                      |                   | <b>131 050</b>                           |   |
| <b>BSC Environmental Health Officer</b>                  |                   | <b>(02) 6686 1210<br/>(02) 6626 6954</b> |   |
| <b>BSC (Public &amp; Environmental Health, Manager)</b>  | Kerri Watts       | <b>(02) 6686 1210<br/>0414 192 311</b>   | <a href="mailto:Kerr.watts@ballina.nsw.gov.au">Kerr.watts@ballina.nsw.gov.au</a>  |
| <b>BSC (Water &amp; Wastewater, Team Leader)</b>         | Garry Meredith    | <b>1300 864 444<br/>0428 811 277</b>     | <a href="mailto:garrym@ballina.nsw.gov.au">garrym@ballina.nsw.gov.au</a>  |
| <b>BSC (Water &amp; Wastewater, Operations Engineer)</b> | Gabrielle Denniss | <b>(02) 6686 1294<br/>0428 197 329</b>   | <a href="mailto:Gabrielle.denniss@ballina.nsw.gov.au">Gabrielle.denniss@ballina.nsw.gov.au</a>  |
| <b>BSC (Water &amp; Wastewater, Manager)</b>             | Bridget Walker    | <b>(02) 6686 1226<br/>0474 009 041</b>   | <a href="mailto:bridget.walker@ballina.nsw.gov.au">bridget.walker@ballina.nsw.gov.au</a>  |
| <b>BSC Risk &amp; Human Resources Department</b>         |                   | <b>(02) 6686 1202<br/>(02) 6686 1430</b> |   |
| <b>BSC (Coordinator, Risk Management)</b>                | Stuart Roach      | <b>(02) 6686 1406<br/>0408 245 502</b>   | <a href="mailto:sroach@ballina.nsw.gov.au">sroach@ballina.nsw.gov.au</a>  |
| <b>Fire &amp; Rescue NSW</b>                             |                   | <b>1300 729 579</b>                      |   |
| <b>NSW Shellfish Program Manager</b>                     |                   | <b>(02) 9741 4749<br/>0407 078 269</b>   | <a href="mailto:nswp@foodauthority.nsw.gov.au">nswp@foodauthority.nsw.gov.au</a>  |
| <b>NSW Shellfish Richmond River Coordinator</b>          | Geoff Lawler      | <b>(02) 6686 3394</b>                    |   |
| <b>Oyster Farmer (North Creek)</b>                       | Ray Hunt          | <b>0414 884 274</b>                      |   |
| <b>Oyster Farmer (North Creek)</b>                       | Geoff Lawler      | <b>(02) 6686 3394<br/>(02) 6686 7163</b> |   |
| <b>Oyster Farmer (Serpentine)</b>                        | Ian Cardow        | <b>(02) 6686 3270<br/>0438 237 359</b>   |   |
| <b>Cape Byron Marine Park Authority</b>                  |                   | <b>(02) 6620 9300</b>                    |   |
| <b>Fisheries</b>   |                   | <b>1800 043 536</b>                      |   |

|   |                  |  |   |
|---|------------------|--|---|
| <b>Life Guards</b>                              |                  | <b>0432 217 500</b>                      |   |
| <b>Chemical Suppliers</b>                       |                  | <b>Refer to SDS<br/>(ChemAlert)</b>      |   |
| <b>Aboriginal Land Council</b>                  |                  | <b>(02) 6686 7055</b>                    |   |
| <b>Police</b>                                   |                  | <b>(02) 6681 8699</b>                    |   |
| <b>Rous Water</b>                               |                  | <b>(02) 6621 8055<br/>(02) 6626 6955</b> |   |
| <b>DPI Water</b>                                | Terry Call       | <b>(02) 6627 0100</b>                    | <a href="mailto:terry.call@dpi.nsw.gov.au">terry.call@dpi.nsw.gov.au</a>  |
| <b>Tweed Lab</b>                                | Paul Wright      | <b>(07) 5569 3101</b>                    | <a href="mailto:paulw@tweed.nsw.gov.au">paulw@tweed.nsw.gov.au</a><br>and<br><a href="mailto:samplerception@tweed.nsw.gov.au">samplerception@tweed.nsw.gov.au</a> |
| <b>Pathology North Lismore</b>                  | Erin Lysaght     | <b>(02) 6620 2926</b>                    | <a href="mailto:Erin.Lysaght@health.nsw.gov.au">Erin.Lysaght@health.nsw.gov.au</a>  |
| <b>Environmental Analysis Lab, SCU, Lismore</b> | Graeme Lancaster | <b>(02) 6620 3678<br/>0419 984 088</b>   | <a href="mailto:graham.lancaster@scu.edu.au">graham.lancaster@scu.edu.au</a>  |
| <b>Australian Laboratory Services (ALS)</b>     | Sally Mitchell   | <b>(07) 3552 8676</b>                    | <a href="mailto:sally.mitchell@alsglobal.com">sally.mitchell@alsglobal.com</a>  |
|   | Admin            | <b>(07) 3243 7222</b>                    | <a href="mailto:angel-no-reply@alsglobal.com">angel-no-reply@alsglobal.com</a>  |

