## SCHEDULE LU1

| Permit, licence or approval taken to have been issued | Land Use and Development Permit for the activity  
(Pulp mill and associated infrastructure - George Town municipality) |
<table>
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<tbody>
<tr>
<td>Act pursuant to which the permit, licence or other approval is taken to have been issued in relation to the conditions contained in this schedule</td>
<td>Land Use Planning and Approvals Act 1993 and Environmental Management and Pollution Control Act 1994</td>
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</table>
| Person, body or State Service Agency responsible for the enforcement of the conditions contained in this schedule | Part 2 – George Town Council  
Part 3 – Director of Environmental Management |

### Part 1 – General Definitions

Unless the contrary intention is expressed, words and expressions used in these conditions have the meaning given to them in this part, in the *Environmental Management and Pollution Control Act 1994* and in the *Land Use Planning and Approvals Act 1993*. If there is any inconsistency between a definition in these conditions and the Acts, then the definition in these conditions prevails to the extent of the inconsistency.

**activity** means the establishment and operation of a bleached kraft pulp mill and associated infrastructure located principally within the project site at Long Reach and located within the Municipality of George Town, as described in the DIIS and further information. The activity includes the pulp mill activity, water supply activity, landfill activity, quarry activity and wastewater pipeline activity and vehicle, electricity, gas and water connections to and within the project site;

**associated infrastructure** includes, but is not necessarily limited to, roads, substations, cables, underground or overhead powerlines, control buildings, transformers, gas and water pipelines, hazardous materials storage facilities and concrete batch plants;

**commissioning activities** means the testing of major items of equipment prior to the commencement of commercial operation;

**commissioning phase** means the period from the date of initial testing of major items of equipment, to the time at which the pulp mill activity is producing saleable pulp;

**DIIS and further information** means the DIIS as well as the documents submitted to the Tasmanian Government identified in Annex D1.

**gas pipeline construction corridor** means the area 10 metres either side of the centre of the line defined by the ArcView files titled:

(a) Gaspipe_local_070810.dbf, created on 10 August 2007;  
(b) Gaspipe_local_070810.prj, created on 12 May 2005;
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(c) Gaspipe_local_070810.sbn, created on 10 August 2007;
(d) Gaspipe_local_070810.sbx, created on 10 August 2007;
(e) Gaspipe_local_070810.shp, created on 10 August 2007; and
(f) Gaspipe_local_070810.shx, created on 10 August 2007,
submitted by Mr Greg Stanford of Gunns Limited to the Department of Tourism, Arts
and the Environment via email on 10 August 2007 and located within the
Municipality of George Town. The gas pipeline construction corridor also includes
additional areas required for undertaking the activity approved in writing by the
Director.

landfill activity means the establishment and operation of a landfill activity and
associated infrastructure located on the project site, as generally indicated on Figure
1-5 of Volume 1A of the DIIS;

landfill site means the land within the area shown as the ‘Solid Waste Disposal Site’
on Figure 1-5 of Volume 1A of the DIIS and/or any other area specified in writing by
the Director;

mill site means the land within the area shown as the ‘Millsite Impact Footprint’ on
the figure entitled ‘Bell Bay Pulpmill: Current Design of Mill Site and Associated
Infrastructure’ dated 05-04-07 and submitted to the Tasmanian Government on 8 May
2007 and/or any other area specified in writing by the Director;

plant construction activities means construction of plant, major buildings and
facilities on the pulp mill site, but excludes site preparation, land clearing and grading
and excludes construction activities associated with the wharf activity;

project site means the area within the Project Site Boundary specified on Figure 1-5
of Volume 1A of the DIIS and the wharf site, and/or any other area specified in
writing by the Director. The project site includes the pulp mill site, the landfill site,
the quarry site and the water reservoir site;

pulp mill activity means the establishment and operation of the pulp production
facilities, chemical and energy recovery facilities, woodchip mill, woodchip
conveyor, chemical plant, raw water treatment plant, wastewater treatment plant, pulp
warehouse, wharf and associated infrastructure located to the west of the East Tamar
Highway on the project site as generally indicated on the figure entitled ‘Bell Bay
Pulpmill: Current Design of Mill Site and Associated Infrastructure’ dated 05-04-07
and submitted to the Tasmanian Government on 8 May 2007;

pulp mill site means the land within those areas defined as the mill site, the woodchip
mill site , the wharf site, and/or any other area specified in writing by the Director;

quarry activity means the establishment and operation of a quarry activity and
associated infrastructure located on the project site, as generally indicated on Figure
1-5 of Volume 1A of the DIIS;

quarry site means the land within the area shown as the ‘Quarry’ on Figure 1.5 of
Volume 1A of the DIIS and/or any other area specified in writing by the Director;
wastewater pipeline activity means the establishment and operation of a wastewater pipeline from the wastewater treatment plant to the low water mark between Four Mile Bluff and Five Mile Bluff located within the wastewater pipeline construction corridor and associated infrastructure;

wastewater pipeline construction corridor means the area 10 metres either side of the centre of the line defined by the ArcView files titled:

(a) CentreLine_Effluent_Easement070809.prj, created on 2 August 2007;
(b) CentreLine_Effluent_Easement070809.dbf, created on 9 August 2007;
(c) CentreLine_Effluent_Easement070809.sbn, created on 9 August 2007;
(d) CentreLine_Effluent_Easement070809.sbx, created on 9 August 2007;
(e) CentreLine_Effluent_Easement070809.shp, created on 9 August 2007; and
(f) CentreLine_Effluent_Easement070809.shx, created on 9 August 2007;

and submitted by Mr Greg Stanford of Gunns Limited to the Department of Tourism, Arts and the Environment via email on 10 August 2007. The wastewater pipeline construction corridor also includes extra workspace and changes of location approved by the Director in writing. The wastewater pipeline construction corridor is generally indicated on Figure 1-1 of Volume 1A of the DIIS;

water reservoir site means the land within the area shown as the ‘water reservoir’ as generally indicated on Figure 1-5 of Volume 1A of the DIIS and/or any other area specified in writing by the Director;

water supply activity means the establishment and operation of a water supply pipeline from near the Signal Station Tavern in Mount Direction to the pulp mill site located within the water supply construction corridor, a water reservoir located on the project site, a water supply pipeline to the pulp mill activity located on the project site and associated infrastructure;

water supply construction corridor means the area 10 metres either side of the centre of the line defined by the ArcView files titled:

(a) CentreLine_WaterPipeline_Easement_070802.dbf;
(b) CentreLine_WaterPipeline_Easement_070802.prj;
(c) CentreLine_WaterPipeline_Easement_070802.sbn;
(d) CentreLine_WaterPipeline_Easement_070802.sbx;
(e) CentreLine_WaterPipeline_Easement_070802.shp; and
(f) CentreLine_WaterPipeline_Easement_070802.shx,

created on 2 August 2007 and submitted by Mr Greg Stanford of Gunns Limited to the Department of Tourism, Arts and the Environment via email on 6 August 2007 and located within the Municipality of George Town. The water supply construction corridor also includes additional areas required for undertaking the activity approved in writing by the Director, including the area required for the water reservoir generally indicated on Figure 1-5 of Volume 1A of the DIIS, extra workspace and changes of
construction corridor location. The water supply construction corridor is generally indicated on Figure 1-1 of Volume 1A of the DIIS;

**wharf site** means the land where the wharf facility will be/is located between Big Bay and Dirty Bay on the northern shore of the Tamar River, as generally indicated on the figure entitled ‘Bell Bay Pulpmill: Current Design of Mill Site and Associated Infrastructure’ dated 05-04-07 and submitted to the Tasmanian Government on 8 May 2007 and/or any other area specified in writing by the Director;

**woodchip mill activity** means the redevelopment and operation of the woodchipping facilities (including log delivery, woodchipping, woodchip screening and storage and associated infrastructure) located on the woodchip mill site;

**woodchip mill site** means the land where woodchipping activities (including log delivery areas, woodchipping, woodchip screening and storage and associated infrastructure) are located, and includes the land described in Certificate of Title 136962/1 with Property Identifier 2215945, Certificate of Title 136962/2 with Property Identifier 2215953, and part of that land described in Certificate of Title 128436/1 and/or any other area specified in writing by the Director.
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Part 2 – Planning Conditions

SECTION 1 – DEFINITIONS

In this part, unless the contrary intention is expressed:

construction activity means an activity on the land associated with the construction phase of the activity (which includes vegetation clearance, road construction, related infrastructure and rehabilitation);

contaminated drainage means drainage where any chemical substance or waste has been added at or above background level an represents, or potentially represents, an adverse health or environmental impact;

Council means the George Town Council established under section 18 of the Local Government Act 1993;

major utility service includes all water and gas mains, electrical transmission lines, copper and fibre optic cabling;

related infrastructure includes, but is not necessarily limited to, roads, substations, cables, underground or overhead powerlines, control buildings, transformers, hazardous materials storage facilities and concrete batch plants;

road authorities means the George Town Council in relation to roads for which it has responsibility and the Department of Infrastructure, Energy and Resources in relation to roads for which it has responsibility.
SECTION 2 - CONDITIONS

Water supply

2.1 The person responsible shall ensure that all use and development is to be generally located within the water supply construction corridor, except:

(a) where there is a need identified by the person responsible to locate the use and development outside the water supply construction corridor, the Council may permit the use and development to be located outside the water supply construction corridor provided that:
   i) there is no practicable or expedient alternative other than to provide for the use and development outside the water supply construction corridor; and
   ii) it is in the public interest to do so;

(b) where the person responsible seeks to locate the use and development outside the water supply construction corridor, the person responsible is to provide the Council with:
   i) a plan which accurately identifies where the use and development is to located;
   ii) a plan identifying each parcel of land the use and development is within or passes through; and
   iii) a statement of the reasons why the use and development cannot be located within the water supply construction corridor;

(c) in determining whether it is in the public interest to allow the use and development outside the water supply construction corridor, the Council must have regard to:
   i) whether the person responsible could reasonably have avoided the need to locate the use and development outside the water supply construction corridor, by better planning or otherwise; and
   ii) the public interest in the timely completion of the development; and
   iii) the potential effect upon the environment if the use and development is located outside the water supply construction corridor after obtaining the advice of the Director of Environmental Management or of the Board of Environmental Management and Pollution Control; and
   iv) the potential effect upon archaeological, architectural, cultural, historical, scientific, social or technical values if the use and development is located outside the water supply construction corridor after obtaining advice of Heritage Tasmania; and
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v) the potential effect on land use if the use and development is located outside the water supply construction corridor;

(d) the Council may decline to allow the use and development outside the water supply construction corridor unless the person responsible pays to the Council an amount to cover the costs and expenses which have been or may be incurred by the Council or any person in connection with the assessment of whether to permit the use and development outside the water supply construction corridor.

2.2 The person responsible shall obtain conditional approval from the Council’s Manager Engineering Services for each crossing of a local road prior to the commencement of works where the following applies:

(a) open or break up the soil or pavement of a local highway;
(b) make a drain leading to a local highway;
(c) put or place a pipe or make a drain leading into a sewer or drain or other work of the Council in or under a local highway;
(d) make an excavation, vault or cellar in or under a local highway; and
(e) install, under a local highway, pipelines, pipe systems.

The following must be adhered to where conditional approval is granted:

(f) except as may be provided otherwise by another condition in this Schedule, the person responsible must meet all of the costs of the work including any costs incurred by the Council by reason of the proposal to carry out the work or the carrying out of the work;

(g) before the work starts, the Council must, on demand, provide the person responsible with a free copy of all relevant records in the Council's possession regarding the nature, location and depth of any infrastructure associated with other utility services that may be affected by the work;

(h) the person responsible must meet the cost of any claims or proceedings arising from any damage that the work may cause to infrastructure associated with other utility services, unless:
   i) records given to the person responsible pursuant to condition 2.2(g) did not indicate the presence of the damaged infrastructure; or
   ii) records given to the person responsible pursuant to condition 2.2(g) did not accurately show the location and depth of the damaged infrastructure;

(i) the person responsible must provide the Council’s Manager Engineering Services at least 14 days notice in writing of its intention to start the work;

(j) the person responsible must,, in carrying out the work, comply with the applicable road traffic management standards contained in “General Specifications G2 – Contract Management Plan”
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published by the responsible Department in relation to the Traffic Act 1925 or in any publication issued by that Department to replace that publication;

(k) unless the Council’s Manager Engineering Services and the person responsible agree to allow trenching, the person responsible must use trenchless technology in carrying out the work wherever it is reasonably practicable to do so;

(l) on completion, the person responsible must restore the local highway;

(m) if the Council’s Manager Engineering Services and the person responsible agree before completion that the local highway should be restored to a condition that is better than the condition it was in immediately before the work was carried out and also agree on compensation for such betterment, the local highway must be restored to the condition specified in that agreement;

(n) in any other case, the local highway must be restored to the condition it was in immediately before the work was carried out;

(o) the person responsible must ensure that the restoration work, including any associated excavation and backfilling of trenches, complies with the municipal standards;

(p) notwithstanding the other conditions contained in this clause, the Council’s Manager Engineering Services may consent to a person other than the person responsible carrying out the restoration work;

(q) the person responsible must meet the cost of any emergency repairs that need to be made to the local highway by or on behalf of the Council because of a failure by the person responsible to comply, or comply fully, with the conditions 2.2(l) through 2.2(p);

(r) after the work starts, the person responsible must provide the Council’s Manager Engineering Services with a progress report on the work as soon as practicable after each 14-day period if the work proceeds beyond that number of days;

(s) within 14 days after completion, the person responsible must provide the Council with a report stating that:
   i) the work has been completed; and
   ii) all applicable municipal standards have been complied with; and
   iii) any standards for the work that were agreed between the person responsible and the Council have been complied with;

(t) the person responsible must compile and keep accurate records of the work, showing the nature, location and depth of the infrastructure;

(u) the person responsible must, on demand, provide the Council with a free copy of all or any of the records;
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(v) the person responsible must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the person responsible in the work zone if, immediately before the maintenance or rehabilitation work started:

i) the records required to be compiled and kept under condition 2.2(t) did not indicate the presence of the damaged infrastructure; or

ii) the location and depth of the damaged infrastructure was not accurately shown in those records;

(w) the Council must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the Council in the work zone if, immediately before the maintenance or rehabilitation work started:

i) the records required to be compiled and kept under condition 2.2(t) indicated the presence of the damaged infrastructure; and

ii) the location and depth of the damaged infrastructure was accurately shown in those records.

2.3 The person responsible shall obtain conditional approval from the Council’s Manager Engineering Services for each crossing of, or installation in close proximity to an existing major utility service (e.g. water and gas mains, electrical transmission lines, copper and fibre optic cabling) prior to the commencement of works where the following applies:

(a) open or break up the soil in the immediate vicinity of a major utility service;

(b) make a drain leading to an existing major utility service or service easement;

(c) put or place a pipe over or under or make a drain leading into an existing major utility service or other work of the utility service provider;

(d) make an excavation, vault or cellar in or under a utility service or service easement;

(e) install, under or over a utility service, pipelines, pipe systems.

The following must be adhered to where conditional approval is granted:

(f) except as may be provided otherwise by another condition in this Schedule, the person responsible must meet all of the costs of the work including any costs incurred by the Council by reason of the proposal to carry out the work or the carrying out of the work;

(g) before the work starts, the Council must, refer details of the proposed works to the utility service provider and the utility service provider shall provide the Council and the person responsible with a free copy of all relevant records in the service
provider's possession regarding the nature, location, depth or height of any existing major utility service or infrastructure associated with the existing major utility service that may be affected by the work;

(h) the person responsible must meet the cost of any claims or proceedings arising from any damage that the work may cause to infrastructure associated with other utility services, unless:
   i) records given to the person responsible pursuant to condition 2.3(g) did not indicate the presence of the damaged infrastructure; or
   ii) records given to the person responsible pursuant to condition 2.3(g) did not accurately show the location and depth of the damaged infrastructure;

(i) the person responsible must provide the Council’s Manager Engineering Services at least 14 days notice in writing of its intention to start the work;

(j) the person responsible must, in carrying out the work, comply with all reasonable technical and other requirements of the service provider in respect of the proposed works to ensure that the existing major utility service infrastructure is protected from physical damage, corrosion, electrolysis, field induction or other potential damage identified by the service provider;

(k) unless the Council’s Manager Engineering Services and the person responsible agree to allow trenching, the person responsible must use trenchless technology in carrying out the work wherever it is reasonably practicable to do so;

(l) on completion, the person responsible must restore the area disturbed by the work;

(m) if, following consideration of any advice received from the service provider, the Council’s Manager Engineering Services and the person responsible agree before completion that the area disturbed by the work should be restored to a condition that is better than the condition it was in immediately before the work was carried out and also agree on compensation between the parties for such betterment, the area disturbed by the work must be restored to the condition specified in that agreement;

(n) in any other case, the area disturbed by the work must be restored to the condition it was in immediately before the work was carried out;

(o) the person responsible must ensure that the restoration work, including any associated excavation and backfilling of trenches, complies with the municipal standards;

(p) notwithstanding the other conditions contained in this clause, the Council’s Manager Engineering Services may consent to a person other than the person responsible carrying out the restoration work;

(q) the person responsible must meet the cost of any emergency repairs that need to be made to the area disturbed by or on behalf of the Council because of a failure by the person
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responsible to comply, or comply fully, with the conditions 2.3(l) through 2.3(p);

(r) after the work starts, the person responsible must provide the Council’s Manager Engineering Services with a progress report on the work as soon as practicable after each 14-day period if the work proceeds beyond that number of days;

(s) within 14 days after completion, the person responsible must provide the Council with a report stating that:
   i) the work has been completed; and
   ii) all applicable municipal standards have been complied with; and
   iii) any standards for the work that were agreed between the person responsible and the Council have been complied with;

(t) the person responsible must compile and keep accurate records of the work, showing the nature, location and depth of the infrastructure;

(u) the person responsible must, on demand, provide the Council and the utility service provider with a free copy of all or any of the records;

(v) the person responsible must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the person responsible in the work zone if, immediately before the maintenance or rehabilitation work started:
   i) the records required to be compiled and kept under condition 2.3(t) did not indicate the presence of the damaged infrastructure; or
   ii) the location and depth of the damaged infrastructure was not accurately shown in those records;

(w) the utility service provider must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the utility service provider in the work zone if, immediately before the maintenance or rehabilitation work started:
   i) the records required to be compiled and kept under condition 2.3(t) indicated the presence of the damaged infrastructure; and
   ii) the location and depth of the damaged infrastructure was accurately shown in those records.