## Appendix 2 – Site Plans

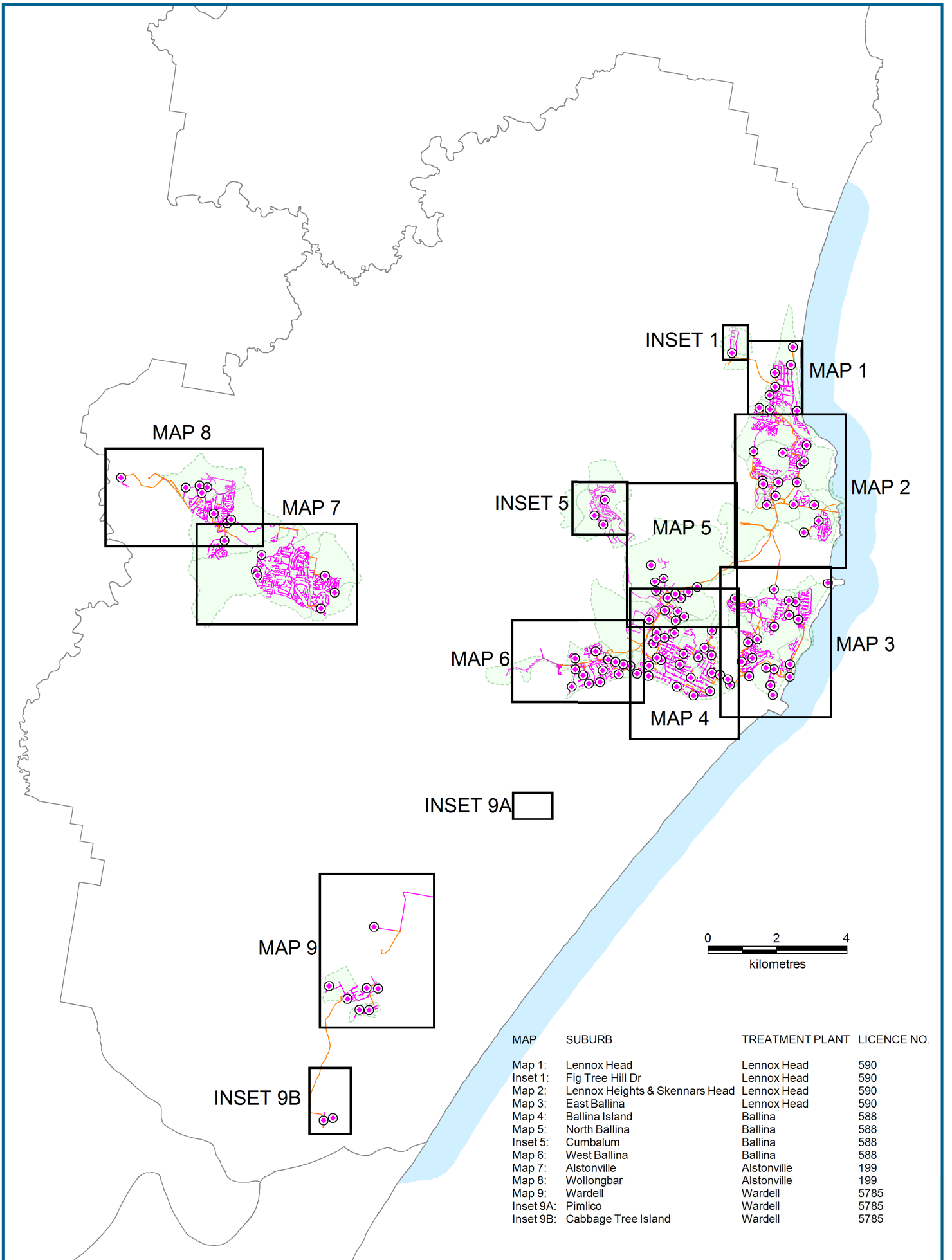
The Site Plans are constructed using the best current available data and are considered uncontrolled when printed. It is expected that reference will be made to the interactive electronic version of the maps through Council GIS systems. All PIRMP diagrams are in one plan set, the full list of plans are listed below:

### Sewerage Reticulation maps

| Map Number | Title                                  | Treatment Plant  | Licence No. |
|------------|--|------------------|-------------|
| na         | Map Index (Maps 1-9)                   | All              | All         |
| 1 of 9     | Lennox Head & Fig Tree Hill Dr         | Lennox Head WWTP | 590         |
| 2 of 9     | Lennox Heights & Skennars head         | Lennox Head WWTP | 590         |
| 3 of 9     | East Ballina                           | Lennox Head WWTP | 590         |
| 4 of 9     | Ballina Island                         | Ballina WWTP     | 588         |
| 5 of 9     | Cumbalum & North Ballina               | Ballina WWTP     | 588         |
| 6 of 9     | West Ballina                           | Ballina WWTP     | 588         |
| 7 of 9     | Alstonville                            | Alstonville WWTP | 199         |
| 8 of 9     | Wollongbar                             | Alstonville WWTP | 199         |
| 9 of 9     | Wardell, Pimlico & Cabbage Tree Island | Wardell WWTP     | 5785        |

### Licensed Facility Maps

| Map Number | Title                           | Treatment Plant | Licence No. |
|------------|---------------------------------|-----------------|-------------|
| na         | Lennox Head WWTP                |                 | 590         |
| na         | Ballina WWTP                    |                 | 588         |
| na         | Alstonville WWTP                |                 | 199         |
| na         | Wardell WWTP                    |                 | 5785        |
| na         | BSC Airport Sandpit             |                 | 5948        |
| na         | Ballina Waste Management Centre |                 | 6350        |



**Map Index (1-9)**  
**Pollution Incident Response Management Plan**














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 Although all care is taken in the preparation of this plan, Ballina Shire Council accepts no responsibility for any misprints, errors, omissions or inaccuracies.  
 The information contained within this plan is for pictorial representation only. Do not scale. Accurate measurements should be undertaken by survey.