2.4 The person responsible will:

   (a) maintain a minimum depth of cover over the water supply pipeline of 900mm in all agricultural areas and roadsides; and

   (b) install and maintain permanent pipe line markers:
      i) on both sides of the road crossings;
      ii) on both sides of railway crossings;
      iii) on both sides of significant river and stream crossings;
      iv) at all fences;
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v) at all utility crossings; and
vi) at all bends in the pipe; and

(c) erect signs at intervals no greater than 500 metres and must be within line of sight. Where the water supply construction corridor closely parallels a road or power line the spacing will be no greater than 200 metres; and

(d) markers will be visible along the Right of Way in either direction.

2.5 In the interests of fire safety:

(a) an Emergency Plan for the site is to be prepared and maintained to the satisfaction of the Tasmania Fire Service and the Council; and

(b) a defendable space plan is to be prepared and maintained to the satisfaction of the Tasmania Fire Service for all relevant developments at risk of bushfire.

2.6 The person responsible must ascertain the location of all infrastructure in the vicinity of the proposed water supply construction corridor prior to the commencement of the construction activity. The person responsible must repair and reinstate any damage done to infrastructure to the satisfaction of the owner of the infrastructure.

2.7 The person responsible must negotiate with the affected private land owners a legal easement for the proposed water supply construction corridor as well as the right to enter private land while developing the water supply construction corridor.

2.8 Traffic management plans shall be prepared and implemented in accordance with AS1742.3 Manual of Uniform Traffic Control Devices Part 3 – Traffic control Devices for Works on Roads.

2.9 The person responsible must:

(a) prior to commencing construction activity, identify the roads which it intends to use for high mass vehicles during construction activity; and

(b) compensate road authorities to the extent of increased costs reasonably incurred by the road authorities for the repair or reinstatement of any roads and bridges which the person responsible uses for high mass vehicles during construction activities.

2.10 Buildings must be designed to the approval of the Council and must meet the following functional statements:

(a) buildings are to withstand the combination of loads and other actions to which it may be reasonably subjected;

(b) glazing is to be installed in a building to avoid undue risk of injury to people;

(c) buildings are to be constructed to maintain structural stability during fire to:
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i) allow occupants time to evacuate safely; and  
ii) allow for Tasmania Fire Service intervention; and  
iii) avoid damage to other property;

(d) buildings are to be provided with safeguards to prevent fire spread:  
i) so that occupants have time to evacuate safely without being overcome by the effects of fire; and  
ii) to allow for Tasmania Fire Service intervention; and  
iii) to adjoining fire compartments; and  
iv) between buildings;

(e) buildings are to provide, as far as is reasonable:  
i) safe; and  
ii) equitable and dignified, access for people to the services and facilities within;

(f) buildings are to be provided with fire-fighting equipment to safeguard against fire spread:  
i) to allow occupants time to evacuate safely without being overcome by the effects of fire; and  
ii) so that occupants may undertake initial attack on a fire; and  
iii) so that the Tasmania Fire Service have the necessary equipment to undertake search, rescue, and fire-fighting operations; and  
iv) to other parts of the building; and  
v) between buildings;

(g) buildings including any associated sitework are to be constructed in a way that protects people and other property from the adverse effects of redirected surface water;

(h) buildings are to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground;

(i) buildings are to be constructed to avoid the likelihood of:  
i) the creation of unhealthy or dangerous conditions; and  
ii) damage to building elements, caused by dampness or water overflow from bathrooms, laundries and the like;

(j) buildings are to be constructed to provide height in a room or space suitable for the intended use;

(k) a space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use;

(l) a space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement;

(m) a space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use;

(n) pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants;
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(o) equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity;
(p) a building’s services are to be continually capable of using energy efficiently;
(q) occupancy permits must be issued prior to use or occupation of any building.

2.11 Any mud or debris deposited on existing roads must be cleaned up immediately in a manner that does not impact on Council infrastructure. This may include sweeping or vacuuming.

2.12 A separate permit is required for future decommissioning of the pipeline.

2.13 A landscape assessment and site rehabilitation/reinstatement plan is to be prepared where the CEMP does not apply and is to include the following:
(a) location of the existing or approved dwellings, buildings or structures, services and roads;
(b) details of proposed rehabilitation/reinstatement to be undertaken for all disturbed surfaces;
(c) flora species used for rehabilitation; and
(d) surface treatment and materials used for reinstatement of hard infrastructure.

2.14 The person responsible must limit construction vehicle speed to 40km/h along roads within the water supply construction corridor, where adjacent to residential areas.

2.15 Prior the commencement of construction activities, the person responsible must:
(a) facilitate regular contact with affected landowners or occupiers; and
(b) take reasonable endeavours to notify landowners and occupiers of schedules of activity in the vicinity of their land, including any general equipment movement schedules.

2.16 Excess excavated material that is removed from the water supply construction corridor must only be deposited at sites approved by the Council for land filling.

2.17 No contaminated drainage, silt or sediment as a result of works shall be discharged into the Council’s piped stormwater drainage system.

2.18 Prior to the commencement of use of the pipeline, a report must be submitted to all relevant jurisdictional bodies that outlines a risk assessment and management plan for the operational phase of the project. The report must specifically detail how the proposed risk assessment and management process must ensure location specific environmental and societal risks will be satisfactorily addressed in
terms of pipeline failure. Written certification must be provided to the Council from the author of the detailed report stating the purpose, for which the report was provided, the context in which it was commissioned, and any limitations, qualifications, or reservations by the Certifier. It must state that the Certifier is aware that the Council and other relevant authorities will be relying on this certification in its assessment of the proposal. It must indemnify the Council and other relevant authorities from any legal liability arising from errors or omissions in the report and pipeline design.

2.19 A condition assessment of all buildings within 150 metres of the water supply construction corridor must be conducted by an accredited building surveyor prior to any blasting.

2.20 Once operational, the pipeline operator will be part of the ‘Dial Before You Dig’ service.

Wastewater pipeline

2.21 The person responsible shall ensure that all use and development is to be generally located within the wastewater pipeline construction corridor, except:

(a) where there is a need identified by the person responsible to locate the use and development outside the wastewater pipeline construction corridor, the Council may permit the use and development to be located outside the wastewater pipeline construction corridor provided that:
   i) there is no practicable or expedient alternative other than to provide for the use and development outside the wastewater pipeline construction corridor; and
   ii) it is in the public interest to do so.

(b) where the person responsible seeks to locate the use and development outside the wastewater pipeline construction corridor, the person responsible is to provide the Council with:
   i) a plan which accurately identifies where the use and development is to located;
   ii) a plan identifying each parcel of land the use and development is within or passes through; and
   iii) a statement of the reasons why the use and development cannot be located within the wastewater pipeline construction corridor;

(c) in determining whether it is in the public interest to allow the use and development outside the wastewater pipeline construction corridor, the Council must have regard to:
   i) whether the person responsible could reasonably have avoided the need to locate the use and development outside the wastewater pipeline construction corridor, by better planning or otherwise; and
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ii) the public interest in the timely completion of the development; and

iii) the potential effect upon the environment if the use and development is located outside the wastewater pipeline construction corridor after obtaining the advice of the Director of Environmental Management or of the Board of Environmental Management and Pollution Control; and

iv) the potential effect upon archaeological, architectural, cultural, historical, scientific, social or technical values if the use and development is located outside the wastewater pipeline construction corridor after obtaining advice of Heritage Tasmania; and

v) the potential effect on land use if the use and development is located outside the wastewater pipeline construction corridor, and

(d) the Council may decline to allow the use and development outside the wastewater pipeline construction corridor unless the person responsible pays to the Council an amount to cover the costs and expenses which have been or may be incurred by the Council or any person in connection with the assessment of whether to permit the use and development outside the wastewater pipeline construction corridor.

2.22 Where the wastewater pipeline construction corridor traverses adjacent to George Town from the intersection of the rail crossing with the East Tamar Highway/ Main Road to the intersection of the wastewater pipeline crossing North Street, the wastewater pipeline shall be constructed so that the pipeline:

(a) has a depth of cover of the pipeline of not less than 3.0 metres at any location along this route; and

(b) is protected against damage by a reinforced concrete encasement of thickness not less than 200mm over the full distance of its alignment between the prescribed reference points.

2.23 The person responsible shall obtain conditional approval from the Council’s Manager Engineering Services for each crossing of a local road prior to the commencement of works where the following applies:

(a) open or break up the soil or pavement of a local highway;

(b) make a drain leading to a local highway;

(c) put or place a pipe or make a drain leading into a sewer or drain or other work of the Council in or under a local highway;

(d) make an excavation, vault or cellar in or under a local highway;

(e) install, under a local highway, pipelines, pipe systems;

(f) the following must be adhered to where conditional approval is granted:

(g) except as may be provided otherwise by another condition in this Schedule, the person responsible must meet all of the costs
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of the work including any costs incurred by the Council by reason of the proposal to carry out the work or the carrying out of the work;

(h) before the work starts, the Council must, on demand, provide the person responsible with a free copy of all relevant records in the Council’s possession regarding the nature, location and depth of any infrastructure associated with other utility services that may be affected by the work;

(i) the person responsible must meet the cost of any claims or proceedings arising from any damage that the work may cause to infrastructure associated with other utility services, unless:
   i) records given to the person responsible pursuant to condition 2.23(h) did not indicate the presence of the damaged infrastructure; or
   ii) records given to the person responsible pursuant to condition 2.23(h) did not accurately show the location and depth of the damaged infrastructure;

(j) the person responsible must provide the Council’s Manager Engineering Services at least 14 days notice in writing of its intention to start the work;

(k) the person responsible must, in carrying out the work, comply with the applicable road traffic management standards contained in “General Specifications G2 – Contract Management Plan” published by the responsible Department in relation to the Traffic Act 1925 or in any publication issued by that Department to replace that publication;

(l) unless the Council’s Manager Engineering Services and the person responsible agree to allow trenching, the person responsible must use trenchless technology in carrying out the work wherever it is reasonably practicable to do so;

(m) on completion, the person responsible must restore the local highway;

(n) if the Council’s Manager Engineering Services and the person responsible agree before completion that the local highway should be restored to a condition that is better than the condition it was in immediately before the work was carried out and also agree on compensation for such betterment, the local highway must be restored to the condition specified in that agreement;

(o) in any other case, the local highway must be restored to the condition it was in immediately before the work was carried out;

(p) the person responsible must ensure that the restoration work, including any associated excavation and backfilling of trenches, complies with the municipal standards;

(q) notwithstanding the other conditions contained in this clause, the Council’s Manager Engineering Services may consent to a person other than the person responsible carrying out the restoration work;
(r) the person responsible must meet the cost of any emergency repairs that need to be made to the local highway by or on behalf of the Council because of a failure by the person responsible to comply, or comply fully, with the conditions 2.23(m) through (q);

(s) after the work starts, the person responsible must provide the Council’s Manager Engineering Services with a progress report on the work as soon as practicable after each 14-day period if the work proceeds beyond that number of days;

(t) within 14 days after completion, the person responsible must provide the Council with a report stating that:
   i) the work has been completed; and
   ii) all applicable municipal standards have been complied with; and
   iii) any standards for the work that were agreed between the person responsible and the Council have been complied with;

(u) the person responsible must compile and keep accurate records of the work, showing the nature, location and depth of the infrastructure;

(v) the person responsible must, on demand, provide the Council with a free copy of all or any of the records;

(w) the person responsible must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the person responsible in the work zone if, immediately before the maintenance or rehabilitation work started:
   i) the records required to be compiled and kept under condition 2.23(t) did not indicate the presence of the damaged infrastructure; or
   ii) the location and depth of the damaged infrastructure was not accurately shown in those records;

(x) the Council must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the Council in the work zone if, immediately before the maintenance or rehabilitation work started:
   i) the records required to be compiled and kept under condition 2.23(t) indicated the presence of the damaged infrastructure; and
   ii) the location and depth of the damaged infrastructure was accurately shown in those records.

2.24 The person responsible shall obtain conditional approval from the Council’s Manager Engineering Services for each crossing of, or installation in close proximity to an existing major utility service (e.g. water and gas mains, electrical transmission lines, copper and fibre optic cabling) prior to the commencement of works where the following applies:
SCHEDULE LU1

(a) open or break up the soil in the immediate vicinity of a major utility service;
(b) make a drain leading to an existing major utility service or service easement;
(c) put or place a pipe over or under or make a drain leading into an existing major utility service or other work of the utility service provider;
(d) make an excavation, vault or cellar in or under a utility service or service easement;
(e) install, under or over a utility service, pipelines, pipe systems.

The following must be adhered to where conditional approval is granted:

(f) except as may be provided otherwise by another condition in this Schedule, the person responsible must meet all of the costs of the work including any costs incurred by the Council by reason of the proposal to carry out the work or the carrying out of the work;

(g) before the work starts, the Council must, refer details of the proposed works to the utility service provider and the utility service provider shall provide the Council and the person responsible with a free copy of all relevant records in the service provider's possession regarding the nature, location, depth or height of any existing major utility service or infrastructure associated with the existing major utility service that may be affected by the work;

(h) the person responsible must meet the cost of any claims or proceedings arising from any damage that the work may cause to infrastructure associated with other utility services, unless:
   i) records given to the person responsible pursuant to condition 2.24(g) did not indicate the presence of the damaged infrastructure; or
   ii) records given to the person responsible pursuant to condition 2.24(g) did not accurately show the location and depth of the damaged infrastructure;

(i) the person responsible must provide the Council’s Manager Engineering Services at least 14 days notice in writing of its intention to start the work;

(j) the person responsible must, in carrying out the work, comply with all reasonable technical and other requirements of the service provider in respect of the proposed works to ensure that the existing major utility service infrastructure is protected from physical damage, corrosion, electrolysis, field induction or other potential damage identified by the service provider;

(k) unless the Council’s Manager Engineering Services and the person responsible agree to allow trenching, the person responsible must use trenchless technology in carrying out the work wherever it is reasonably practicable to do so;
SCHEDULE LU1

(l) on completion, the person responsible must restore the area disturbed by the work;

(m) if, following consideration of any advice received from the service provider, the Council’s Manager Engineering Services and the person responsible agree before completion that the area disturbed by the work should be restored to a condition that is better than the condition it was in immediately before the work was carried out and also agree on compensation between the parties for such betterment, the area disturbed by the work must be restored to the condition specified in that agreement;

(n) in any other case, the area disturbed by the work must be restored to the condition it was in immediately before the work was carried out;

(o) the person responsible must ensure that the restoration work, including any associated excavation and backfilling of trenches, complies with the municipal standards;

(p) notwithstanding the other conditions contained in this clause, the Council’s Manager Engineering Services may consent to a person other than the person responsible carrying out the restoration work;

(q) the person responsible must meet the cost of any emergency repairs that need to be made to the area disturbed by or on behalf of the Council because of a failure by the person responsible to comply, or comply fully, with the conditions 2.24(l) through (p);

(r) after the work starts, the person responsible must provide the Council’s Manager Engineering Services with a progress report on the work as soon as practicable after each 14-day period if the work proceeds beyond that number of days;

(s) within 14 days after completion, the person responsible must provide the Council with a report stating that:

i) the work has been completed; and

ii) all applicable municipal standards have been complied with; and

iii) any standards for the work that were agreed between the person responsible and the Council have been complied with;

(t) the person responsible must compile and keep accurate records of the work, showing the nature, location and depth of the infrastructure;

(u) the person responsible must, on demand, provide the Council and the utility service provider with a free copy of all or any of the records;

(v) the person responsible must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the Council in the work zone if, immediately before the maintenance or rehabilitation work started:
SCHEDULE LU1

i) the records required to be compiled and kept under condition 2.24(t) did not indicate the presence of the damaged infrastructure; or
ii) the location and depth of the damaged infrastructure was not accurately shown in those records

(w) the utility service provider must meet the cost of any damage that may be caused to the infrastructure by routine maintenance or rehabilitation work carried out by or on behalf of the utility service provider in the work zone if, immediately before the maintenance or rehabilitation work started:
   i) the records required to be compiled and kept under condition 2.24(t) indicated the presence of the damaged infrastructure; and
   ii) the location and depth of the damaged infrastructure was accurately shown in those records.

2.25 The person responsible will:

   (a) maintain a minimum depth of cover over the wastewater pipeline of 900mm in all agricultural areas and roadsides other than required by condition 2.22; and
   (b) install and maintain permanent pipe line markers:
      i) on both sides of the road crossings;
      ii) on both sides of railway crossings;
      iii) on both sides of significant river and stream crossings;
      iv) at all fences;
      v) at all utility crossings; and
      vi) at all bends in the pipe; and
   (c) erect signs at intervals no greater than 500 metres and must be within line of sight. Where the wastewater pipeline construction corridor closely parallels a road or power line the spacing will be no greater than 200 metres; and
   (d) markers will be visible along the Right of Way in either direction.

2.26 In the interests of fire safety:

   (a) an emergency plan for the site is to be prepared and maintained to the satisfaction of the Tasmania Fire Service and the Council; and
   (b) a defendable space plan is to be prepared and maintained to the satisfaction of the Tasmania Fire Service for all relevant developments at risk of bushfire.

2.27 The person responsible must ascertain the location of all infrastructure in the vicinity of the proposed wastewater pipeline construction corridor prior to the commencement of the construction activity. The person responsible must repair and reinstate any damage done to infrastructure to the satisfaction of the owner of the infrastructure.

2.28 The person responsible must negotiate with the affected private land owners a legal easement for the proposed wastewater pipeline
construction corridor as well as the right to enter private land while developing the wastewater pipeline construction corridor.


2.30 The person responsible must:

(a) prior to commencing construction activity, identify the roads which it intends to use for high mass vehicles during construction activity; and

(b) compensate road authorities to the extent of increased costs reasonable incurred by the road authorities for the repair or reinstatement of any roads and bridges which the person responsible uses for high mass vehicles during construction activities.

2.31 Buildings must be designed to the approval of the Council and must meet the following functional statements:

(a) buildings are to withstand the combination of loads and other actions to which it may be reasonably subjected;

(b) glazing is to be installed in a building to avoid undue risk of injury to people;

(c) buildings are to be constructed to maintain structural stability during fire to:
   i) allow occupants time to evacuate safely; and
   ii) allow for Tasmania Fire Service intervention; and
   iii) avoid damage to other property;

(d) buildings are to be provided with safeguards to prevent fire spread:
   i) so that occupants have time to evacuate safely without being overcome by the effects of fire; and
   ii) to allow for Tasmania Fire Service intervention; and
   iii) to adjoining fire compartments; and
   iv) between buildings;

(e) buildings are to provide, as far as is reasonable:
   i) safe; and
   ii) equitable and dignified, access for people to the services and facilities within;

(f) buildings are to be provided with fire-fighting equipment to safeguard against fire spread:
   i) to allow occupants time to evacuate safely without being overcome by the effects of fire; and
   ii) so that occupants may undertake initial attack on a fire; and
   iii) so that the Tasmania Fire Service have the necessary equipment to undertake search, rescue, and fire-fighting operations; and
   iv) to other parts of the building; and
SCHEDULE LU1

v) between buildings;

(g) buildings including any associated sitework are to be constructed in a way that protects people and other property from the adverse effects of redirected surface water;

(h) buildings are to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground;

(i) buildings are to be constructed to avoid the likelihood of:
   i) the creation of unhealthy or dangerous conditions; and
   ii) damage to building elements, caused by dampness or water overflow from bathrooms, laundries and the like;

(j) buildings are to be constructed to provide height in a room or space suitable for the intended use;

(k) a space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use;

(l) a space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement;

(m) a space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use;

(n) pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants;

(o) equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity;

(p) a building’s services are to be continually capable of using energy efficiently;

(q) occupancy permits must be issued prior to use or occupation of any building.

2.32 Any mud or debris deposited on existing roads must be cleaned up immediately in a manner that does not impact on Council infrastructure. This may include sweeping or vacuuming.

2.33 A separate permit is required for future decommissioning of the pipeline.

2.34 A landscape assessment and site rehabilitation/reinstatement plan is to be prepared where the CEMP does not apply and is to include the following:

(a) location of the existing or approved dwellings, buildings or structures, services and roads;

(b) details of proposed rehabilitation/reinstatement to be undertaken for all disturbed surfaces;

(c) flora species used for rehabilitation; and

(d) surface treatment and materials used for reinstatement of hard infrastructure.
2.35 The person responsible must limit construction vehicle speed to 40km/h along roads within the wastewater pipeline construction corridor, where adjacent to residential areas.

2.36 Prior the commencement of construction activities, the person responsible must:
   (a) facilitate regular contact with affected land owners or occupiers; and
   (b) take reasonable endeavours to notify landowners and occupiers of schedules of activity in the vicinity of their land, including any general equipment movement schedules.

2.37 Excess excavated material that is removed from the wastewater pipeline construction corridor must only be deposited at sites approved by the Council for land filling.

2.38 No contaminated drainage, silt or sediment as a result of works shall be discharged into the Council’s piped stormwater drainage system.

2.39 Prior to the commencement of use of the pipeline, a report must be submitted to all relevant jurisdictional bodies that outlines a risk assessment and management plan for the operational phase of the project. The report must specifically detail how the proposed risk assessment and management process will ensure location specific environmental and societal risks will be satisfactorily addressed in terms of pipeline failure. Written certification shall be provided to the Council from the author of the detailed report stating the purpose, for which the report was provided, the context in which it was commissioned, and any limitations, qualifications, or reservations by the Certifier. It shall state that the Certifier is aware that the Council and other relevant authorities will be relying on this certification in its assessment of the proposal. It shall indemnify the Council and other relevant authorities from any legal liability arising from errors or omissions in the report and pipeline design.

2.40 A condition assessment of all buildings within 150 metres of the wastewater pipeline construction corridor must be conducted by an accredited building surveyor prior to any blasting.

2.41 Once operational, the pipeline operator will be part of the ‘Dial Before You Dig’ service

**Pulp mill**

2.42 The person responsible shall ensure that all use and development of the Pulp Mill Production Facility is generally in accordance with the management measures and commitments contained in the DIIS excepting as required by the following conditions.
SCHEDULE LU1

2.43 The person responsible shall provide the Council with demonstrated evidence of freehold title, legal lease or licence agreement with the existing owner or vested management authority of the land comprising the designated development site at Long Reach, being the subject land, prior to the commencement of construction on site or by a date specified in writing by the Council.

2.44 An outdoor lighting management plan must be submitted to the Council for approval prior to the commencement of construction of outdoor lighting infrastructure or by a date specified in writing by the Council.

   (a) the person responsible shall ensure that the plan specifies the location, height, type, style and intensity of the outdoor lighting proposed and details shielding measures to be undertaken to reduce light spills onto adjacent receptors;

   (b) the plan must be consistent with the requirements of Australian Standard AS4282 – 1997: Control of the Obtrusive Effects of Outdoor Lighting;

   (c) the plan must include but is not necessarily limited to, details of the following:

      i) a table containing all of the major commitments made in this plan.

      ii) an implementation timetable for key aspects of the plan; and

      iii) a reporting program to regularly advise the Council of the results of the plan;

   (d) construction of outdoor lighting infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plan has been specified in writing by the Council;

   (e) the person responsible must ensure the outdoor lighting management plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council;

   (f) the person responsible must obtain the written approval of the Council for any consequent amendment to the outdoor lighting management plan.

2.45 A Fire Emergency Plan must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

   (a) the person responsible shall ensure that the plan provides for protection of the site from bush fire as well as containing measures containing the spread of fire within the operating areas of the site;

   (b) the plan for the site is to be prepared, maintained and reviewed annually to the satisfaction of the Tasmania Fire Service and the Council;
(c) a defendable space plan is to be prepared and maintained to the satisfaction of the Tasmania Fire Service for all relevant developments at risk of bushfire;

(d) the person responsible shall create and maintain in effective condition, fire breaks and emergency vehicle access ways around the perimeter of the operating areas of the site for the operational life of the Pulp Mill.

2.46 A detailed car parking layout and on site traffic movement plan must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

(a) the person responsible shall ensure that the plan is consistent with the requirements of AS 2890.1, 1993 Parking Facilities and shall provide a minimum of 200 on site car parking bays and adequate turning provision for vehicles to enable ingress and egress in a forward direction;

(b) the plan must include but is not limited to the following:
   i) a table containing all of the major commitments made in the plan.
   ii) an implementation timetable for key aspects of the plan; and

   iii) a reporting program to regularly advise the Council of the results of the plan.

(c) construction of on site car parking infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(d) the person responsible must ensure the car parking layout and on site traffic movement plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council;

(e) the person responsible must obtain the written approval of the Council for any consequent amendment to the endorsed car parking layout and on site traffic movement plan.

2.47 Buildings must be designed to the approval of the Council and must meet the following functional statements:

(a) buildings are to withstand the combination of loads and other actions to which it may be reasonably subjected;

(b) glazing is to be installed in a building to avoid undue risk of injury to people;

(c) buildings are to be constructed to maintain structural stability during fire to:
   i) allow occupants time to evacuate safely; and
   ii) allow for Tasmania Fire Service intervention; and

   iii) avoid damage to other property;

(d) buildings are to be provided with safeguards to prevent fire spread:
SCHEDULE LU1

i) so that occupants have time to evacuate safely without being overcome by the effects of fire; and
ii) to allow for Tasmania Fire Service intervention; and
iii) to adjoining fire compartments; and
iv) between buildings;

(e) buildings are to provide, as far as is reasonable:
i) safe; and
ii) equitable and dignified, access for people to the services and facilities within;

(f) buildings are to be provided with fire-fighting equipment to safeguard against fire spread:
i) to allow occupants time to evacuate safely without being overcome by the effects of fire; and
ii) so that occupants may undertake initial attack on a fire; and
iii) so that the Tasmania Fire Service have the necessary equipment to undertake search, rescue, and fire-fighting operations; and
iv) to other parts of the building; and
v) between buildings;

(g) buildings including any associated sitework are to be constructed in a way that protects people and other property from the adverse effects of redirected surface water;

(h) buildings are to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground;

(i) buildings are to be constructed to avoid the likelihood of:
i) the creation of unhealthy or dangerous conditions; and
ii) damage to building elements, caused by dampness or water overflow from bathrooms, laundries and the like;

(j) buildings are to be constructed to provide height in a room or space suitable for the intended use;

(k) a space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use;

(l) a space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement;

(m) a space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use;

(n) pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants;

(o) equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity;

(p) a building’s services are to be continually capable of using energy efficiently;

(q) plumbing sewerage and water to be installed in accordance with Australian Standard AS 3500; and
SCHEDULE LU1

(r) occupancy permits must be issued prior to use or occupation of any building.

2.48 The colour scheme of the Pulp Mill buildings shall blend as far as practicable with the background of the Tippogoree Hills and the surface finish of the materials and paint selected will be a matt finish to minimise reflective glare.

2.49 A detailed stormwater management design plan must be submitted to the Council for approval prior to the commencement of construction of on site stormwater infrastructure or by a date specified in writing by the Council:

(a) the person responsible shall ensure that all use and development of the stormwater infrastructure is generally in accordance with the stormwater management measures and commitments contained in the DIIS excepting as required by the following conditions;

(b) an additional oil and debris separating gross pollutant trap of design volumetric capacity to treat the anticipated overflow from the second stormwater collection basin to the Tamar River for a 1 in 20 year storm event shall be provided;

(c) construction of on site stormwater infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(d) the person responsible must ensure the Storm Water Management Plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council;

(e) the person responsible must obtain the written approval of the Council for any consequent amendment to the endorsed Storm Water Management Plan.

2.50 A detailed potable water supply design plan must be submitted to the Council for approval prior to the commencement of construction of on site potable water supply infrastructure or by a date specified in writing by the Council:

(a) the person responsible shall ensure that all use and development of the potable water supply infrastructure is generally in accordance with the potable water supply management measures and commitments contained in the DIIS excepting as required by the following conditions;

(b) the Pulp Mill site shall be provided with potable water supply via a new water main connected to the Esk Water trunk supply main;

(c) the person responsible must ensure that the specifications, dimensions, volumetric capacity and construction parameters of the potable water supply main and ancillary infrastructure satisfy the requirements of Esk Water;
SCHEDULE LU1

(d) the potable water supply main shall be equipped with an appropriate backflow prevention device located at an accessible point on the main in accordance with the requirements of Esk Water;

(e) construction of the potable water supply main shall not commence until a plan bearing the endorsement of Esk Water and detailing the location of the main has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(f) the person responsible must ensure the potable water supply design plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council;

(g) the person responsible must obtain the endorsement of Esk Water and the written approval of the Council for any consequent amendment to the endorsed potable water supply design plan.

2.51 The person responsible shall ensure that all use and development of the site involving vehicle interaction at the road entrance to the development site between traffic generated as a result of the Pulp Mill operations and existing public and commercial traffic using the East Tamar Highway is in accordance with best practice national standards for grade separated interchanges:

(a) the person responsible must ensure that the design of the intersection at the entry to the Pulp Mill is incorporated with an entrance for the existing chip mills to limit access to the East Tamar Highway to one entrance and achieves the greatest degree of safety possible through elimination by grade separation of direct vehicle conflict resulting from crossed turning paths at grade;

(b) the person responsible must ensure that the design of the grade separated interchange incorporates additional access for traffic movements accessing land to the east of the East Tamar Highway upon which the Pulp Mill quarry, landfill and water storage reservoir is situated such that the proposed additional at grade intersection onto the East Tamar Highway for accessing these facilities is eliminated;

(c) access to the eastern entry of the grade separated interchange to and from the Pulp Mill, quarry, landfill and water storage reservoir shall be by a new gravel access road constructed and located so as to be totally separate from the East Tamar Highway other than at the point of connection with the proposed interchange.

2.52 No additional road access to the East Tamar Highway other than for emergency purposes is permitted and no use shall be made of existing accesses to the site other than for emergency purposes.
2.53 The person responsible must ensure that the design of the grade separated interchange incorporates a provision for the future construction of a public road west of the East Tamar Highway to provide for linkage and integration with any further industrial development north of the proposed Pulp Mill.

2.54 A vegetation management plan must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

(a) the person responsible shall ensure the plan provides for sympathetic landscaping to maximise screening of the facility where practical and addresses post construction rehabilitation and restoration;

(b) all vegetation not required to be cleared for construction and operation of the Pulp Mill and associated infrastructure is to be retained;

(c) the plan must include but is not limited to the following:
   i) a table containing all of the major commitments made in the plan;
   ii) an implementation timetable for key aspects of the plan; and
   iii) a reporting program to regularly advise the Council of the results of the plan;

(d) civil construction work shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plan has been specified in writing by the Council;

(e) the person responsible must ensure the vegetation management plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council; and

(f) the person responsible must obtain the written approval of the Council for any consequent amendment to the vegetation management plan.

Wharf and pulp warehouse

2.55 The person responsible shall ensure that all use and development of the Pulp Mill wharf and pulp warehouse facility is generally in accordance with the management measures and commitments contained in the DIIS excepting as required by the following conditions.

2.56 The colour scheme of the Pulp Mill wharf and pulp warehouse shall blend as far as practicable with the background of the Tippogoree Hills and the surface finish of the materials and paint selected will be a matt finish to minimise reflective glare.

2.57 An outdoor lighting management plan for the proposed Pulp Mill wharf and pulp warehouse facility, including mooring dolphins, must
be submitted to the Council for approval prior to the commencement of construction of outdoor lighting infrastructure for the wharf and warehouse facility or by a date specified in writing by the Council:

(a) the person responsible shall ensure that the plan specifies the location, height, type, style and intensity of the outdoor lighting proposed and details shielding measures to be undertaken to reduce light spills onto adjacent receptors;

(b) the plan must be consistent with the requirements of Australian Standard AS4282 – 1997: Control of the Obtrusive Effects of Outdoor Lighting;

(c) the plan must include but is not necessarily limited to, details of the following:
   i) a table containing all of the major commitments made in this plan;
   ii) an implementation timetable for key aspects of the plan; and
   iii) a reporting program to regularly advise the Council of the results of the plan.

(d) construction of outdoor lighting infrastructure for the pulp warehouse and wharf facility shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plan has been specified in writing by the Council;

(e) the person responsible must ensure the outdoor lighting management plan is implemented and maintained for the operational life of the wharf and warehouse facility and that all requirements of the plan are completed to the satisfaction of the Council;

(f) the person responsible must obtain the written approval of the Council for any consequent amendment to the outdoor lighting management plan.

2.58 A Fire Emergency Plan for the proposed Pulp Mill wharf and pulp warehouse facility must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

(a) the person responsible shall ensure that the plan provides for protection of the site from bush fire as well as containing measures containing the spread of fire within the operating areas of the site or from vessels moored at the site;

(b) the plan for the site is to be prepared, maintained and reviewed annually to the satisfaction of the Tasmania Fire Service and the Council;

(c) a defendable space plan is to be prepared and maintained to the satisfaction of the Tasmania Fire Service for all relevant developments at risk of bushfire;

(d) the person responsible shall create and maintain in effective condition, fire breaks and emergency vehicle access ways
around the perimeter of the operating areas of the site for the duration of the project.

2.59 A detailed potable and fire water supply design plan for the proposed Pulp Mill wharf and pulp warehouse facility must be submitted to the Council for approval prior to the commencement of construction of on site potable and fire water supply infrastructure for the wharf and warehouse facility, or by a date specified in writing by the Council:

(a) the person responsible shall ensure that all use and development of the potable and fire water supply infrastructure is generally in accordance with the potable and fire water management measures and commitments contained in the DIIS excepting as required by the following conditions;

(b) the wharf and warehouse facility site shall be provided with potable water supply via a new water main connected to the internal site potable water reticulation network supplied from the Esk Water trunk supply main;

(c) the person responsible must ensure that the specifications, dimensions, volumetric capacity and construction parameters of the potable water supply main and ancillary infrastructure satisfy the requirements of Esk Water;

(d) the potable water supply main shall be equipped with an appropriate backflow prevention device located at an accessible point on the main in accordance with the requirements of Esk Water;

(e) the wharf and warehouse facility shall be provided with fire water supply via new water mains connected to the sites internal fire water reticulation network;

(f) the person responsible must ensure that the specifications, dimensions, volumetric capacity and construction parameters of the fire water supply mains and ancillary infrastructure satisfy the requirements of the Tasmanian Fire Service;

(g) the fire water supply mains shall be a minimum diameter of 150mm and shall be equipped with hydrants located at not more than 60 metre centres to provide adequate coverage;

(h) construction of the potable and fire water supply main systems shall not commence until a plan bearing the endorsement of Esk Water and the Tasmanian Fire Service and detailing the location of the mains has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council.

2.60 A detailed stormwater design plan for the Pulp Mill wharf and pulp warehouse area must be submitted to the Council for approval prior to the commencement of construction of on site stormwater infrastructure or by a date specified in writing by the Council:

(a) the person responsible shall ensure that all use and development of the wharf and warehouse stormwater infrastructure is generally in accordance with the stormwater management
measures and commitments contained in the DIIS excepting as required by the following conditions;

(b) stormwater run-off from the working platform shall be collected by pits and pipes and directed to oil and debris separating gross pollutant traps suspended from the structure before pumping to the main on site stormwater treatment system. The wharf and warehouse system design shall be for a 1 in 20 year storm event;

(c) construction of on site wharf and warehouse stormwater infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(d) the person responsible must ensure the wharf and warehouse stormwater management measures are integrated with the overall site Stormwater Management Plan and that the plan is implemented and maintained for the operational life of the wharf and warehouse such that all requirements of the plan are completed to the satisfaction of the Council; and

(e) the person responsible must obtain the written approval of the Council for any consequent amendment to the endorsed Stormwater Management Plan.