Printed  
 02/06/2016

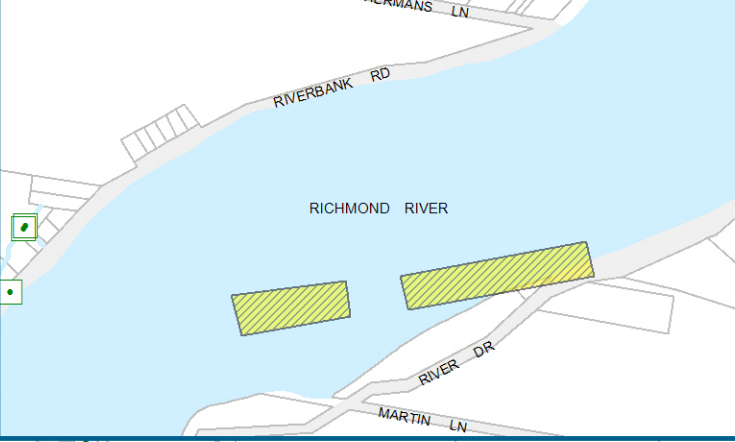


**Legend**

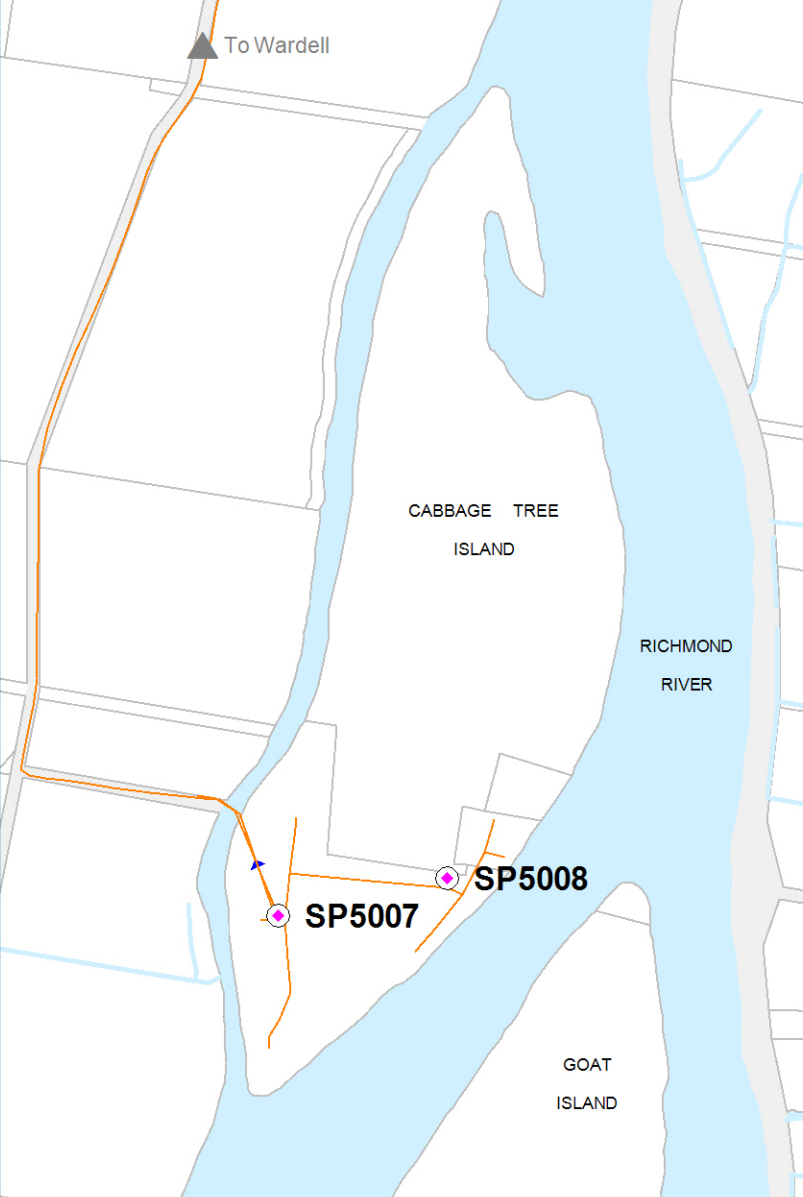
-  Sewage Pump Station  
e.g. Asset ID = SP3001
-  Sewage Overflow Location
-  Sewer Gravity Reticulation  
and Flow Direction
-  Sewer Rising Main  
and Flow Direction
-  Stormwater Outlet Headwall
-  Urban Stormwater  
Catchment Boundary
-  Urban Stormwater  
Catchment Flow Direction
-  Drainage Line  
Open Drains, Natural Drains
-  Water Way  
Dams, Creeks, Rivers, Ocean
-  Oyster Lease
-  Hazard / Risk Locations



**INSET 9A: Pimlico**



**INSET 9B: Cabbage Tree Island**



WWTP  
5785

SP5001

SP5005

SP5006

SP5002

SP5004

SP5003

SP5007

SP5008



**Map 9 of 9**  
**Wardell, Pimlico & Cabbage Tree Island / Wardell WWTP - License No. 5785**  
**Pollution Incident Response Management Plan**

Version: 1  
Printed: 30/08/2012  
Drawn By: WP  
Approved By: AS



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Although all care is taken in the preparation of this plan, Ballina Shire Council accepts no responsibility for any misprints, errors, omissions or inaccuracies.  
The information contained within this plan is for pictorial representation only. Do not scale. Accurate measurements should be undertaken by survey.

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**Wardell WWTP - License No. 5785**  
**Pollution Incident Response Management Plan**

Version: 1  
Printed: 31/10/2012  
Drawn By: WP  
Approved By: TP



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## Appendix 3 – Site Chemical Register

Council maintains its chemical register using the ChemAlert system. Copies are considered uncontrolled when printed.

## Stock Register

(Location Name: BALLINA SHIRE COUNCIL/ WATER &amp; WASTEWATER STP'S/ WARDELL STP , Child Locations Included)