2.61 Buildings must be designed to the approval of the Council and must meet the following functional statements:

(a) buildings are to withstand the combination of loads and other actions to which it may be reasonably subjected;

(b) glazing is to be installed in a building to avoid undue risk of injury to people;

(c) buildings are to be constructed to maintain structural stability during fire to:
   i) allow occupants time to evacuate safely; and
   ii) allow for Tasmania Fire Service intervention; and
   iii) avoid damage to other property;

(d) buildings are to be provided with safeguards to prevent fire spread:
   i) so that occupants have time to evacuate safely without being overcome by the effects of fire; and
   ii) to allow for Tasmania Fire Service intervention; and
   iii) to adjoining fire compartments; and
   iv) between buildings;

(e) buildings are to provide, as far as is reasonable:
   i) safe; and
   ii) equitable and dignified, access for people to the services and facilities within;

(f) buildings are to be provided with fire-fighting equipment to safeguard against fire spread:
   i) to allow occupants time to evacuate safely without being overcome by the effects of fire; and
   ii) so that occupants may undertake initial attack on a fire; and
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iii) so that the Tasmania Fire Service have the necessary equipment to undertake search, rescue, and fire-fighting operations; and
iv) to other parts of the building; and
v) between buildings;

(g) buildings including any associated sitework are to be constructed in a way that protects people and other property from the adverse effects of redirected surface water;

(h) buildings are to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground;

(i) buildings are to be constructed to avoid the likelihood of:
   i) the creation of unhealthy or dangerous conditions; and
   ii) damage to building elements, caused by dampness or water overflow from bathrooms, laundries and the like;

(j) buildings are to be constructed to provide height in a room or space suitable for the intended use;

(k) a space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use;

(l) a space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement;

(m) a space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use;

(n) pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants;

(o) equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity;

(p) a building’s services are to be continually capable of using energy efficiently;

(q) plumbing sewerage and water to be installed in accordance with Australian Standard AS 3500; and

(r) occupancy permits must be issued prior to use or occupation of any building.

2.62 A detailed car parking layout and on site traffic movement plan for the wharf and pulp warehouse must be prepared and submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

(a) the person responsible shall ensure that the plan is consistent with the requirements of AS 2890.1, 1993 Parking Facilities and shall provide a minimum of 40 on site car parking bays and adequate turning provision for vehicles to enable ingress and egress in a forward direction;

(b) the plan must include but is not limited to the following:
   i) a table containing all of the major commitments made in the plan;
SCHEDULE LU1

ii) an implementation timetable for key aspects of the plan; and

iii) a reporting program to regularly advise the Council of the results of the plan;

(c) construction of on site car parking infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(d) the person responsible must ensure the car parking layout and on site traffic movement plan is implemented and maintained for the operational life of the wharf and warehouse facility and that all requirements of the plan are completed to the satisfaction of the Council.

Quarry and landfill

2.63 The person responsible shall ensure that all use and development of the quarry, landfill and water storage reservoir is generally in accordance with the management measures and commitments contained in the DIIS excepting as required by the following conditions.

2.64 A Fire Emergency Plan must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council:

(a) the person responsible shall ensure that the plan provides for protection of the site from bush fire as well as containing measures containing the spread of fire within the operating areas of the site;

(b) the plan for the site is to be prepared, maintained and reviewed annually to the satisfaction of the Tasmania Fire Service and the Council;

(c) a defendable space plan is to be prepared and maintained to the satisfaction of the Tasmania Fire Service for all relevant developments at risk of bushfire;

(d) the person responsible shall create and maintain in effective condition, fire breaks and emergency vehicle access ways around the perimeter of the operating areas of the site for the operational life of the Pulp Mill; and

(e) the person responsible must ensure the eastern sector Fire Emergency Plan management measures are integrated with the overall site Fire Emergency Plan and that the plan is implemented and maintained for the operational life of the Pulp Mill such that all requirements of the plan are completed to the satisfaction of the Council.

2.65 A detailed car parking layout and on site traffic movement plan must be submitted to the Council for approval prior to the commencement of construction activities or by a date specified in writing by the Council.
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(a) the person responsible shall ensure that the plan is consistent with the requirements of AS 2890.1, 1993 Parking Facilities and shall provide a minimum of 6 on site car parking bays and adequate turning provision for vehicles to enable ingress and egress in a forward direction;

(b) the plan must include but is not limited to the following:
   i) a table containing all of the major commitments made in the plan;
   ii) an implementation timetable for key aspects of the plan; and
   iii) a reporting program to regularly advise the Council of the results of the plan;

(c) construction of on site car parking infrastructure shall not commence until the plan has been approved in writing by the Council or an alternate date for the receipt of the plans has been specified in writing by the Council;

(d) the person responsible must ensure the car parking layout and on site traffic movement plan is implemented and maintained for the operational life of the Pulp Mill and that all requirements of the plan are completed to the satisfaction of the Council;

(e) the person responsible must obtain the written approval of the Council for any consequent amendment to the endorsed car parking layout and on site traffic movement plan; and

(f) the approved plan as amended from time to time with the approval of the Council must be implemented to the satisfaction of the Council.

2.66 The Pulp Mill landfill site shall be provided with perimeter security fencing and gates for the operational life of the Pulp Mill. The person responsible may, through the provision of security management and operation of the gates, prohibit public entry to the site.

2.67 Buildings must be designed to the approval of the Council and must meet the following functional statements:

(a) buildings are to withstand the combination of loads and other actions to which it may be reasonably subjected;

(b) glazing is to be installed in a building to avoid undue risk of injury to people;

(c) buildings are to be constructed to maintain structural stability during fire to:
   i) allow occupants time to evacuate safely; and
   ii) allow for Tasmania Fire Service intervention; and
   iii) avoid damage to other property;

(d) buildings are to be provided with safeguards to prevent fire spread:
   i) so that occupants have time to evacuate safely without being overcome by the effects of fire; and
   ii) to allow for Tasmania Fire Service intervention; and
   iii) to adjoining fire compartments; and
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iv) between buildings;

(e) buildings are to provide, as far as is reasonable:
   i) safe; and
   ii) equitable and dignified, access for people to the services and facilities within;

(f) buildings are to be provided with fire-fighting equipment to safeguard against fire spread:
   i) to allow occupants time to evacuate safely without being overcome by the effects of fire; and
   ii) so that occupants may undertake initial attack on a fire; and
   iii) so that the Tasmania Fire Service have the necessary equipment to undertake search, rescue, and fire-fighting operations; and
   iv) to other parts of the building; and
   v) between buildings;

(g) buildings including any associated sitework are to be constructed in a way that protects people and other property from the adverse effects of redirected surface water;

(h) buildings are to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground;

(i) buildings are to be constructed to avoid the likelihood of:
   i) the creation of unhealthy or dangerous conditions; and
   ii) damage to building elements, caused by dampness or water overflow from bathrooms, laundries and the like;

(j) buildings are to be constructed to provide height in a room or space suitable for the intended use;

(k) a space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use;

(l) a space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement;

(m) a space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use;

(n) pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants;

(o) equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity;

(p) a building’s services are to be continually capable of using energy efficiently;

(q) plumbing sewerage and water to be installed in accordance with Australian Standard AS 3500; and

(r) occupancy permits must be issued prior to use or occupation of any building.
2.68 A condition assessment of all buildings within 150 metres of the quarry, landfill or water storage reservoir must be conducted by an accredited building surveyor prior to any blasting.

2.69 The person responsible shall ensure that all use and development of the site involving vehicle interaction at the road entrance to the development site between traffic generated as a result of the Pulp Mill operations and existing public and commercial traffic using the East Tamar Highway is in accordance with best practice national standards for grade separated interchanges:

(a) the person responsible must ensure that that the design of the intersection at the entry to the Pulp Mill is incorporated with an entrance for the existing chip mills to limit access to the East Tamar Highway to one entrance and achieves the greatest degree of safety possible through elimination by grade separation of direct vehicle conflict resulting from crossed turning paths at grade;

(b) the person responsible must ensure that the design of the grade separated interchange incorporates additional access for traffic movements accessing land to the east of the East Tamar Highway upon which the Pulp Mill quarry, landfill and water storage reservoir is situated such that the proposed additional at grade intersection onto the East Tamar Highway for accessing these facilities is eliminated; and

(c) access to the eastern entry of the grade separated interchange to and from the Pulp Mill quarry, landfill and water storage reservoir shall be by a new gravel access road constructed and located so as to be totally separate from the East Tamar Highway other than at the point of connection with the proposed interchange.

2.70 No additional road access to the East Tamar Highway other than for emergency purposes is permitted and no use shall be made of existing accesses to the site other than for emergency purposes.
SCHEDULE LU1

Part 3 – Environmental Conditions

SECTION 1 - DEFINITIONS

In this part, unless the contrary intention is expressed:

**50th percentile or median** means the value at which the relevant parameter is exceeded by no more than 50 percent of all sample results over any given time period;

**90th percentile** means the value at which the relevant parameter is exceeded by no more than 10 percent of all sample results over any given time period;

**99th percentile** means the value at which the relevant parameter is exceeded by no more than 1 percent of all sample results over any given time period;

**99.9th percentile** means the value at which the relevant parameter is exceeded by no more than 0.1 percent of all sample results over any given time period;

**Aboriginal heritage relic** means:

(a) any artefact, painting, carving, engraving, arrangement of stones, midden, or other object made or created by any of the original inhabitants of Australia or the descendants of any such inhabitants;

(b) any object, site, or place that bears signs of the activities of any such original inhabitants or their descendants; or

(c) the remains of the body of such an original inhabitant or of a descendant of such an inhabitant who died before the year 1876 that are not interred in –
   (i) any land that is or has been held, set aside, reserved, or used for the purposes of a burial-ground or cemetery pursuant to any Act, deed, or other instrument; or
   (ii) a marked grave in any other land;

subject to the following provisions:

(a) no object made or created after the year 1876 shall be treated as a relic, and no activity taking place after that year shall for those purposes be regarded as being capable of giving rise to such a relic; and

(b) in any proceedings in relation to an object alleged to be a relic, the court shall assume the object to be a relic if it is satisfied that there are reasonable grounds for believing that the object is, or may be, a relic;

**Aboriginal heritage specialist** means a person recognised by the Aboriginal Heritage Office and the Tasmanian Aboriginal Land and Sea Council for the purposes of investigating, examining and reporting on Aboriginal heritage;

**Accepted Modern Technology** or AMT means technology which has a demonstrated capacity to achieve the desired emission concentration in a cost-effective manner, takes account of cost-effective engineering and scientific developments and pursues opportunities for waste minimisation;
**SCHEDULE LU1**

**activity** means the activity to which this schedule relates, and includes more than one such activity;

**ADt** (Air Dried tonne) means a tonne of pulp with a moisture content such that it will neither lose nor gain moisture in a standard environment at a temperature of 24 degrees Centigrade and a relative humidity of 50 percent;

**ambient air** means external air, and does not include the air inside buildings or structures;

**AOX** or **Adsorbable Organic Halogens** means the equivalent amount of halogen (fluorine, chlorine, bromine, or iodine) contained in organic compounds, expressed as chloride, as determined by measurement of adsorption of a sample on activated charcoal;

**APIA Code** means the Australian Pipeline Industry Association Ltd. Code of Environmental Practice – Onshore Pipelines (2005), or any revised version thereof;

**Australian Standard** or **AS** means an Australian Standard published by Standards Australia International Ltd. Any reference to an Australian Standard is a reference to the most recent edition of that Standard, unless otherwise stated;

**Bass Strait outfall** means outfall for the discharge of treated wastewater to Bass Strait;

**BOD** means Biochemical Oxygen Demand;

**BOD5** means five day Biochemical Oxygen Demand as determined by the oxygen uptake at a temperature of 20 degrees Centigrade over a 5 day period in the dark measured in mg/L of oxygen;

**boiler ash** comprises all the solid residue from the combustion process. It includes the material that remains in the furnace at the completion of the combustion cycle (bottom ash), the particulate matter captured from the exhaust gases (fly ash) and the solid material removed from the boiler during maintenance activities;

**capping** means the placement of one or more layers to form a permanent covering above deposited waste and includes a reference to such a layer;

**cell** means a discrete section of the landfill site used for the deposition of waste;

**CEM** means Continuous Emissions Monitor, and refers to an instrument installed to continuously monitor the concentration of a pollutant within a stack, and also to an instrument installed to continuously monitor associated parameters within the stack such as temperature, moisture and velocity;

**CEMP** means an Environmental Management Plan prepared for the construction phase of the activity;
cetacean alert area means an area of two kilometres radius from underwater construction activities;

cetacean monitoring zone means an area of three kilometre radius from underwater construction activities;

cetacean exclusion area means an area of one kilometre radius from underwater construction activities;

closure of the landfill means the cessation of all waste deposition activities at the landfill site;

CNCG means concentrated non-condensable gases;

COD means Chemical Oxygen Demand, a measure of the oxygen demand of the organic compounds in a sample;

colour means colour as measured by Spectrophotometric Method;

Common Wombat means *Vombatus ursinus tasmaniensis*;

construction activities means activities on or in the terrestrial or marine environment associated with the construction phase of the activity, including but not limited to, activities associated with the clearance of vegetation, site works to create a level site, blasting, pile driving, backhoe dredging, rock breaking, rock crushing, road construction, associated infrastructure installation, installation of fences, plant and building construction and installation;

continuous monitoring, or continuously monitored, means automated analysis or measurement to create an uninterrupted (to the extent reasonably practicable) record of the results of the analyses or measurement;

control location means a location chosen to represent the general ambient sound without contribution from noise sources associated with the activity;

dangerous goods has the meaning given to that expression in the *Dangerous Goods Act 1998*;

decommissioning means the dismantling and removal of structures and equipment and the removal or control of pollutants or processes that may cause environmental harm undertaken subsequent to the termination or abandonment of any activity;

Dioxins and Furans means chemical compounds including polychlorinated dibenzop-dioxins (PCDD), and polychlorinated dibenzofurans (PCDF) having chlorine atoms in the 2,3,7,8 positions on the molecule and certain polychlorinated biphenyls specified by the World Health Organisation;

Director means the Director of Environmental Management holding office under section 18 of the EMPCA and includes a person authorised in writing by the Director to exercise the relevant power or function on the Directors behalf;
**Director of Industry Safety** means the Director of Industry Safety holding office under section 33 of the *Workplace Health and Safety Act 1995*;

**Director of National Parks and Wildlife** means the Director of National Parks and Wildlife holding office under section 6 of the *National Parks and Reserves Management Act 2002*;

**disturbance** means a change from the pre-construction condition of vegetation, soil, water or ecosystems arising from the activity;

**DNCG** means dilute non-condensable gases;

**DPIW** means the Department of Primary Industries and Water, and includes any other Department to which the administration of all or part of the TSPA may be assigned;

**DTAE** means the Department of Tourism, Arts and the Environment, and includes any other Department to which the administration of all or part of the EMPCA may be assigned;

**E. coli** means *Escherichia coli* bacteria;

**emergency event** means an unplanned event requiring an urgent response to protect life, the environment or property;

**EMPCA** means the *Environmental Management and Pollution Control Act 1994*;

**EMP** means Environmental Management Plan;

**EMP (Commissioning)** means an Environmental Management Plan prepared for the commissioning phase of the activity;

**EMS** means Environmental Management System;


**EPBC Act** means the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*;

**erosion control structures** means structures designed and constructed to reduce erosion and includes, without limitation, erosion control berms and sediment settling ponds;

**exclusion zone** means an area into which unauthorised entry is prohibited;
first flush means the initial volume of stormwater runoff generated during a rain event which may contain elevated pollutant loads compared to subsequent stormwater flows;

GDA94 means Geocentric Datum of Australia 1994;

grab sample means an individual sample collected in less than 30 minutes and which is representative of the substance sampled;

green liquor dregs means the solids filtered out of the green liquor which is formed by dissolving the smelt (the combustion residue) from the recovery boiler;

green woodchips means woodchips processed from recently harvested timber and having a moisture content greater than 40 percent;

Gunns Rowella Monitoring Station means the ambient air monitoring station established by Gunns Ltd at Rowella, at a site with the approximate MGA coordinates (491973 mE, 544231 mN);

historic cultural heritage place has the meaning given to ‘place’ in the Historic Cultural Heritage Act 1995;

hydrotest activities means hydrostatic pressure testing associated with pipeline commissioning;

ICC means the sum of the inorganic chlorinated compounds hydrogen chloride, chlorine and chlorine dioxide;

incident means the unplanned release of a pollutant as a result of the activity, including as a result of an emergency, accident or malfunction, being a release which causes or may cause material environmental harm;

inert waste means waste that does not undergo environmentally significant physical, chemical or biological transformations, has no potentially hazardous content once landfilled and is not contaminated with other material;

isokinetic stack test means a stack test conducted in accordance with AS 4323.2, involving sampling at a rate such that the velocity and direction of the gas entering the sampling nozzle is the same as that of the gas stream being sampled;


landfill means a waste depot as described in Schedule 2 of EMPCA;

Landfill Sustainability Guide means the Landfill Sustainability Guide 2004 published by the then Department of Primary Industries, Water and Environment, or any revised version thereof;
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**laydown area** means an area required for the storage and assembly of plant, equipment and materials required for construction purposes;

**LC50** means the concentration of a substance which is lethal to 50% of the test organisms;

**leachate** means any liquid that is either released by or has percolated through waste;

**Leq** means the equivalent sound pressure level and is the constant sound pressure level that has the same energy as the time-varying sound pressure level measured over a given time period;