(Sort By: Colour Rating, Filter By: None)

| Stock Number | Product Name  |                |           |               | Supplier (Emergency Contact)  |                              |                    |                 |             |
|--------------|---|----------------|-----------|---------------|---|------------------------------|--------------------|-----------------|-------------|
|              | Hazardous   | Dangerous Good | UN number | Packing Group | Hazchem Code  | Status                       | In Stock Inventory | Risk Assessment | SDS Date    |
| 114          | 54G-LINE DULUX WEATHERSHIELD EXTERIOR GLOSS                     |                |           |               | DULUX GROUP (AUSTRALIA) PTY LTD (1800 220 770/ 0800 220 770)                    |                              |                    |                 |             |
|              | No  | No             | -         | -             | -   | Approved - with Restrictions | Yes                | -               | 18-Mar-2019 |
| 75           | ENVIRO DRYSORB  |                |           |               | CHEMRON AUSTRALIA PTY LTD ((02) 9998 5656)                                      |                              |                    |                 |             |
|              | No  | No             | -         | -             | -   | Approved - with Restrictions | Yes                | -               | 22-Jul-2019 |
| 750          | VALVOLINE VALPLEX EP GREASE                                     |                |           |               | VALVOLINE (AUSTRALIA) PTY LTD (1800 804 658, New Zealand (02) 8603 2300)        |                              |                    |                 |             |
|              | No  | No             | -         | -             | -   | None                         | Yes                | -               | 09-Aug-2017 |
| 865          | 2 STROKE ENGINE OIL   |                |           |               | VALVOLINE (AUSTRALIA) PTY LTD (1800 804 658, New Zealand (02) 8603 2300)        |                              |                    |                 |             |
|              | Yes   | No             | -         | -             | -   | None                         | Yes                | -               | 10-Mar-2020 |
| 269          | AQIUM GEL ETHANOL 70% W/W (AUST R 179333)                       |                |           |               | EGO PHARMACEUTICALS PTY LTD ((03) 9586 8800; 1800 033 706/ 13 11 26)            |                              |                    |                 |             |
|              | Yes   | DG 3           | UN 1170   | PG II         | ●2YE  | None                         | Yes                | -               | 08-Apr-2020 |
| 22282        | AQUAFASST LOW RANGE AMMONIA SET                                 |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558)     |                              |                    |                 |             |
|              | Yes   | No             | -         | -             | -   | Approved - No Restrictions   | Yes                | -               | 04-Dec-2016 |
| 7            | ASSASSIN  |                |           |               | MOMAR AUSTRALIA PTY LTD (1800 267 933)  |                              |                    |                 |             |
|              | Yes   | DG 2.1         | UN 1950   | -             | 2YE   | None                         | Yes                | -               | 30-Sep-2021 |
| 102          | INOX-MX3 AEROSOL  |                |           |               | CANDAN INDUSTRIES PTY LTD ((07) 5574 8205)                                      |                              |                    |                 |             |
|              | Yes   | DG 2.1         | UN 1950   | -             | 2YE   | Approved - with Restrictions | Yes                | -               | 28-Feb-2022 |
| 885          | LAUNDRY POWDER  |                |           |               | BUNZL AUSTRALASIA LIMITED (13 11 26 (Poisons Information Centre)/ 0800 764 766) |                              |                    |                 |             |
|              | Yes   | No             | -         | -             | -   | None                         | Yes                | -               | 01-Oct-2016 |
| 22314        | LUGOL SOLUTION (L6146)  |                |           |               | SIGMA-ALDRICH PTY. LTD. (1800 448 465/ (02) 9037 2994)                          |                              |                    |                 |             |
|              | No  | No             | -         | -             | -   | Approved - No Restrictions   | Yes                | -               | 20-Jul-2021 |
| 149          | METHYLATED SPIRITS  |                |           |               | RECOCHEM INC ((07) 3308 5200; 1300 131 001 (After hours)/ 0800 764 766)         |                              |                    |                 |             |
|              | Yes   | DG 3           | UN 1170   | PG II         | ●2YE  | Approved - with Restrictions | Yes                | -               | 31-Jan-2022 |
| 918          | MORTEIN FAST KNOCKDOWN CRAWLING INSECT KILLER ODOURLESS AEROSOL |                |           |               | RB (HYGIENE HOME) AUSTRALIA PTY LTD (13 11 26 (PIC))                            |                              |                    |                 |             |
|              | Yes   | DG 2.1         | UN 1950   | -             | 2YE   | None                         | Yes                | -               | 15-Jan-2018 |

## Stock Register

(Location Name: BALLINA SHIRE COUNCIL/ WATER &amp; WASTEWATER STP'S/ WARDELL STP , Child Locations Included)

(Sort By: Colour Rating, Filter By: None)

| Stock Number | Product Name                             |                |           |               | Supplier (Emergency Contact)   |                              |                    |                 |                  |
|--------------|--|----------------|-----------|---------------|--|------------------------------|--------------------|-----------------|------------------|
|              | Hazardous                                | Dangerous Good | UN number | Packing Group | Hazchem Code   | Status                       | In Stock Inventory | Risk Assessment | SDS Date         |
| 349          | PEA BEU RAPID KILL INSECT KILLER AEROSOL |                |           |               | RB (HYGIENE HOME) AUSTRALIA PTY LTD (13 11 26 (PIC))                         |                              |                    |                 |                  |
|              | Yes                                      | DG 2.1         | UN 1950   | -             | 2YE  | Approved - No Restrictions   | Yes                | -               | PRODUCT OBSOLETE |
| 22137        | POTASSIUM PERSULPHATE                    |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558)  |                              |                    |                 |                  |
|              | Yes                                      | DG 5.1         | UN 1492   | PG III        | 1Z   | Approved - No Restrictions   | Yes                | -               | 06-Jul-2020      |
| 41           | ROUNDUP BIACTIVE HERBICIDE               |                |           |               | BAYER CROPSCIENCE PTY LTD (1800 033 111 (IXOM Operations))                   |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | Approved - with Restrictions | Yes                | -               | 01-Oct-2021      |
| 785          | SEPTONE CITRA SCRUB                      |                |           |               | ITW AAMTECH AUSTRALIA (1800 039 008)   |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | None                         | Yes                | -               | 01-Nov-2019      |
| 22304        | SODIUM SULFITE                           |                |           |               | HACH PACIFIC (13 11 26)  |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | None                         | Yes                | -               | 17-Aug-2018      |
| 22179        | SODIUM SULPHITE ANHYDROUS                |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558)  |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | Approved - No Restrictions   | Yes                | -               | 04-Jul-2020      |
| 1374         | TN (TOTAL NITROGEN) HYDROXIDE REAGENT    |                |           |               | HACH PACIFIC (13 11 26)  |                              |                    |                 |                  |
|              | Yes                                      | DG 8           | UN 1760   | PG II         | 2X   | Approved - No Restrictions   | Yes                | -               | 13-Aug-2019      |
| 301          | TOMCAT RAT & MOUSE BAIT                  |                |           |               | BARMAC, A DIVISION OF AMGROW PTY LTD (13 11 26)                              |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | Approved - with Restrictions | Yes                | -               | 31-Mar-2020      |
| 252          | UNLEADED PETROL                          |                |           |               | AMPOL AUSTRALIA PETROLEUM PTY LTD (FORMERLY CALTEX AUSTRALIA) (1800 033 111) |                              |                    |                 |                  |
|              | Yes                                      | DG 3           | UN 1203   | PG II         | 3YE  | Approved - with Restrictions | Yes                | -               | 26-Mar-2019      |
| 128          | USE ALL                                  |                |           |               | TRUE BLUE CHEMICALS (13 11 26)   |                              |                    |                 |                  |
|              | Yes                                      | No             | -         | -             | -  | Approved - with Restrictions | Yes                | -               | 22-Apr-2021      |
| 22140        | VARIO AMMONIA CYANURATE                  |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558)  |                              |                    |                 |                  |
|              | Yes                                      | DG 8           | UN 2680   | PG II         | 2X   | Approved - No Restrictions   | Yes                | -               | SDS DISCONTINUED |

## Stock Register

(Location Name: BALLINA SHIRE COUNCIL/ WATER &amp; WASTEWATER STP'S/ WARDELL STP , Child Locations Included)

(Sort By: Colour Rating, Filter By: None)

| Stock Number | Product Name  |                |           |               | Supplier (Emergency Contact)  |                              |                    |                 |                  |
|--------------|---|----------------|-----------|---------------|---|------------------------------|--------------------|-----------------|------------------|
|              | Hazardous   | Dangerous Good | UN number | Packing Group | Hazchem Code  | Status                       | In Stock Inventory | Risk Assessment | SDS Date         |
| 22273        | VARIO PHOSPHATE RGT   |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 6.1 / 8     | UN 3290   | PG II         | 2X  | Approved - No Restrictions   | Yes                | -               | 04-Jul-2020      |
| 22280        | VARIO POTASSIUM PERSULFATE F 10   |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 5.1         | UN 3215   | PG III        | 1Z  | None                         | Yes                | -               | 04-Jul-2020      |
| 22138        | VARIO TOTAL N PERSULFATE RGT  |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 5.1         | UN 3215   | PG III        | 1Z  | Approved - No Restrictions   | Yes                | -               | 04-Jul-2020      |
| 22145        | VARIO TOTAL NITROGEN HYDROXIDE LR VIAL                                    |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 8           | UN 1824   | PG III        | 2R  | Approved - No Restrictions   | Yes                | -               | 04-Jul-2020      |
| 112          | WATTYL KILLRUST GLOSS EPOXY ENAMEL LEAD FREE (PRE NOVEMBER 2019)          |                |           |               | VALSPAR PAINT (AUSTRALIA) PTY LTD ((02) 9037 2994)                          |                              |                    |                 |                  |
|              | Yes   | DG 3           | UN 1263   | PG III        | •3Y   | Approved - with Restrictions | Yes                | -               | PRODUCT OBSOLETE |
| 134          | WATTYL SOLAGARD LOW SHEEN WHITE BASE                                      |                |           |               | VALSPAR PAINT (AUSTRALIA) PTY LTD ((02) 9037 2994)                          |                              |                    |                 |                  |
|              | Yes   | No             | -         | -             | -   | Approved - with Restrictions | Yes                | -               | 31-Oct-2020      |
| 80           | SEPTONE RUSTSOLVE   |                |           |               | ITW AAMTECH AUSTRALIA (1800 039 008)  |                              |                    |                 |                  |
|              | Yes   | DG 8           | UN 1805   | PG III        | 2R  | Approved - with Restrictions | Yes                | -               | PRODUCT OBSOLETE |
| 1373         | SODIUM HYDROXIDE SOLUTION, 1.54N  |                |           |               | HACH PACIFIC (13 11 26)   |                              |                    |                 |                  |
|              | Yes   | DG 8           | UN 1824   | PG II         | 2R  | Approved - with Restrictions | Yes                | -               | 29-Jul-2019      |
| 22147        | VARIO NITRAX REAGENT TUBE A/ NITRATE REAGENT B VARIO NITRATE CHROMOTROPIC |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 8           | UN 1830   | PG II         | 2P  | Approved - No Restrictions   | Yes                | -               | SDS DISCONTINUED |
| 22146        | VARIO TOTAL NITROGEN ACID LR/HR VIAL                                      |                |           |               | THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD ((03) 9757 4559/ (02) 8014 4558) |                              |                    |                 |                  |
|              | Yes   | DG 8           | UN 1830   | PG II         | 2P  | Approved - No Restrictions   | Yes                | -               | 04-Jul-2020      |

## **Appendix 4 – Personal Protective Equipment**

This section list the standard PPE items required.

### **7.1.1 Wastewater Treatment Plant**

The following items are to be kept at the Wardell WWTP:

- Ear/hearing protection
- Gas monitor
- Gas calibration equipment
- Life rings (around the treatment system)
- Sun screen
- Apron/disposal overalls
- Rubber Gloves
- Goggles
- Gumboots
- Steel capped Boots

### **7.1.2 Sewerage reticulation response truck**

The following items are to be kept on the sewerage reticulation response truck:

- Asbestos kit
- Goggles/eye protection
- Hearing protection
- Apron/disposable overalls
- Rubber gloves
- Gumboots

## Appendix 5 – Risk Assessment and Actions

### Methodology

1. Determine Consequence and Likelihood Definitions
2. Determine Risk Definitions
3. Determine Inherent Risk. Inherent risk is based on the hazardous containments that may be present
4. Devise Hazardous Events.
5. For each hazardous event, determine possible causes, raw risk characteristics, existing control measures, residual risk characteristics and any further improvements required.

Items 3 to 5 are in the attached spreadsheet.