**lime kiln electrostatic precipitator dust** means the solids removed from the lime kiln flue gases in the lime kiln electrostatic precipitator;

**liquid waste** means any waste that is in liquid form or is substantially comprised of free liquids or is not able to be lifted and moved in heaps with a spade;

**listed cetacean species** means cetacean species of specially protected wildlife and cetacean species of protected wildlife listed under the NCA, and/or cetacean species listed under the TSPA;

**listed pinniped and turtle species** means pinniped and turtle species of specially protected wildlife and pinniped and turtle species of protected wildlife listed under the NCA, and/or pinniped or turtle species listed under the TSPA;

**LN** means the sound pressure level equalled or exceeded for N% of the time (for example, L_{10} is the sound pressure level equalled or exceeded for 10% of the time);

**Masked Owl – Tasmanian** means *Tyto novaehollandiae castanops*;

**masl** means metres above sea level;

**MGA** means Map Grid of Australia, and refers to the spatial coordinate system based on the Geocentric Datum of Australia 1994;

**Microtox® bioassay** means the test as described in the Environmental Emission Limit Guidelines conducted using a Microtox® bioassay machine operated in accordance with the manufacturer’s specifications;

**mixing zone** has the meaning given to that expression in the *State Policy on Water Quality Management 1997*;

**NATA** means National Association of Testing Authorities, Australia;

**native vegetation** means plant species that occur naturally in a given area;

**Natural Values Atlas** means the *Natural Values Atlas* maintained and published on the internet by DPIW;

**NCA** means the *Nature Conservation Act 2002*;
NCG means non-condensable gases, which are gases which do not readily change phase from a gas to a liquid on cooling;

NCG treatment mode means when one or both of the non-condensable gas incinerators are burning non-condensable gases for a purpose other than for producing sodium bisulphite for mill consumption;

NOEC means no observable effects concentration, that is the concentration of the water sample tested using a toxicity bioassay for which the effect is not different from controls;


noise sensitive premises means:
   (a) domestic premises;
   (b) caravan parks and camping grounds;
   (c) urban parks, urban reserves, public gardens and urban outdoor recreational areas (other than spectator sporting venues);
   (d) hospitals;
   (e) sanatoria, rehabilitation centres, and the like;
   (f) premises used for child care;
   (g) premises used for aged care;
   (h) educational institutions - schools, colleges, universities, technical and further education institutes, academies, lecture halls, and other premises used for the purpose of instruction;
   (i) premises used for public religious worship;
   (j) hotels, clubs, lodges, and the like which provide accommodation to the public;
   (k) prisons and detention centres; or
   (l) libraries.

nominated area sources means:
   (a) the Wastewater Treatment Plant Equalisation Basin;
   (b) the Wastewater Treatment Plant Emergency Basin;
   (c) the Wastewater Treatment Plant Aeration Basin;
   (d) the Wastewater Treatment Plant Primary Clarifier;
   (e) the Wastewater Treatment Plant Secondary Clarifiers; and
   (f) any other nominated area source specified in writing by the Director.

nominated exhaust points means:
   (a) the Recovery Boiler Flue (Main Mill Stack, Flue 1);
   (b) the Lime Kiln Flue (Main Mill Stack, Flue 2);
   (c) the Non-condensable Gas Flue (Main Mill Stack, Flue 3);
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(d) the Power Boiler Flue (Main Stack Mill, Flue 4);
(e) the Bleach Plant Vent;
(f) the Drying Machine Vent;
(g) the Chlorate Plant Vent Gas Scrubber;
(h) the Chlorine Dioxide Plant Vent Gas Scrubber;
(i) the Cooling Tower fan exhausts;
(j) the Emergency Diesel Generator exhaust(s);
(k) the various steam vents identified in the DIIS;
(l) the various heating and ventilation exhausts identified in the DIIS; and
(m) any other nominated exhaust point specified in writing by the Director.

nominated stack testing points means:
(a) the Recovery Boiler Flue (Main Mill Stack, Flue 1);
(b) the Lime Kiln Flue (Main Mill Stack, Flue 2);
(c) the Non-condensable Gas Flue (Main Mill Stack, Flue 3);
(d) the Power Boiler Flue (Main Mill Stack, Flue 4);
(e) the Bleach Plant Vent;
(f) the Drying Machine Vent;
(g) the Chlorate Plant Vent Gas Scrubber;
(h) the Chlorine Dioxide Plant Vent Gas Scrubber;
(i) the Cooling Tower fan exhausts;
(j) the Emergency Diesel Generator exhaust(s); and
(k) any other nominated stack testing point specified in writing by the Director.

non polluted stormwater means waters arising from precipitation onto areas, such as
grassed areas, and roof-tops, where there is no reasonable likelihood of these waters
containing pollutants which may cause environmental harm;

normal standby mode means when one or both of the non-condensable gas
incinerators are burning non-condensable gases for the purpose of producing sodium
bisulphite for mill consumption;

NO\textsubscript{x} means nitrogen oxides;

nutrients means nitrogen and phosphorus;

NVC means no visible contamination;

OEMP means an Environmental Management Plan prepared for the operational phase
of the activity;

onshore means on land above low water mark;

OPSIS means the optical measurement of ambient or in-stack pollutant
concentrations using the OPSIS DOAS (Differential Optical Absorption Spectroscopy) technique;

PAH means polycyclic aromatic hydrocarbons;
Peregrine Falcon means *Falco peregrinus macropus*;

**pinniped and turtle alert area** means an area of one kilometre radius from underwater construction activities;

**pinniped and turtle monitoring zone** means an area of one and a half kilometre radius from underwater construction activities;

**pinniped and turtle exclusion area** means an area of five hundred metre radius from underwater construction activities;

**pipeline maintenance activity** means any activity associated with the maintenance of the water supply and wastewater pipelines and their ancillary facilities (including repair or replacement of the pipelines or ancillary facilities, the clearing or trimming of vegetation, reinstatement or rehabilitation works, the installation, maintenance or removal of erosion control structures, maintenance of access tracks, but excluding activities associated with the initial response to an emergency event).

**planning authority** means the Council(s) for the municipal area(s) in which the activity is situated;

**PM$_{10}$** means particulate matter with an equivalent aerodynamic diameter of 10 microns or less;

**PM$_{2.5}$** means particulate matter with an equivalent aerodynamic diameter of 2.5 microns or less;

**pollution abatement equipment** means equipment designed to reduce the amount and/or concentration of pollution emitted to the atmosphere from a nominated exhaust point or a nominated area source;

**potentially harmful chemicals** means chemicals used in carrying on the activity which have the potential to cause environmental harm if released to the environment;

**potentially polluted stormwater** means stormwater arising from precipitation onto areas where there is a reasonable likelihood of these waters becoming polluted, including areas used for storage and handling of potentially harmful chemicals and areas which may be subject to spillage of potentially harmful chemicals;

**publicly available** means the document, excluding any commercial-in-confidence material, is available for review and download from a publicly accessible website, and that the document, excluding any commercial-in-confidence material, will be made available to a member of the public in printed or electronic format upon request;

**putrescible wastes** means waste containing major components able to be decomposed by bacterial action and includes food waste, paper and cardboard;

**Pulp Mill Environmental Monitoring Program** means the document entitled *Gunns Limited Bell Bay Pulp Mill Environmental Monitoring Program Summary Tables*.
SCHEDULE LU1

(Draft for Approval) submitted by Gunns Limited to the Director and received on 26 July 2007;

**pulp mill site vegetation clearance area** means the area identified as the Proposed Vegetation Clearance Area on Annex V1 to these conditions;

**PWS** means the Parks and Wildlife Service Division of DTAE;

**Quarry Code of Practice** means the *Quarry Code of Practice June 1999* published by the Department of Primary Industries, Water and Environment and the Department of Infrastructure, Energy and Resources, or any revised version thereof;

**recycling** means a set of processes (including biological processes) for converting recovered materials that would otherwise be disposed of as wastes, into useful materials or products;

**rehabilitation** means activities associated with restoring sites cleared or disturbed during construction or operation of the activity to state as close as reasonably practicable to their pre-construction condition and includes both post-construction rehabilitation around operating areas and rehabilitation undertaken as part of decommissioning;

**reuse** means use of materials that would otherwise be disposed of as wastes without significant reprocessing or conversion of those materials;

**revegetation** means activities undertaken to re-establish desirable vegetation on areas impacted by construction, operation or decommissioning activities and includes, without limitation, preparing the soil and planting seeds, seedlings, cuttings or other viable propagules and includes maintenance activities undertaken to ensure successful re-colonisation by desirable vegetative species;

**rupture disc** means a one-use-only pressure relieving device used to protect a system from overpressure by venting the system to the external environment

**Secretary** means the Secretary of DPIW;

**slaker sand** means the unreacted waste material arising from the recausticizing operation;

**soft start procedure** refers to the progressive raising of noise levels from construction activities associated with the construction of the marine components of the wharf and wastewater pipeline activity, commencing with low (similar to background) noise levels then progressively ramping up to the full level of noise associated with the construction activity;

**solid waste** means any discarded material resulting from plant operations, including solid, semi-solid, and contained fluid materials, but does not include hazardous waste;

**Spotted-tailed Quoll** means *Dasyurus maculatus maculatus*;
**SCHEDULE LU1**

**State waters** has the meaning given in Section 5 of the *Living Marine Resources Management Act 1995*;

**stormwater** means water either present on the activity site or present as surface run-off emanating from the project site as a result of rainfall or other precipitation;

**Surfer** means the *Golden Software* contouring and 3D surface mapping software known as Surfer which can be used to manipulate and display modelled pollutant isopleths;

**sustained major construction activity** means construction activities involving ongoing (non-intermittent) operation of major noise generating equipment, including earthmoving equipment;

**Swift Parrot** means *Lathamus discolor*;

**TAPM** means *The Air Pollution Model*, and refers to the prognostic atmospheric dispersion model of that name produced by CSIRO Marine and Atmospheric Research;

**TASI** means Tasmanian Aboriginal Site Index;

**Tasmanian Devil** means *Sarcophilus harrisii*;

**Tasmanian Noise Measurement Procedures Manual** means the *Noise Measurement Procedures Manual* published by the Environment Division of the then Department of Primary Industries, Water and Environment in July 2004 and any subsequent updates thereof;

**TEQ** means toxic equivalents and refers to a measure of the total toxicity due to the presence of Dioxins and Furans, adjusted for toxicity relative to tetrachlorodibenzo-p-dioxin using the methodology described by Van den Berg et al, 2006, in the article titled *The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency. Factors for Dioxins and Dioxin-like Compounds*, published in the journal *Toxicologica Sciences*; volume 93 pages 223-241 or other methodology approved by the Director;

**threatened fauna species** means fauna species listed under the EPBC Act, the NCA, the TSPA or the schedules to the *Wildlife Regulations 1999*;

**threatened flora species** means flora species listed under the EPBC Act, the NCA, the TSPA or the schedules to the *Wildlife Regulations 1999*;

**TOC** means Total Organic Carbon as determined by measurement of the carbon dioxide formed when organic carbon is oxidised and/or inorganic carbon is acidified;

**TPH** means total petroleum hydrocarbons;
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trench plug means material introduced into an open pipeline trench to allow animals to cross from one side of the trench to the other and to allow egress of animals which fall into the trench;

TRS means total reduced sulfur compounds (measured as hydrogen sulphide equivalent);

TSP means total suspended particulates;

TSPA means Threatened Species Protection Act 1995;

TSS means total suspended solids, also known as non-filtrable reside (NFR);

TUV means Technischer Überwachungs-Verein (Technical Monitoring Association), and refers to the German monitoring certification scheme;

UK MCERTS means United Kingdom Monitoring Certification Scheme;

US EPA means the United States Environment Protection Authority, and refers to the US EPA monitoring certification scheme;

utility services means all water and gas mains, electrical transmission lines and communication cables that are not owned or operated by the person responsible;

wastewater means all liquid waste and process effluent generated by the pulp mill activity and includes first flush stormwater but does not include non first flush stormwater;

Wastewater Monitoring Point 1 means a point beyond where wastewater is discharged from the wastewater treatment plant outlet and prior to any dilution of that wastewater, as specified in writing by the Director;

wastewater treatment plant sludge means the sludge containing the solids separated from wastewater or effluent during the wastewater treatment process;

watercourse means a river, creek or other natural stream of water flowing in a defined channel, or between banks, notwithstanding that the flow may be intermittent or seasonal or the banks not clearly or sharply defined, but does not include a drain or drainage depression in the contours of the land which only serves to relieve upper land of excess water in times of major precipitation;

Wedge-tailed Eagle means Aquila audax fleayi;

wetland means land which is covered by water or subject to saturated soils for part of the year under normal climatic and drainage conditions;

White-bellied Sea-eagle means Haliaeetus leucogaster;

witness sump means the drain identified as the witness sump in drawing H05069-R10_1 in Appendix G, Conceptual Cell Design, of Gunns Pulp Mill Solid Waste
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Landfill Conceptual Design, dated June 2006, prepared by Pitt & Sherry Holdings Pty Ltd, as provided in Appendix 55, Volume 16 of the DIIS.
SECTION 2 – GENERAL CONDITIONS
Conditions that apply to the activity

General

2GN 1.1 A copy of these conditions and any associated documents referred to in these conditions must always be held in a location that is known and accessible to the person responsible for the activity. The person responsible for the activity must take all reasonable steps to ensure that all persons who are responsible for undertaking work on the site, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

2GN 2.1 The following changes, if they may cause or increase the emission of a pollutant that is not authorised by these conditions or otherwise result in material environmental harm, must only take place in relation to the activity if a new permit has been issued by the relevant planning authority (where the authority determines that a permit is required) or, if no such permit is required, the prior written approval of the Director:
   (a) a change to a process used in the course of carrying out the activity; or
   (b) the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or
   (c) a change in the nature of materials used in the course of carrying out the activity.

2GN 3.1 If the person who is or was responsible for the activity will cease or ceases to be responsible for the activity, then, as soon as practicable, but no later than 30 days after that cessation, that person must:
   (a) notify the Director in writing of that fact;
   (b) provide the Director with full particulars in writing of any person succeeding him or her as the person responsible; and
   (c) notify any such person of the requirements of any relevant permit, environment protection notice or other environmental management obligations.

2GN 4.1 If the person responsible for the pulp mill activity, landfill activity or quarry activity is not the owner of the land upon which these activities are carried out and the owner of the land changes or is to change, then, as soon as practicable but no later than 30 days after becoming aware of the change, the person responsible must notify the Director in writing of the change of ownership.
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Response to incidents

2GN 5.1 If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all practicable action to minimise any adverse environmental effects from the incident.

Compliance with DIIS

2GN 6.1 The activity must be undertaken in accordance with the DIIS and further information, unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

Commitments

2GN 7.1 The activity must be carried out in accordance with the commitments contained in the DIIS and further information unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

Compliance with Environmental Emission Limit Guidelines

2GN 8.1 Unless the contrary intention appears, the activity must comply with the requirements of the Environmental Emission Limit Guidelines to the satisfaction of the Director. In particular, the person responsible is required to:

(a) implement the general measures for best practice environmental management listed in Table 1 of the Guidelines;
(b) incorporate technologies listed in Table 2 (AMT for the reduction of emissions to the atmosphere), Table 4 (AMT for the reduction of emission to the marine environment), and Table 8 (AMT for the reduction and handling of solid waste) of the Guidelines; and
(c) comply with sections D.2.2, D.2.3, D.2.5, D.2.6, D.2.7, D.2.8 and D.2.9 of the Guidelines.

Best Available Techniques

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*Environmental Management System*

2GN 10.1 Prior to the completion of commissioning activities, or by a date specified in writing by the Director, an Environmental Management System (‘EMS’) satisfying the requirements of ISO 14001, or prepared to an equivalent standard, must be implemented in relation to the operation of the activity.

10.2 Prior to the completion of commissioning activities, or by a date specified in writing by the Director, a report must be submitted to the Director from an appropriately qualified external auditor which provides an evaluation of the EMS against the requirements of ISO 14001.

10.3 The EMS must be audited against ISO 14001 by an appropriately qualified external auditor at least once per year. The auditor’s report must be submitted to the Director within 30 days of completion of the audit.

*Community consultation and communication*

2GN 11.1 The person responsible must develop and implement a community consultation and communication strategy to the satisfaction of the Director. The strategy should be based on successful industry programs, such as the Responsible Care program of the Plastics and Chemical Industry Association or equivalent.

11.2 The strategy must include, but is not limited to, details of the procedures for consulting with and communicating to the community in the vicinity of the project on the construction program and timetable, commissioning program and timetable, environmental management programs and environmental incidents that may affect their health or enjoyment of the environment.

11.3 A copy of the strategy must be submitted to the Director. The strategy as it relates to construction, commissioning and operational activities must be submitted to the Director prior to the commencement of the respective stages of the activity.

*Response to public complaints*

2GN 12.1 Prior to the commencement of construction activities, or by a date specified in writing by the Director, a Public Complaint Response Protocol must be submitted to the Director for approval. The protocol must include, but is not limited to, the following:

(a) the establishment of a 24 hour public complaints telephone hotline;

(b) a public communications process in relation to the hotline;
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(c) a procedure for responding to public complaints received which includes investigation, mitigation (if necessary), feedback and documentation steps; and

(d) the establishment of a public complaints register.

2GN 13.1 A public complaints register must be maintained and made available for inspection by an authorized officer upon request. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:

(a) the time and date at which the complaint was received;
(b) contact details for the complainant;
(c) the subject matter of the complaint;
(d) any investigations undertaken with regard to the complaint; and
(e) the manner in which the complaint was resolved, including any mitigation measures implemented.

13.2 Complaint records must be maintained for a period of at least 3 years.

Construction

Construction timetable

2CN 1.1 Prior to the commencement of construction activities, or by a date specified in writing by the Director, a construction timetable must be submitted to the Director. The timetable must identify the key construction activities and the dates of commencement and completion of each key construction activity. The Director must be notified in advance of any significant changes to the construction timetable.

1.2 The person responsible must notify the Director in writing of the following:

(a) the date of commencement of construction activities, within 24 hours of the commencement; and

(b) the date of commencement of key construction activities identified in the construction timetable, within 24 hours of their commencement.

Construction Environmental Management Plan

2CN 2.1 Prior to the commencement of construction activities, or by a date specified in writing by the Director, a detailed timetable for the preparation of an Environmental Management Plan for the construction phase of the activity (CEMP) must be prepared and submitted to the Director for approval. The timetable may include the progressive submission of sections of the CEMP.
2.2 The CEMP must be prepared and submitted in accordance with the approved timetable and any written requirements of the Director, unless otherwise approved in writing by the Director. The objective of the CEMP is to describe the measures and processes by which compliance with the requirements of the conditions contained in this schedule relating to the construction phase of the activity will be achieved.

2.3 The CEMP must be prepared in accordance with any guidelines provided by the Director, and must be prepared in consultation with relevant Government agencies.

2.4 The CEMP must place particular emphasis on the following:
   (a) acid sulphate soils management;
   (b) erosion and sediment control;
   (c) vegetation and fauna management;
   (d) weed and disease management;
   (e) Phytophthora cinnamomi management;
   (f) rehabilitation of disturbed areas;
   (g) fire management;
   (h) blasting management;
   (i) noise emissions management;
   (j) chemical and hydrocarbon spill management;
   (k) Aboriginal heritage management;
   (l) historic heritage management;
   (m) air emissions (including dust) management;
   (n) surface water quality management;
   (o) marine pest management; and
   (p) marine mammal and turtle management.

2.5 The submitted CEMP (or sections of the CEMP if submitted in stages) must be accompanied by an independent audit report prepared by an appropriately qualified external auditor. The auditor must be approved in writing by the Director prior to undertaking the audit. The audit report must assess the measures and processes contained in the CEMP (or sections of the CEMP if submitted in stages) and must include, but is not limited to, the auditor’s findings, recommendations and conclusion as to whether or not the CEMP satisfies the objective for the CEMP specified above.

2.6 Construction activities must not take place unless the CEMP and audit report have been submitted to the Director. Notwithstanding the above, where the approved timetable includes the progressive submission of sections of the CEMP, some construction activities may take place provided that the sections of the CEMP and audit report relevant to those activities have been submitted, and provided the Director has given written authority for those construction activities to take place.
2.7 The activity must be undertaken in accordance with the CEMP, as amended from time to time.

2.8 If requested to do so by the Director, the person responsible must revise the CEMP and submit the revised CEMP to the Director, doing so by such a date as may be specified in the Director's request.

2.9 The person responsible must prepare a publicly available document which summarises the CEMP structure and content.

**Utility services**

2CN 3.1 Prior to the commencement of construction activities in the vicinity of utility services, the person responsible must use best endeavours to obtain the consent of the relevant service provider for each crossing of, or installation in close proximity to, an existing utility service.

3.2 In undertaking the construction activities in the vicinity of utility services, the person responsible must comply with all reasonable technical and other requirements of the service provider in respect of the proposed activities to ensure that the existing utility service is protected from physical damage, corrosion, electrolysis, field induction or other potential damage.

**Gas pipeline construction corridor**

2CN 4.1 Construction activities in relation to the gas pipeline connection to the pulp mill site must only occur within the gas pipeline construction corridor, unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

2CN 5.1 The width of the gas pipeline construction corridor must not exceed 20 metres, unless otherwise approved in writing by the Director.

**Commissioning**

**Environmental Management Plan (Commissioning)**

2CM 1.1 At least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director, an Environmental Management Plan for the commissioning phase of the activity (EMP (Commissioning)) must be prepared and submitted to the Director.

1.2 The EMP must be prepared in accordance with any guidelines provided by the Director. The objective of the EMP is to describe the measures and processes by which compliance with the requirements of these
1.3 The plan must include all special actions and contingency plans which will be implemented to manage emissions to the environment during the commissioning phase.

1.4 The plan must include a commissioning timetable which identifies the key commissioning activities and dates for commencement and completion of each activity. The Director must be notified in advance of any significant changes to the commissioning timetable.

1.5 The plan must place particular emphasis on the following:
   (a) air emissions;
   (b) noise emissions;
   (c) wastewater emissions; and
   (d) process spill management.

1.6 The submitted plan must be accompanied by an independent audit report of the EMP prepared by an appropriately qualified external auditor. The auditor must be approved in writing by the Director prior to undertaking the audit. The audit report must assess the measures and processes contained in the EMP and must include, but is not limited to, the auditor’s findings, recommendations and conclusion as to whether or not the EMP satisfies the objective for the plan specified above.

1.7 Commissioning activities must not take place unless the EMP and audit report have been submitted to the Director.

1.8 The activity must be undertaken in accordance with the EMP, as amended from time to time.

1.9 If requested to do so by the Director, the person responsible must revise the EMP and submit the revised EMP to the Director, doing so by such a date as may be specified in the Director’s request.

1.10 The person responsible must prepare a publicly available document which summarises the EMP structure and content.

Commissioning notification

2CM 2.1 The person responsible must notify the Director in writing of the following:
   (a) the date of commencement of commissioning activities, within 24 hours of the commencement;
   (b) the date of commencement of key commissioning activities identified in the commissioning timetable, within 24 hours of the commencement; and
(c) the date of completion of commissioning activities, within 48 hours of the completion.

2CM 3.1 The person responsible must provide public notification of the commencement of commissioning activities to the satisfaction of the Director.

2CM 4.1 At least 14 days prior to the commencement of commissioning activities associated with the recovery boiler or power boiler, the Director must be notified of the proposed method for mitigating noise emissions associated with the commissioning activities, including the blowing of steam lines. Noise emissions associated with the commissioning of the recovery boiler and power boiler must be mitigated to the satisfaction of the Director.

Availability of equipment

2CM 5.1 Prior to the commencement of construction activities and during the commissioning period, unless otherwise authorised in writing by the Director:

(a) all atmospheric emission control equipment must be operational;
(b) all noise attenuation equipment must be operational; and
(c) the wastewater treatment plant must be operational.

Operations

Operations Environmental Management Plan

2OP 1.1 At least 60 days prior to the completion of commissioning activities, or by a date specified in writing by the Director, an Environmental Management Plan for the operational phase of the activity (OEMP) must be prepared and submitted to the Director.

1.2 The OEMP must be prepared in accordance with any guidelines provided by the Director. The objective of the OEMP is to describe the measures and processes by which compliance with the requirements of these conditions relating to the operational phase of the activity will be achieved.

1.3 The plan must place particular emphasis on the following:

(a) greenhouse gas emissions management;
(b) Aboriginal heritage management;
(c) historic heritage management;
(d) noise emissions management;
(e) air emissions (including odour) management;
(f) wastewater quality management;
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(g) hazardous materials management; and
(h) process spill management.

1.4 The submitted plan must be accompanied by an independent audit report of the OEMP prepared by an appropriately qualified external auditor. The auditor must be approved in writing by the Director prior to undertaking the audit. The audit report must assess the measures and processes contained in the OEMP and must include, but is not limited to, the auditor’s findings, recommendations and conclusion as to whether or not the OEMP satisfies the objective for the plan specified above.

1.5 Operational activities must not take place unless the OEMP and audit report have been submitted to the Director.

1.6 The activity must be undertaken in accordance with the OEMP, as amended from time to time.

1.7 If requested to do so by the Director, the person responsible must revise the OEMP and submit the revised OEMP to the Director, doing so by such a date as may be specified in the Director's request.

1.8 The person responsible must prepare a publicly available document which summarises the OEMP structure and content.

Maintenance

Maintenance activities and plant shutdowns

2MT 1.1 Unless otherwise specified in writing by the Director, the person responsible must provide written notification to the Director of the following events in accordance with the timeframe specified:

(a) any planned shutdown of the pulp mill activity at least seven days prior to the commencement of the shutdown;
(b) any unplanned shutdown of the pulp mill activity within 24 hours of the commencement of the shutdown;
(c) any proposed maintenance activity (terrestrial or in State waters) which has the potential to result in a breach of these conditions or result in material environmental harm at least 72 hours prior to the commencement of the proposed maintenance activity; and
(d) any unplanned maintenance activity (terrestrial or in State waters) which has the potential to breach these conditions or result in material environmental harm within 24 hours of the commencement of the proposed maintenance activity.

1.2 The notification must include the following:

(a) details of the shutdown or maintenance activity;
(b) the reason for the shutdown or maintenance activity;
(c) details of all reasonably foreseeable environmental impacts associated with the shutdown or maintenance activity;
(d) details of any additional monitoring proposed to be undertaken in relation to the shutdown or maintenance activity; and
(e) details of any proposed management measures to avoid or mitigate environmental impacts.

1.3 Except in relation to the initial response to an emergency event, maintenance activities which have the potential to breach these conditions or result in material environmental harm must not commence without the prior written approval of the Director, and must be undertaken in accordance with any written requirements specified by the Director.

1.4 If requested to do so by the Director, the person responsible for a maintenance activity must submit an Environmental Management Plan with respect to that particular maintenance activity to the Director for approval. The plan must be prepared in accordance with any requirements and by such date as the Director may specify in writing.

1.5 The maintenance activity must be undertaken in accordance with any approved Environmental Management Plan prepared with respect to that maintenance activity, and any amendment to the plan approved in writing by the Director.

Monitoring

2MN 1.1 Any sample or measurement required to be obtained by these conditions must be subject to the following:
(a) the sample must be tested in a laboratory accredited by the National Association of Testing Authorities (NATA), or a laboratory approved in writing by the Director, for the specified test;
(b) the measurement must be made, or the sample must be collected and analysed in accordance with the relevant Australian Standards, NATA approved methods, the American Public Health Association Standard Methods for the Analysis of Water and Waste Water, Noise Measurement Procedures Manual or other standard(s) approved by the Director;
(c) details relating to the collection and analysis of the sample must be retained for at least three years after the date of measurement and be made available on request by an authorized officer; and
(d) the sample must be taken and transported by a person with appropriate training and experience.
Baseline and Operational Monitoring Plan

2MN 2.1 Within 90 days of the date of issue of this permit, or by a date specified in writing by the Director, a Baseline and Operational Monitoring Plan must be submitted to the Director for approval.

2.2 The plan must be prepared in accordance with any guidelines provided by the Director, and must be prepared in consultation with relevant Government agencies.

2.3 Unless otherwise approved in writing by the Director, the plan must include the following programs:
   (a) an Ambient Air Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions (including Annex A4), and the commitments provided in summary table 1.1 of the Pulp Mill Environmental Monitoring Program;
   (b) an Atmospheric Emission Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions (including Annex A3);
   (c) a Noise Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions and the commitments provided in summary table 1.2 of the Pulp Mill Environmental Monitoring Program;
   (d) a Groundwater Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions and the commitments provided in summary table 2.1.1 of the Pulp Mill Environmental Monitoring Program;
   (e) a Surface Water Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions and the commitments provided in summary table 2.2.1 of the Pulp Mill Environmental Monitoring Program;
   (f) a Soil Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions and the commitments provided in summary table 2.3.1 of the Pulp Mill Environmental Monitoring Program;
   (g) a Wastewater Monitoring Program, which must be consistent with, but not limited to, the requirements of these conditions (including Annex W3); and
   (h) a Marine Ecological Monitoring Program in relation to the wharf activity, which must be consistent with, but not limited to, the requirements of these conditions and the commitments provided in summary table 3.3.1 of the Pulp Mill Environmental Monitoring Program.

2.4 The plan must include, but is not limited to, details of the following:
   (a) a table containing all of the major commitments made in the plan;
   (b) an implementation timetable for key aspects of the plan;
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(c) a program to make key data publicly available in an appropriate format;
(d) a program to regularly advise the Director of the results of the plan; and
(e) a review program for regularly updating the plan.

2.5 Commissioning activities must not commence unless the plan has been approved in writing by the Director.

2.6 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

2.7 The plan must be made publicly available.

Construction Monitoring Plan

2MN 3.1 Prior to the commencement of construction activities, or by a date specified in writing by the Director, a Construction Monitoring Plan must be submitted to the Director for approval.

3.2 The plan must be prepared in accordance with any guidelines provided by the Director, and must be prepared in consultation with relevant Government agencies.

3.3 The plan must be consistent with the requirements of these conditions and include the following programs:
(a) an Air Monitoring Program;
(b) a Noise Monitoring Program;
(c) a Groundwater Monitoring Program;
(d) a Surface Water Monitoring Program;
(e) a Marine Water Quality Monitoring Program;
(f) a Marine Sediment Monitoring Program;
(g) a Dinoflagellate Cyst Monitoring Program; and
(h) a Marine Ecological Monitoring Program, which must be consistent with, but not limited to, the monitoring design described in Section 3 (Donovans Bay Crossing) and Section 4 (Long Reach Wharf) of the Aqualon Pty Ltd report to Gunns Limited titled Ecological Monitoring Program for Marine and Estuarine Habitats during the Construction and Operation Phases of Gunns Limited’s Proposed Pulp Mill dated 21 December 2006.

3.4 The plan must include, but is not limited to, details of the following:
(a) a table containing all of the major commitments made in the plan;
(b) an implementation timetable for key aspects of the plan; and
(c) a reporting program to regularly advise the Director of the results of the plan.
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3.5 Construction activities must not commence unless the plan has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the plan provided that the sections of the plan relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

3.6 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

3.7 The plan must be made publicly available.

Annual Environmental Performance Report

2AR 1.1 A publicly available annual Environmental Performance Report must be submitted to the Director within 18 months of the issue of this permit, and annually thereafter. The report must comply with the requirements of section C.18 of the Environmental Emission Limit Guidelines. The report must include, but is not limited to, the following information:

(a) a statement by the General Manager or Chief Executive Officer acknowledging the contents of the report;

(b) a listing of any complaints received from the public during the reporting period and any actions that have resulted;

(c) a listing of environmental incidents and/or incidents of non compliance with permit or environment protection notice conditions that occurred during reporting period, and any mitigative or preventative actions that have resulted from such incidents;

(d) an assessment of compliance with the relevant requirements of the Environmental Emission Limit Guidelines;

(e) a summary of environment-related procedural or process changes that have been implemented during the reporting period;

(f) a summary of the monitoring data required by these conditions. This information should be presented in graphical form where possible, including comparison with the results of at least the preceding reporting period. Special causes and system changes that have impacted on the parameters monitored must be noted. Explanation of significant deviations between actual results and any predictions made in previous reports must be provided;

(g) a summary of fulfilment of environmental commitments made for the reporting period. This summary must include indication of results of the actions implemented and explanation of any failures to achieve such commitments;

(h) a summary of the amounts (tonnes or litres) of both solid and liquid wastes produced and treatment methods implemented
during the reporting period. Initiatives or programs planned to avoid, minimise, re-use, or recycle such wastes over the next reporting period should be detailed; and

(i) a summary of any community consultation and communication undertaken during the reporting period.

Acid sulphate soil management

2SL 1.1 Prior to the commencement of construction activities involving significant excavation of soil, or by a date specified in writing by the Director, a report must be submitted to the Director for approval which contains the following:

(a) methodology and results of a comprehensive assessment of the project site where construction activities are proposed to identify areas at risk of acid sulphate soil. The survey methodology (including survey timing) must be developed to the satisfaction of the Director; and

(b) the areas at risk must be identified using the sampling protocol detailed in Section 4 of Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils (ASS) in Queensland, Ahern et al., 1998, Queensland Department of Natural Resources' Queensland Acid Sulfate Soils Investigation Team (QASSIT) (This document is available on the internet at www.nrw.qld.gov.au/land/ass/products.html).

2SL 2.1 If areas at risk of impacts from acid sulphate soils are identified during the acid sulphate soils assessment, then the CEMP must include details of proposed measures and procedures for the management of acid sulphate soils and potential acid sulphate soils. The CEMP must specifically include, but is not limited to, details of the following:

(a) the use of best practice environmental management techniques for the management of potential acid sulphate soils and acid sulphate soils;

(b) measures to address risks and mitigation measures associated with:
   i) exposure of potential acid sulphate soils (including excavation);
   ii) stockpiling of acid sulphate soils;
   iii) acid drainage; and
   iv) impacts on infrastructure and the biophysical environment;

(c) details of temporary and permanent control measures for excavation, stockpiling and backfilling acid sulphate soils in accordance with the document Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines, Dear et al. 2002; Queensland Department of Natural Resources Queensland Acid Sulfate Soils Investigation Team (QASSIT).
Erosion and sediment control

2ER 1.1 The CEMP must include details of proposed measures and procedures for the management of erosion and sediment movement. The CEMP must specifically include, but is not limited to, details of the following:

(a) identification of areas at risk of erosion and sediment movement;
(b) measures to manage:
   i) water and wind erosion;
   ii) turbidity in the freshwater, estuarine and marine environments;
   iii) sodic soils;
   iv) landslip and slumping;
   v) soil mixing, inversion and compaction; and
   vi) streambank erosion and channel stability;
(c) measures to prevent sediment runoff into watercourses and wetlands from ground disturbance;
(d) temporary and permanent control measures for disturbed areas and stockpiles; and
(e) a monitoring and maintenance program.

Surface water management

2SW 1.1 The person responsible must ensure that all practicable measures are taken to avoid the production of wastes that might be emitted to surface waters or State waters. Such measures must be implemented in the following order of preference:

(a) avoidance;
(b) reuse;
(c) recycling;
(d) recovery of energy;
(e) treatment;
(f) containment; and
(g) disposal to State waters (where approved by these conditions).

2SW 2.1 Sediment settling ponds must be periodically cleaned out to maintain their efficiency. Sediment removed during this cleaning must be securely deposited such that sediment will not be transported off the project site by surface run-off.

2SW 3.1 All sewage and greywater produced as a result of the activity (including during the construction phase of the activity) must be
collected, treated and disposed of in a manner approved by the Director and to the satisfaction of the Director.

2SW 4.1 Temporary toilet facilities must be provided and maintained during the construction phase of the activity at all major work sites where permanent toilet facilities are not available.