### Consequence and Likelihood Definitions

|             |                |  |  |
|-------------|----------------|--|--|
| Likelihood  | Rare           | Only ever occurs under exceptional circumstances   |  |
|             | Unlikely       | Conceivable but not likely to occur under normal operations; no evidence of previous incidents |  |
|             | Possible       | Not generally expected to occur but may under specific circumstances                           |  |
|             | Likely         | Will probably occur at some stage based on evidence of previous incidents                      |  |
|             | Almost Certain | Event expected to occur most times during normal operations                                    |  |
| Hazard Type |                | Health & Safety  | Environmental  |
| Consequence | Insignificant  | First aid only required  | Minor impact to environmental amenity < \$1,000 to rehabilitate  |
|             | Minor          | Minor medical treatment with or without potential for lost time                                | Damage to environmental amenity \$1,000 - \$10,000 to rehabilitate   |
|             | Moderate       | Significant injury involving medical treatment or hospitalisation and lost time                | Short term impact to ecosystem function<br>Damage to environmental amenity \$10,000 - \$50,000 to rehabilitate   |
|             | Major          | Individual fatality or serious long term injury  | Long term impact to ecosystem function<br>Damage to environmental amenity \$50,000 - \$100,000 to rehabilitate   |
|             | Catastrophic   | Multiple fatalities or extensive long term injury  | Damage to unique habitat or threatened species<br>irreparable impact to ecosystem function<br>wide spread damage to environmental amenity >\$100,000 to rehabilitate |

## Risk Definitions

|                | CONSEQUENCE   |        |          |         |              |
|----------------|---------------|--------|----------|---------|--------------|
| LIKELIHOOD     | Insignificant | Minor  | Moderate | Major   | Catastrophic |
| Almost Certain | Medium        | High   | High     | Extreme | Extreme      |
| Likely         | Medium        | Medium | High     | High    | Extreme      |
| Possible       | Low           | Medium | High     | High    | High         |
| Unlikely       | Low           | Low    | Medium   | Medium  | High         |
| Rare           | Low           | Low    | Medium   | Medium  | High         |

The risk assessment is generic for all sites, reference to site plans should be made to see where risks apply.

| Hazard                              | Source                    | Quantity         | Health Impact with Acute Exposure | Environmental Impact with acute exposure |
|-------------------------------------|---------------------------|------------------|-----------------------------------|--|
| <b>Raw Wastewater</b>               |                           |                  |                                   |  |
| Pathogens (virus' / bacteria / etc) | Sewage, Trade Waste       | High             | <b>Death</b>                      | <b>High</b>                              |
| Nutrients (N, P)                    | Sewage, Trade Waste       | High             | Low                               | Medium                                   |
| H2S                                 | Sewage, Trade Waste       | Potentially High | <b>Death</b>                      | Low                                      |
| Radioactive substances              | Trade Waste               | Low              | <b>Death</b>                      | Medium                                   |
| Acid                                | Trade Waste               | Low              | <b>Serious Injury</b>             | Medium                                   |
| Metals                              | Trade Waste               | Low              | Low                               | Low                                      |
| Oil & Grease                        | Trade Waste               | Medium           | Low                               | Medium                                   |
| <b>Chemicals</b>                    |                           |                  |                                   |  |
| Calcium Nitrate                     | Odour Control Dosing Unit | Low              | Minor Injury                      | ?  |
| Refer to MSDS for Complete List     | Chemical storage          | Medium           | <b>Injury / Illness</b>           | ?  |



| No | Hazardous Event                          | Limiting Hazard                     | Weather | Cause   | Raw Consequence | Raw Likelihood | Raw Risk | Control Measures  | Residual Consequence | Residual Likelihood | Residual Risk | Improvements Required?    | Comment |
|----|--|-------------------------------------|---------|---|-----------------|----------------|----------|---|----------------------|---------------------|---------------|---------------------------|---------|
| 1  | Sewage Spill onto land                   | Pathogens (virus' / bacteria / etc) | Dry     | Damage, blockage, pump failure, rising main break, pump truck spill, power failure  | Moderate        | Likely         | High     | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Moderate             | Rare                | Medium        | Pump Improvement (PRP100) |         |
|    |  |                                     | Rain    | Damage, blockage, pump failure, rising main break, pump truck spill, power failure, excessive inflow and infiltration, inadequate pump capacity | Moderate        | Likely         | High     | as above, inflow and infiltration investigate and reticification works  | Moderate             | Rare                | Medium        | Pump Improvement (PRP100) |         |
|    |  |                                     | Flood   | Inundation  | Minor           | Likely         | Medium   | switchboards constructed above flood levels, communications   | Minor                | Rare                | Low           |                           |         |
| 2  | Sewage Spill into environmental waterway | Pathogens (virus' / bacteria / etc) | Dry     | Damage, blockage, pump failure, rising main break, pump truck spill, power failure  | Moderate        | Likely         | High     | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Moderate             | Rare                | Medium        | Pump Improvement (PRP100) |         |
|    |  |                                     | Rain    | Damage, blockage, pump failure, rising main break, pump truck spill, power failure, excessive inflow and infiltration, inadequate pump capacity | Moderate        | Likely         | High     | as above, inflow and infiltration investigate and reticification works  | Moderate             | Rare                | Medium        | Pump Improvement (PRP100) |         |
|    |  |                                     | Flood   | Inundation  | Minor           | Likely         | Medium   | switchboards constructed above flood levels, communications   | Minor                | Rare                | Low           |                           |         |
| 3  | Sewage Spill into recreational water     | Pathogens (virus' / bacteria / etc) | Dry     | Damage, blockage, pump failure, rising main break, pump truck spill, power failure  | Catastrophic    | Likely         | Extreme  | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Catastrophic         | Rare                | High          | Pump Improvement (PRP100) |         |
|    |  |                                     | Rain    | Damage, blockage, pump failure, rising main break, pump truck spill, power failure, excessive inflow and infiltration, inadequate pump capacity | Major           | Likely         | High     | as above, inflow and infiltration investigate and reticification works  | Major                | Rare                | Medium        | Pump Improvement (PRP100) |         |
|    |  |                                     | Flood   | Inundation  | Moderate        | Likely         | High     | switchboards constructed above flood levels, communications   | Moderate             | Rare                | Medium        |                           |         |
| 4  | Sewage Spill into oyster lease area      | Pathogens (virus' / bacteria / etc) | Dry     | Damage, blockage, pump failure, rising main break, pump truck spill, power failure  | Catastrophic    | Likely         | Extreme  | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Catastrophic         | Rare                | High          | Pump Improvement (PRP100) |         |
|    |  |                                     | Rain    | Damage, blockage, pump failure, rising main break, pump truck spill, power failure, excessive inflow and infiltration, inadequate pump capacity | Catastrophic    | Likely         | Extreme  | as above, inflow and infiltration investigate and reticification works  | Catastrophic         | Rare                | High          | Pump Improvement (PRP100) |         |
|    |  |                                     | Flood   | Inundation  | Major           | Likely         | High     | switchboards constructed above flood levels, communications   | Major                | Rare                | Medium        |                           |         |
|    |  |                                     | Dry     | Damage, blockage, pump failure, rising main break, pump truck spill, power failure  | Major           | Likely         | High     | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Major                | Rare                | Medium        | Pump Improvement (PRP100) |         |