Groundwater management

Groundwater - construction

2GW 1.1 Any diversion of existing shallow groundwater aquifers that might be intercepted during construction earthworks must be done in a manner that minimises the risk of the aquifers becoming polluted.

Initial hydrogeological assessment

2GW 2.1 Prior to the commencement of plant construction activities, or by a date specified in writing by the Director, a report on an initial hydrogeological assessment of the project site must submitted to the Director. The report must include, but is not limited to:

(a) details of site geology, aquifers (both shallow and deep) and aquitards;
(b) recharge and discharge relationships between major aquifers, aquitards and surface water and seasonal variability in recharge and discharge;
(c) groundwater elevations, flow rates, flow pathways and flow directions and seasonal variability within these parameters;
(d) groundwater elevations relative to the Australian Height Datum (AHD);
(e) groundwater water quality and seasonal variability in groundwater quality; and
(f) location and identity of local and regional groundwater receptors, for example, surface waters, wetlands and groundwater abstraction bores.

2.2 The initial hydrogeological assessment must include, but is not limited to, the following:

(a) the establishment of data quality objectives to ensure that data of sufficient quantity and quality to support decision making is obtained and the collection of redundant or unnecessary data is avoided; and
(b) the development of a quality assurance/quality control program and the establishment of acceptability criteria for data quality.

2.3 The investigations conducted for the initial hydrogeological assessment must comply with the following:
SCHEDULE LU1

(a) monitoring wells must be constructed in accordance with the document entitled *Minimum Construction Requirements for Water Bores in Australia, Edition 2, 2003*, Section 19;

(b) the monitoring wells must all be installed using similar construction methods and materials, in order to minimise sources of variation within data;

(c) monitoring wells must be screened across the groundwater interface to allow the detection of non aqueous phase liquids (NAPL) that float on groundwater;

(d) for each aquifer located within the project site, at least three appropriately spaced groundwater monitoring wells must be installed:

i) at least one groundwater monitoring well must be installed up hydraulic gradient from the potential contaminant sources. The location of the up hydraulic gradient monitoring well should be located at a distance from the activity (e.g. landfill, pulp mill, wharf) that is sufficient to enable the monitoring of "background" water quality;

ii) the installation of at least one groundwater monitoring well per aquifer must be down hydraulic gradient of the activity; and

iii) the installation of at least one groundwater monitoring well per aquifer must be lateral to the potential contaminant source to enable the calculation of groundwater flow direction.

2.4 Interpretation of groundwater testing results must be undertaken using the relevant reference values contained within the documents listed below:

(a) National Environment Protection (Assessment of Site Contamination) Measure, 1999 made by the National Environment Protection Council under the National Environment Protection Council Act 1994 ("the NEPM"); ADWG (2004);

(b) *Australian Drinking Water Quality Guidelines*, National Health and Medical Research Council, 2004;

(c) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, Australian and New Zealand Environment and Conservation Council, October 2000; and

(d) if an analyte is not listed in the documents above, or if the only reference value available in the above documents is not appropriate for the environmental values to be protected, then alternate guideline levels may be used providing they are referenced fully and the relevance of the alternate reference value is demonstrated to the satisfaction of the Director.

2.5 Groundwater assessors must utilise the EPA Victoria document entitled *Hydrogeological Assessment (Groundwater Quality) Guidelines*
SCHEDULE LU1

(Publication 668) as a guide when planning and conducting hydrogeological assessment.

2.6 Additional works for the initial hydrogeological assessment must be undertaken in accordance with any written requirements of the Director.

2.7 The development of the initial hydrogeological assessment must be overseen by a qualified and experienced hydrogeologist.

**Conceptual hydrogeological model**

2GW 3.1 At least 30 days prior to the commencement of plant construction activities on the pulp mill site, or by a date specified in writing by the Director, a report containing details of a conceptual hydrogeological model for the project site must be submitted to the Director for approval. The conceptual hydrogeological model must be based on the findings of the initial hydrogeological assessment required by these conditions.

3.2 The report must contain, but is not limited to, details of the following:
   (a) an interpretation of the model by a qualified and experienced hydrogeologist;
   (b) a compilation of the model outputs; and
   (c) a discussion of the model outputs.

3.3 The conceptual hydrogeological model must be updated as additional relevant information is obtained, or at the written request of the Director.

**Groundwater monitoring**

2GW 4.1 At least 14 days prior to the completion of commissioning activities, or by a date specified in writing by the Director, a groundwater monitoring program must be submitted to the Director for approval. The program must be designed to detect any potential impact on groundwater as a result of the pulp mill activity.

4.2 The program must include, but is not limited to, details of the following:
   (a) the proposed locations for sentinel monitoring wells;
   (b) the proposed timeframe for installation of sentinel monitoring wells;
   (c) site specific "intervention values" parameters which will trigger further groundwater management;
   (d) an outline of contingency actions, including procedures for the further assessment or remediation of source and secondary
impacts to be implemented in the event that intervention values are exceeded; and
(e) a commitment that all groundwater monitoring must be overseen by a qualified and experienced hydrogeologist.

4.3 The approved program, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

4.4 Commissioning activities must not take place unless the program has been approved in writing by the Director.

4.5 The activity must be undertaken in accordance with the approved program, as amended from time to time with the approval of the Director.

4.6 The plan must be made publicly available.

2GW 5.1 Sentinel monitoring wells must be installed down the hydraulic gradient from significant potential sources of impact on groundwater associated with the activity including, but not limited to, the chemical plant and chemical/hazardous storage areas, refuelling and maintenance facilities, the landfill, process areas and the wastewater treatment plant. The location of sentinel monitoring wells must be close enough to potential sources of contamination to detect groundwater contamination, and must be approved in writing by the Director prior to installation.

5.2 Sentinel monitoring wells must be installed to the satisfaction of the Director.

Terrestrial fauna management

Fauna Management Plan

2FN 1.1 Prior to the commencement of construction activities, or by a date specified in writing by the Director, a Fauna Management Plan must be submitted to the Director for approval which contains details of the following:
   (a) the methodology and results of a detailed survey to determine the presence of Tasmanian Devil, Common Wombat and Spotted-tailed Quoll den sites within the pulp mill site vegetation clearance area, the water supply construction corridor and the wastewater pipeline construction corridor. The survey methodology (including survey timing) must be to the satisfaction of the Director;
   (b) any proposed siting, design and/or management measures to minimise adverse impacts on Tasmanian Devils, Common Wombat or Spotted-tailed Quolls;
SCHEDULE LU1

(c) the methodology and results of a detailed survey to determine the presence of active Wedge-tailed Eagle, White-bellied Sea-eagle, Masked Owl – Tasmanian, Swift Parrot and Peregrine Falcon nest sites within the pulp mill site vegetation clearance area, the water supply construction corridor and the wastewater pipeline construction corridor. The survey methodology (including survey timing) must be to the satisfaction of the Director; and

(d) any proposed siting, design and/or management measures to minimise adverse impacts on any active Wedge-tailed Eagle, White-bellied Sea-eagle, Masked Owl–Tasmanian, Swift Parrot or Peregrine Falcon nest sites.

1.2 Construction activities must not take place unless the plan has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the plan provided that the sections of the plan relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

1.3 The proposed siting, design and/or management measures contained in the approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.4 The plan must be made publicly available.

2FN 2.1 Data from threatened fauna surveys must be provided to the Secretary in an electronic form suitable for entry into the Natural Values Atlas within 90 days of collection. Data must include species name, location information (including grid reference in GDA 94 and location variation in metres), observer name, observation date, number of individuals and area occupied.

2FN 3.1 When construction activities take place at night, light shades and low lighting must be applied to construction and operational areas located adjacent to remnant native vegetation.

2FN 4.1 Where overhead powerlines will traverse a wetland or be located near a wetland, the overhead powerlines must:

(a) be located as far from the wetland as practicable; and

(b) where practicable, be aligned in parallel with the predominant bird flight paths.

2FN 5.1 Bird flight diverters must, where appropriate and to the satisfaction of the Director, be installed on all overhead powerlines, including the earth wire, and other overhead cables.

2FN 6.1 The spacing of the conductors, return line and earth wire on all overhead powerlines must be greater than 1.59 metres.
SCHEDULE LU1

2FN 7.1 Maintenance activities on overhead powerlines must include the regular removal of any nesting material.

2FN 8.1 Where practicable, native vegetation below 1.65 metres in height located below any overhead line or cable must be retained.

2FN 9.1 During the period between 1 August and 1 February construction activities, or maintenance activities which last for a continuous period of greater than 30 minutes, or maintenance activities which last for more than a total period of 60 minutes within a 24 hour period, must not occur within:

(a) 1000 metres of an active Wedge-tailed Eagle or a White-bellied Sea-eagle nest if the construction activities or maintenance activities are in line-of-sight of the nest site; or

(b) 500 metres of an active Wedge-tailed Eagle or a White-bellied Sea-eagle nest site;

unless approved in writing by the Director.

Vegetation management

Vegetation clearance

2VG 1.1 The clearance of vegetation outside of the pulp mill site vegetation clearance area is not permitted unless approved in writing by the Director. Any request for approval of a change to the vegetation clearance area must include the following:

(a) details of the location and extent of the proposed change, including a plan showing the proposed change;

(b) the reason for the proposed change;

(c) details of any additional environmental surveys undertaken or proposed to be undertaken in relation to the proposed change. Survey design must take into consideration whether there are:

i) threatened flora or fauna species locations on or within 500 metres of the proposed change;

ii) acid sulphate soils on or within 500 metres of the proposed change; or

iii) Aboriginal heritage relics or historic cultural heritage places on or within 500 metres of the proposed change;

(d) details of any environmental impact which is expected to or which may arise from the proposed change; and

(e) details of any proposed management measures to avoid or mitigate these impacts.

1.2 The proposed management measures and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.
2VG 2.1 The clearance of, and disturbance to, native vegetation must be minimised to the greatest extent practicable. Native trees, and in particular old growth or hollow bearing trees, must be retained wherever practicable.

Exclusion zones

2VG 3.1 Prior to the commencement of construction activities in a particular area, exclusion zones must be established to the satisfaction of the Director around native vegetation that is to be retained in that area. Exclusion zones must be adequately fenced or marked and be clearly identifiable as an exclusion zone to the satisfaction of the Director.

3.2 Vegetation (including root systems) within an exclusion zone must not be damaged.

3.3 Soil within an exclusion zone must not be disturbed.

Surveys

2VG 4.1 Prior to the commencement of construction activities in an area where a survey is required by this condition, or by a date specified in writing by the Director, pre-construction surveys must be undertaken by a suitably qualified person(s) for threatened flora species, non-threatened native flora species and threatened native vegetation communities. Surveys must occur in areas that will be disturbed by construction activities and that were not surveyed as part of the DIIS, or were not surveyed at the appropriate time of year, to the satisfaction of the Director.

4.2 A report must be submitted to the Director for approval, which contains the following:
   (a) the methodology and results of the surveys; and
   (b) any proposed siting, design and/or management measures, including exclusion zones, to minimise adverse impacts on the any identified threatened flora species, non-threatened native flora species and threatened native vegetation communities.

4.3 Construction activities associated with the areas identified above must not take place unless the report has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the report provided that the sections of the report relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

4.4 The approved report must be implemented to the satisfaction of the Director.
SCHEDULE LU1

2VG 5.1 Threatened flora surveys required under these conditions must, where practicable, be undertaken at appropriate times of the year to identify ephemeral threatened flora species (e.g. orchids).

2VG 6.1 Data from any threatened flora surveys must be provided to the Secretary in an electronic form suitable for entry into the *Natural Values Atlas* within 90 days of collection. Data must include species name, location information including grid reference in GDA 94 and location variation in metres, observer name, observation date, number of individuals and area occupied.

**Offset measures**

2OF 1.1 Offset measures approved by the Secretary must be implemented to compensate for the loss of threatened flora and threatened fauna species and their habitat and threatened native vegetation communities as a result of construction activities.

1.2 Wherever practicable, offset areas must be located near the area of impact being offset.

**Offset Plan**

2OF 2.1 Within 60 days of the completion of construction activities, or by a date specified in writing by the Director, an Offset Plan must be submitted to the Director for approval.

2.2 The plan must be developed in consultation with relevant Government agencies.

2.3 The plan must include, but is not limited to, the following:

(a) details of all areas of native vegetation (including threatened native vegetation communities) and known threatened flora and fauna habitat impacted by construction activities;

(b) proposed offset measures to achieve the objective of no net loss of native vegetation and ecological values as a result of construction activities. This may include the creation of, or the prevention, repair or mitigation of damage to native vegetation (including threatened native vegetation communities) and the habitats of threatened fauna and threatened flora species;

(c) proposed measures for the ongoing management and preservation (where relevant) of the proposed offset measures;

(d) a table containing all of the major commitments made in the plan;

(e) an implementation timetable for key aspects of the plan; and

(f) a reporting program to regularly advise the Director of the results of implementation of the plan.
2.4 The approved plan must be implemented in accordance with the approved implementation timetable and must commence within six months of the completion of commissioning activities, unless otherwise approved in writing by the Director.

2.5 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

2.6 The plan must be made publicly available.

Weed and disease management

2WD 1.1 The CEMP must include details of proposed measures and procedures for the management of weeds and diseases.

1.2 The CEMP must be consistent with obligations in the Weed Management Act 1999, statutory Weed Management Plans for Tasmanian Declared Weeds, the Northern Weed Management Strategy, relevant Weeds of National Significance strategies, the Strategy for the Management of Rice Grass and the Tasmanian Washdown Guidelines for Weed and Disease Control (Machinery, Vehicles and Equipment, Ed. 1), unless otherwise approved in writing by the Director.

1.3 The CEMP must include, but is not limited to, details of the following:
   (a) weed and disease identification procedures;
   (b) procedures for monitoring the impacts of outbreaks of weeds and disease on threatened flora species and threatened native vegetation communities;
   (c) procedures for monitoring the impacts of outbreaks of weeds and disease on non-threatened flora species and non-threatened native vegetation communities;
   (d) proposed weed and disease eradication or control measures;
   (e) development of weed and disease risk management plans according to risk potential;
   (f) development of temporary and permanent mitigation and control measures for weeds identified to have high risk potential;
   (g) hygiene protocols including vehicle and equipment washdown protocols;
   (h) access restrictions, where applicable; and
   (i) the areas where management measures will be implemented, including terrestrial and aquatic rehabilitation sites.

Phytophthora cinnamomi management

2PC 1.1 Prior to the commencement of construction activities in a particular area, or by a date specified in writing by the Director, a report must be submitted to the Director which contains an assessment of the presence
and extent of *Phytophthora cinnamomi* within areas where construction activities will occur and along any access roads and any specific management measures proposed.

2PC 2.1 In areas where *Phytophthora cinnamomi* has been identified or is reasonably likely to occur, hygiene protocols, including vehicle and equipment washdown protocols, must be undertaken in accordance with the *Interim Phytophthora cinnamomi Management Guidelines*, and *Tasmanian Washdown Guidelines for Weed and Disease Control (Machinery, Vehicles and Equipment, Ed. 1)*, unless otherwise approved in writing by the Director.

2PC 3.1 When undertaking construction activities in areas containing flora species sensitive to *Phytophthora cinnamomi*, construction and remediation materials such as gravel, soil and seedlings must be sourced from areas that can be demonstrated to be free of *Phytophthora cinnamomi*.

2PC 4.1 The CEMP must include details of proposed measures and procedures for *Phytophthora cinnamomi* management.

4.2 The CEMP must include, but is not limited to, details of the following:

(a) procedures for the identification and prioritisation of areas that contain native flora species that are sensitive to *Phytophthora cinnamomi*;

(b) procedures for the identification of *Phytophthora cinnamomi*;

(c) procedures for addressing *Phytophthora cinnamomi* outbreaks, with specific consideration to those that endanger threatened flora species and threatened native vegetation communities;

(d) procedures for minimising the area of soil disturbance and new road/track development where practicable;

(e) procedures for sourcing construction, remediation and rehabilitation materials such as gravel, soil and seedlings from uninfected sites;

(f) procedures for the implementation of management measures including access restrictions; and

(g) procedures for reducing the spread of *Phytophthora cinnamomi* during fires.

**Rehabilitation management**

2DR 1.1 The CEMP must include details of proposed measures and procedures for the rehabilitation of disturbed areas. The CEMP must place particular emphasis on areas where native vegetation has been disturbed, and areas that show a high risk of erosion or other forms of instability.

1.2 The CEMP must include, but is not limited to, details of the following:
SCHEDULE LU1

(a) a photographic record of ecologically sensitive areas prior to construction that will be disturbed during construction for use as a baseline to assess the success of rehabilitation following construction activities;
(b) proposed methods for the storage and reinstatement of soil;
(c) proposed stabilisation measures;
(d) measures for surface recontouring and soil compaction relief;
(e) erosion and sediment control measures for affected areas;
(f) procedures for replacement of habitat structural elements;
(g) measures for restricting vehicle access to rehabilitated areas;
(h) procedures and methods for rehabilitation works, including replanting densities and the use of locally indigenous species appropriate to the landscape;
(i) procedures for the collection of seed and vegetative material for use in rehabilitation works;
(j) response procedures for rain and/or flooding events;
(k) strategies for monitoring of individual threatened flora species in rehabilitation areas if deemed necessary; and
(l) monitoring procedures to enable assessment of the success of maintenance and rehabilitation measures.

2DR 2.1 Rehabilitation works following construction activities must utilise stockpiled topsoil and vegetative matter from areas of disturbed populations of threatened flora species, in such a manner to retain viable seeds, other propagules and soil microflora to the greatest extent practicable.

2DR 3.1 Rehabilitation (including revegetation) of any temporarily disturbed area must occur as soon as practicable following the completion of construction activities in that area, and must be carried out to the satisfaction of the Director.

2DR 4.1 Fertiliser must not be used in areas where threatened orchids may occur.

Fire management

2WF 1.1 Firebreaks must be kept to the minimum practicable width, and must be located so as to reduce the net area of impact on native vegetation, particularly threatened species and threatened native vegetation communities.