| No | Hazardous Event  | Limiting Hazard                     | Weather | Cause   | Raw Consequence | Raw Likelihood | Raw Risk | Control Measures  | Residual Consequence | Residual Likelihood | Residual Risk | Improvements Required?            | Comment |
|----|--|-------------------------------------|---------|---|-----------------|----------------|----------|---|----------------------|---------------------|---------------|-----------------------------------|---------|
| 5  | Sewage Spill into drinking / stock water catchment (private or public) | Pathogens (virus' / bacteria / etc) | Rain    | Damage, blockage, pump failure, rising main break, pump truck spill, power failure, excessive inflow and infiltration, inadequate pump capacity | Major           | Likely         | High     | as above, inflow and infiltration investigate and reticification works  | Major                | Rare                | Medium        | Pump Improvement (PRP100)         |         |
|    |  |                                     | Flood   | Inundation  | Moderate        | Likely         | High     | switchboards constructed above flood levels, communications   | Moderate             | Rare                | Medium        |                                   |         |
| 6  | Sewage Spill into private property / blow back into toilets etc        | Pathogens (virus' / bacteria / etc) | Dry     | Damage, blockage, pump failure, rising main break, jetting, power failure   | Major           | Likely         | High     | Reticulation Maintenance, lightning protection, standby generators, telemetry monitoring and alarms, duty-standby pump arrangement, signage, communications, Spill Procedures | Major                | Rare                | Medium        | Pump Improvement (PRP100)         |         |
|    |  |                                     | Rain    | Damage, blockage, pump failure, rising main break, jetting, power failure, excessive inflow and infiltration, inadequate pump capacity          | Major           | Likely         | High     | as above, inflow and infiltration investigate and reticification works  | Major                | Rare                | Medium        | Pump Improvement (PRP100)         |         |
|    |  |                                     | Flood   | Inundation  | Major           | Likely         | High     | switchboards constructed above flood levels, communications   | Major                | Rare                | Medium        |                                   |         |
|    |  |                                     |         |   |                 |                |          |   |                      |                     |               |                                   |         |
| 7  | Calcium Nitrate Spill onto Land  | Calcium Nitrate                     | Any     | rupture in tank, failure in valves, PLC etc   | Minor           | Likely         | Medium   | Maintenance, telemetry alarms   | Minor                | Rare                | Low           | Chemical Spill response procedure |         |

| No | Hazardous Event                            | Limiting Hazard                     | Weather | Cause  | Raw Consequence | Raw Likelihood | Raw Risk | Control Measures  | Residual Consequence | Residual Likelihood | Residual Risk | Improvements Required?   | Comment |
|----|--|-------------------------------------|---------|--|-----------------|----------------|----------|---|----------------------|---------------------|---------------|--|---------|
| 1  | Overflow of Raw Sewage at Inlet            | Pathogens (virus' / bacteria / etc) | Dry     | Blockage, mechanical, electrical & control failure                               | Moderate        | Likely         | High     | Maintenance, lightning protection, SCADA / telemetry monitoring and alarms, limiting inflow pump capacities | Moderate             | Rare                | Medium        |  |         |
|    |  |                                     | Rain    | Blockage, mechanical, electrical & control failure, excessive inflow             | Moderate        | Likely         | High     | as above, inflow and infiltration investigate and reticification works                                      | Moderate             | Rare                | Medium        |  |         |
|    |  |                                     | Flood   | Inundation   | Minor           | Likely         | Medium   | as above, turn pumps off  | Minor                | Rare                | Low           |  |         |
| 2  | Discharge of Partially Treated Sewage      | Pathogens (virus' / bacteria / etc) | Dry     | mechanical, electrical & control failure   | Moderate        | Likely         | High     | Maintenance, plant inspections, SCADA / telemetry monitoring and alarms, routine testing                    | Moderate             | Rare                | Medium        | Water Quality Database that processes laboratory data and notifies response officers |         |
|    |  |                                     | Rain    | Blockage, mechanical, electrical & control failure, excessive inflow             | Minor           | Likely         | Medium   | storm detention, wet weather bypass   | Minor                | Rare                | Low           | Water Quality Database that processes laboratory data and notifies response officers |         |
|    |  |                                     | Flood   | Inundation   | Minor           | Likely         | Medium   | as above  | Minor                | Rare                | Low           |  |         |
| 3  | Chemical Spill on Site                     | Chemicals (acid, alkaline)          | Any     | Blockage, mechanical, electrical & control failure, incorrect hookup up to truck | Minor           | Likely         | Medium   | Maintenance, lightning protection, SCADA / telemetry monitoring and alarms, bunding                         | Minor                | Rare                | Low           | Chemical Spill response procedure  |         |
| 4  | Chemical Spill during delivery / transport | Chemicals (acid, alkaline)          | Any     | accident, mechanical failure   | Minor           | Likely         | Medium   | bunding, supervision, induction, procedures, competent delivery drivers, road rules                         | Minor                | Rare                | Low           | Chemical Spill response procedure  |         |

## **Appendix 6 – Action Plans to Minimise Harm**

To address the risk of sewer overflows, Ballina Shire Council has a number of management actions comprising of one or more of the following:

- Continuous Improvement of Sewerage System Operations
  - Dedicated Reticulation Operations Engineer
  - Pump Replacement Program
  - Improved Programmed Maintenance System
  - Improved staff training matrix and resourcing
  
- Chemical Spill Response Procedure

# Appendix 7 – Pollution Incident Notification and Investigation Flow Chart

# Pollution Incident Notification and Investigation Flow Chart

Updated 6 December 2021

This notification and investigation flow chart has been prepared from Ballina Shire Councils Pollution Incident Response Management Plan (PIRMP). Reporting of spill incidents shall be done in accordance with this approved management plan.

| ROLE & RESPONSIBILITIES  |   | CONTACT NUMBERS  |   |
|--|---|--|---|
| <b>ON-CALL OPERATOR</b>  | <b>TEAM LEADER - (G.Meredith 0415 788 494)</b>  | <b>Compulsary Contact List</b>   | <b>Relevant Contact List</b>  |
| <b>Attend Incident</b>   | Immediate risk to Human health & safety?<br>Yes <input type="checkbox"/> No <input type="checkbox"/>  | EPA Environment Line<br>Notify & record incident number<br>131 555                               | Affected Neighbours   |
| <b>Initial Investigation</b><br>- Cause<br>- Extent (visually & using PIRMP maps)<br>- Effect (to Humans and Ecosystem)  | <b>Notify WHS Officer</b> (P.Brunst 0400 906 862)   | NSW Health<br>Notify<br>1300 066 055 / (AH) 0428 882 805   | NSW Shellfish Richmond River Coordinator<br>Ian Cardow 0438 237 359 - until 30.08.2014 Geoff lawler 02 6686 3394 - after 01.09.2014                             |
| <b>Is there immediate risk to Human health &amp; safety?</b><br>- If 'yes', Notify Emergency Services (000) & implement Emergency Response Procedure           | <b>Notify Manager of Water, Wastewater &amp; Waste</b> (T.Mackney 0408 563 584)   | Safe Work<br>Notify<br>131 050   | Oyster Farmers<br>Ray Hunt - North Creek - 0414 884 274<br>Geoff Lawler - North Creek - 6686 7163/6686 3394<br>Ian Cardow - Serpentine - 0438 237 359/6686 3270 |
| <b>Actual / Potential risk to Humans or Ecosystem health &amp; safety?</b><br>Yes / Non-Trivial <input type="checkbox"/> No / Trivial <input type="checkbox"/> | <b>Notify Team Leader</b><br>- Initial Investigation<br>- Risk to Humans / Ecosystem Health & Safety  | BSC Environmental Health Officer<br>Notify<br>6686 4444 / (AH) 6626 6954 (K. Watts 0414 192 311) | Cape Byron Marine Park Authority<br>6620 9300   |
| <b>Notify Compulsary Authorities</b> (see Compulsary Contact List)   | <b>Notify Operational Engineer</b> Gabrielle Denniss 0428 197 329   | Fire & Rescue<br>Notify & advise not to attend<br>1300 729 579                                   | Fisheries<br>1800 043 536   |
| <b>Notify Only Relevant Authorities</b>  | Determine relevance based off incident & PIRMP maps (see Relevant Contact List)   | BSC Operations Engineer<br>Notify<br>Gabrielle Deniss 0428 197 329                               | Life Guards<br>0432 217 500   |
| <b>Organise testing of Affected Area</b><br>- Contact Sampling officer (R.Jenner 0416 209 738)<br>- Ensure background levels reached                           | <b>Issue Community Notification</b><br>- Determine if necessary based on incident<br>- Determine appropriate method based on incident<br>- Provide regular notification until rectified                                     | NSW Shellfish Program Manager<br>9741 4749 / (AH) 0407 078 269<br>nswsp@foodauthority.nsw.gov.au | Aboriginal Land Council<br>6686 7055  |
| <b>Complete Pollution Incident Reporting Sheet</b><br>- Complete Part A of Sheet<br>- Return to Team Leader  | <b>Complete Pollution Incident Reporting Sheet</b><br>- Complete Part B of Sheet<br>- Save in TRIM under container 545  |  | Police<br>6681 8699   |
|  | <b>Complete the EPA Pollution Incident Report</b><br>- Follow Pollution Incident Report Template<br>- Provide to EPA within 7 days of incident (ian.greenbank@environment.nsw.gov.au)<br>- Save in TRIM under container 545 |  | Rous Water<br>6621 8055 / (AH) 6626 6955  |
|  | <b>Did Damage occur to private property?</b><br>Yes <input type="checkbox"/> No <input type="checkbox"/>  |  | Office of Water<br>6627 0100  |
|  | <b>Notify BSC Risk &amp; HR Department</b><br>- Report to HR (6686 1202) (H.Joblin 0429 294 124)<br>- Report to Risk & HR (6686 1430)   |  | Licensed Water Extractors (see PIRMP map for location & numbers)  |

|  |  |
|--|--|
| <p>Roles: If the Team Leader (G Meredith 0428 811 277) is unable to be contacted, reporting should be done to the Operations Engineer (G Denniss 0428 197 329) or the Manager of Water and Wastewater (B Walker 0474 009 041).</p> | <p><b>Legend:</b></p> <p><span style="display: inline-block; width: 15px; height: 15px; background-color: #f08080; border: 1px solid black;"></span> Immediately</p> <p><span style="display: inline-block; width: 15px; height: 15px; background-color: #c0c0c0; border: 1px solid black;"></span> As soon as practical</p> |
|--|--|