2WF 2.1 Except where they form part of a permanent road, firebreaks must be slashed vegetation rather than bare earth.

2WF 3.1 Procedures for fuel reduction burning must take into consideration the fire regime requirements of the native vegetation, particularly threatened flora species and threatened native vegetation communities.
2WF 4.1 The CEMP must include details of proposed measures and procedures for fire management.

4.2 The CEMP must include, but is not limited to, details of the following:
(a) procedures for fuel reduction burning;
(b) measures for maintaining biodiversity;
(c) measures to manage wildfires; and
(d) procedures for reducing the spread of Phytophthora cinnamomi during fire fighting.

Atmospheric emissions management

2AM 1.1 The person responsible must ensure that all practicable measures are taken to avoid the production of wastes that might be emitted to the atmosphere. Such measures must be implemented in the following order of preference:
(a) avoidance;
(b) reuse;
(c) recycling;
(d) recovery of energy;
(e) treatment;
(f) containment; and
(g) disposal to the ambient atmosphere (where approved by these conditions).

2AM 2.1 The person responsible must ensure that all practicable measures are taken to control emissions to the atmosphere and to prevent emissions from causing material environmental harm (including an environmental nuisance).

2AM 3.1 Vehicles carrying loads containing material which may blow or spill must be equipped with effective control measures to prevent the escape of the material when they travel on public roads. Effective control measures may include tarpaulins and load dampening.

2AM 4.1 Cleared vegetation must not be disposed of by burning unless no other practicable disposal options are available. Any such burning must be undertaken in such a way as to prevent emissions from causing an environmental nuisance and be in accordance with any written requirements of the Director.

2AM 5.1 The person responsible must not burn any materials by means of an open fire unless authorized in writing by the Director.

2AM 6.1 Construction activities must be managed using such measures as are necessary to prevent dust emissions causing environmental nuisance. Such measures may include but are not limited to:
SCHEDULE LU1

(a) using a dust suppression method such as watering dust generating surfaces;
(b) ceasing site preparation or construction activities in windy weather when dust may be blown in the direction of residences or other sensitive uses;
(c) the installation of water sprays on dust generating equipment such as fixed crushers and vibrating screens;
(d) the enclosure of dust generating equipment and the treatment of atmospheric emissions by dust extraction equipment; and
(e) any other method specified in writing by the Director.

Greenhouse gas emissions management

2GH 1.1 The activity must implement accepted modern technology and best practice environmental management to reduce greenhouse gas emissions from the pulp mill activity to the satisfaction of the Director.

2GH 2.1 The OEMP must include details of the proposed technology and management measures to reduce or offset greenhouse gas emissions generated by the project.

Construction noise management

Construction noise emission limits

2NC 1.1 Unless authorised elsewhere in these conditions, and except within Noise Limit Area A, combined noise emissions from construction activities in relation to the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
   (a) 45 dB(A) between the hours of 0700hrs and 1800hrs (Day time); or
   (b) 40 dB(A) between the hours of 1800hrs and 2200hrs (Evening time); or
   (c) 35 dB(A) between the hours of 2200hrs and 0700hrs (Night time).

1.2 Unless authorised elsewhere in these conditions, combined noise emissions from construction activities in relation to the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises within Noise Limit Area A and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
   (a) 45 dB(A) between the hours of 0700hrs and 1800hrs (Day time); or
SCHEDULE LU1

(b) 40 dB(A) between the hours of 1800hrs and 2200hrs (Evening time); or
(c) 38 dB(A) between the hours of 2200hrs and 0700hrs (Night time).

1.3 For a maximum period of forty weeks, and except within Noise Limit Area A, combined noise emissions from construction activities in relation to the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
(a) 50 dB(A) between the hours of 0700hrs and 1800hrs from Monday to Saturday inclusive (Day time); or
(b) 45 dB(A) between the hours of 0700hrs and 1800hrs on Sundays and Public Holidays; or
(c) 40 dB(A) between the hours of 1800hrs and 2200hrs from Monday to Saturday inclusive (Evening time); or
(d) 35 dB(A) between the hours of 2200hrs and 0700hrs from Monday to Saturday inclusive (Night time).

1.4 For a maximum period of forty weeks, combined noise emissions from construction activities in relation to the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises within Noise Limit Area A and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
(a) 50 dB(A) between the hours of 0700hrs and 1800hrs from Monday to Saturday inclusive (Day time); or
(b) 45 dB(A) between the hours of 0700hrs and 1800hrs on Sundays and Public Holidays; or
(c) 40 dB(A) between the hours of 1800hrs and 2200hrs from Monday to Saturday inclusive (Evening time); or
(d) 38 dB(A) between the hours of 2200hrs and 0700hrs from Monday to Saturday inclusive (Night time).

1.5 The forty week period referred to above may consist of one single continuous period or, if approved in writing by the Director, several separate periods. The person responsible must advise the Director at least three days in advance of periods, which must not be less than one week, during which the limits provided for in subsections 1.3 and 1.4 above will apply. The person responsible must maintain a record of the periods during which these limits will apply.

1.6 If the combined level of noise from the pulp mill activity, landfill activity and quarry activity and the normal ambient noise exceeds the noise levels specified above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise level by at least 5 dB(A).
SCHEDULE LU1

1.7 The time interval over which noise levels are averaged must be 10 minutes.

1.8 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the *Tasmanian Noise Measurement Procedures Manual*.

1.9 All methods of measurement must be in accordance with the *Tasmanian Noise Measurement Procedures Manual*.

1.10 The noise limit or limits applicable at any specific noise sensitive premises can be varied by the Director provided that the occupiers of the noise sensitive premises give their consent in writing to the variation and to any conditions attached to the variation.

1.11 For the purpose of these conditions ‘Noise Limit Area A’ is defined as the area bounded by the low water mark of the Tamar River and a straight line joining Point Rapid to Middle Point indicated by the hatched area on the map below:
Demonstrate compliance with noise limits

2NC 2.1 Prior to the commencement of each key construction activity identified in the construction timetable in relation to the pulp mill activity, or by a date specified in writing by the Director, the person responsible must provide a report demonstrating to the satisfaction of the Director that construction activities in relation to the pulp mill activity will not cause the relevant noise limits specified in these conditions relating to construction activities to be exceeded at the specified locations. This report may be provided progressively in sections relating to each key construction activity.
2NC 3.1 For the purpose of these conditions the ‘Rowella Area’ is defined as the area hatched on the map below:

A survey of the spatial distribution pattern of sound pressure levels in the Rowella Area resulting from construction activities must be undertaken as soon as practicable following the commencement of sustained major construction activity. The survey must be undertaken during meteorological conditions that are not unfavourable for the propagation of noise from the project site to the Rowella Area.

3.3 The survey must include, but is not limited to, the following:
SCHEDULE LU1

(a) a minimum of twenty representative measurement locations in the Rowella Area; and

(b) measurements must include:
   i) The equivalent continuous (Leq) and L1, L10, L50, L90 and L99 A-weighted sound pressure levels; and
   ii) One-third octave and narrow-band spectra (10 to 1000 Hz with 1 Hz resolution) over suitably representative periods.

3.4 Detailed subjective descriptions of the sounds at each location and details of meteorological conditions relevant to the propagation of noise must be recorded at each measurement location.

3.5 The survey methodology must be approved in writing by the Director prior to the survey being undertaken.

3.6 The results of the survey must be submitted to the Director within seven days of the completion of the survey.

3.7 A report containing interpretation of the results must be submitted to the Director within 30 days of completion of the survey, or by a date specified in writing by the Director.

Blast Management Plan

2NC 4.1 Prior to the commencement of blasting activities on the pulp mill site, or by a date specified in writing by the Director, a Blast Management Plan in relation to the pulp mill site must be submitted to the Director for approval.

4.2 The plan must be prepared in accordance with the requirements contained in Appendix A of Australian Standard AS 2187.2-2006, and any guidelines provided by the Director.

4.3 The plan must include, but is not limited to, details of the following:
   (a) the proposed blasting regime;
   (b) results of modelling of vibration and blast overpressure, undertaken by a suitably qualified person;
   (c) mitigation and management measures for the reduction of impacts from blasting activities;
   (d) a table containing all of the major commitments made in the plan;
   (e) an implementation timetable for key aspects of the plan; and
   (f) a reporting program to regularly advise the Director of the results of the plan.

4.4 Blasting activities must not take place unless the plan has been approved in writing by the Director.
4.5 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

4.6 The plan must be made publicly available.

**Blasting - noise and vibration limits**

2NC 5.1 Blasting in relation to the pulp mill activity and the quarry activity must be carried out in accordance with blasting best practice environmental management principles, and must be carried out such that, when measured at the nearest noise sensitive premises, air blast and ground vibration comply with the following guidelines:
   (a) for 95% of blasts, air blast over pressure must not exceed 115dB (Lin Peak); 
   (b) air blast over pressure must not exceed 120dB (Lin Peak); 
   (c) for 95% of blasts ground vibration must not exceed 5mm/sec peak particle velocity; and 
   (d) ground vibration must not exceed 10mm/sec peak particle velocity.

2NC 6.1 All measurements of airblast overpressure and peak particle velocity must be carried out in accordance with the methods set down in the document *Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration*, Australian and New Zealand Environment Council, September 1990.

**Advice regarding blasting**

2NC 7.1 The proposed blasting schedule on the pulp mill site must be advertised in a local newspaper on two consecutive Saturdays prior to the commencement of any blasting activities on the site.

2NC 8.1 The occupier(s) of all noise sensitive premises within 200 metres of a proposed blasting event must be notified at least 24 hours prior to the blasting event commencing.

**Commissioning and operational noise management**

**Noise restrictions**

2NO 1.1 After the commencement of commissioning, and except within Noise Limit Area A, combined noise emissions from the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
   (a) 45 dB(A) between the hours of 0700hrs and 1800hrs (Day time); or
SCHEDULE LU1

(b) 40 dB(A) between the hours of 1800hrs and 2200hrs (Evening time); or
(c) 35 dB(A) between the hours of 2200hrs and 0700hrs (Night time).

1.2 After the commencement of commissioning, combined noise emissions from the pulp mill activity, landfill activity and quarry activity when measured at any noise sensitive premises within Noise Limit Area A and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
   (a) 45 dB(A) between the hours of 0700hrs and 1800hrs (Day time); or
   (b) 40 dB(A) between the hours of 1800hrs and 2200hrs (Evening time); or
   (c) 38 dB(A) between the hours of 2200hrs and 0700hrs (Night time).

1.3 If the combined level of noise from the pulp mill activity, landfill activity and quarry activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise level by at least 5 dB(A).

1.4 The time interval over which noise levels are averaged must be 10 minutes.

1.5 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.

1.6 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual, issued by the Director.

Demonstrate compliance with noise limits

2NO 2.1 At least 60 days prior to the commencement of commissioning activities in relation to the pulp mill activity, the person responsible must demonstrate to the satisfaction of the Director that the operation of the pulp mill and all its associated equipment will not cause the relevant noise limits specified in these conditions to be exceeded at the specified locations.

2.2 If there are any subsequent changes to the specifications of the equipment used that have the potential to increase noise emissions from the pulp mill site, then this demonstration must be repeated to the satisfaction of the Director prior to the commencement of commissioning activities in relation to the pulp mill activity.
Site-wide noise survey

2NO 3.1 The person responsible must ensure that a comprehensive site-wide characterisation survey of noise sources is completed not later than one year after the completion of commissioning activities, or by a date specified in writing by the Director. The survey must be updated on the replacement, repair or addition of equipment that is a significant source of noise and where the equipment may increase or adversely alter the level and/or character of the noise emitted from the site. Equipment may be grouped to facilitate the measurement process. Where an item of equipment has more than one significant source of noise, the item should be represented by separate points of emission.

3.2 The survey must include:
   (a) the identification of all significant sources of noise on site;
   (b) estimation of the spatial location, including elevation, of each item of equipment with respect to a well-established coordinate system; and
   (c) sufficient sound pressure level measurements of each item of equipment to quantify the emitted one-octave band sound power.

3.3 The results from this survey must be used to predict the spatial distribution of A-weighted sound pressure levels, resulting only from the activities on site, to beyond a resultant level of 25 dB(A). This prediction must be based on a method and assumed meteorological conditions approved by the Director.

3.4 A report must be forwarded to the Director within six weeks of the completion of the survey detailing:
   (a) the positions of the identified items of equipment;
   (b) one-octave band sound power spectra of all identified sources,
   (c) details of the prediction methodology; and
   (d) contours of the predicted sound pressure levels equal to or above 25 dB(A).

Survey of operational noise levels in the Rowella area

2NO 4.1 A survey of the spatial distribution pattern of sound pressure levels in the Rowella Area resulting from the pulp mill activity must be undertaken within 60 days of the completion of commissioning activities, or by a date specified in writing by the Director. The survey must include, but is not limited to, the following:
   (a) a minimum of twenty representative measurement locations in the Rowella Area; and
   (b) measurements must include:
      i) the equivalent continuous ($L_{eq}$) and $L_{1}$, $L_{10}$, $L_{50}$, $L_{90}$ and $L_{99}$ A-weighted sound pressure levels; and
ii) one-third octave and narrow-band spectra (10 to 1000 Hz with 1 Hz resolution) over suitably representative periods.

4.2 Detailed subjective descriptions of the sounds at each location and details of meteorological conditions relevant to the propagation of noise must be recorded at each measurement location.

4.3 The survey methodology must be approved by the Director prior to the survey being undertaken.

4.4 A report containing the survey results and interpretation of the results must be submitted to the Director within 30 days of completion of the survey.

Continuous recording of noise levels

2NO 5.1 Two continuous noise logging devices must be used to monitor noise levels in the Long Reach and Rowella areas. The noise logging devices must record noise levels continuously, except during maintenance of the devices, commencing from the date of issue of this permit.

5.2 The noise logging devices must record the equivalent continuous ($L_{eq}$) and $L_{1}$, $L_{10}$, $L_{50}$, $L_{90}$ and $L_{99}$ A-weighted sound pressure levels measured over periods of 10 minutes.

5.3 The noise logging devices must be located at positions and for time periods approved in writing by the Director. At least one site for monitoring noise (the permanent noise monitoring site) must be established in the Rowella area.

5.4 Recorded noise level data must be made available to the Director in electronic format within four weeks of being collected.

5.5 If requested by the Director, recorded noise level data must be made available in printed format, within four weeks of such request.

Response to elevated noise levels

2NO 6.1 Where sound pressure levels measured by the person responsible exceed the limits specified in these conditions by 3 dB(A) or more for more than one hour, and where the elevated noise levels are not due to the direct influences of the prevailing weather conditions, the person responsible must investigate the cause of the elevated noise levels. If the elevated noise levels are found to be due to the activity then the Director must be notified as soon as practicable and the person responsible must implement measures specified by the Director to achieve compliance with the noise limits specified in these conditions.
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Record of noise generating activities

2NO 7.1 The person responsible must make and retain written records of the various operational activities and changes to operational activities on the pulp mill site that have the potential to change the level and/or character of noise emitted from the site.

7.2 These records must include, but should not be limited to, the start of commissioning of major plant and equipment and any major start-ups and shutdowns of major plant and equipment.

7.3 These records must be provided to the Director within two weeks of any written request to do so.

Noise monitoring survey

2NO 8.1 Unless otherwise approved by the Director, a noise monitoring survey must be carried out within 60 days from the date of issue of this permit and every three months thereafter.

8.2 The proposed survey methodology must be submitted to the Director for approval prior to the first survey.

8.3 The survey must include, but is not limited to, the following:
   (a) a minimum of six representative measurement locations must be used, with one location established as a control location outside the likely influence of the proposed pulp mill activity and one location close to the permanent noise monitoring site at Rowella; and
   (b) sufficient measurements must be made during the day, evening and night times (as defined in these conditions) at each location to establish the acoustic environment, including any influence from the activity.

8.4 Measurements must include:
   (a) the equivalent continuous ($L_{eq}$) and $L_{10}$, $L_{50}$, $L_{90}$ and $L_{99}$ A-weighted sound pressure levels measured over a period of 10 minutes; and
   (b) one-third octave and narrow-band spectra (10 to 1000 Hz with 1 Hz resolution) over suitably representative periods of not less than 1 minute.

8.5 Detailed subjective descriptions of the sounds at each location and details of meteorological conditions relevant to the propagation of noise must be recorded at each measurement site.
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Noise monitoring survey report

2NO 9.1 A noise monitoring survey report must be submitted to the Director within 45 days of completion of each noise monitoring survey, or by a date specified in writing by the Director.

9.2 The noise monitoring survey report must include the following:

(a) the results and details of the measurements and observations required by these conditions;
(b) interpretation of the results to estimate the spatial distribution of environmental noise levels in residential areas within three kilometres of the mill;
(c) a map of the area surrounding the activity with the site boundary, measurement locations and noise sensitive areas clearly marked on the map;
(d) recommendations regarding appropriate mitigation measures to manage any noise problems identified by the noise monitoring survey; and
(e) any other information that will assist with interpreting the results.

Waste management and beneficial reuse

2WM1.1 The generation of waste must be avoided as far as is practicable in accordance with Best Practice Environmental Management.

1.2 Wastes must be managed in accordance with the following hierarchy of waste management:

(a) waste must be minimised, that is, the generation of waste must be reduced to the maximum extent that is practicable, having regard to best practice environmental management;
(b) waste must be re-used or recycled to the maximum extent that is practicable; and
(c) waste that cannot be re-used or recycled must be disposed of at a waste depot or treatment facility that has been approved in writing by the Director to receive such waste, or otherwise in a manner approved in writing by the Director.

Waste Minimisation Plan

2WM2.1 A Waste Minimisation Plan must be submitted to the Director for approval within one year of the date of issue of this permit, or by a date specified in writing by the Director. The objective of the plan is to detail a program for compliance with the waste management hierarchy. The plan must include, but is not limited to, details of the following:

(a) an investigation into the potential for beneficial reuse of lime kiln electrostatic precipitator dust;
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(b) an investigation into the potential for beneficial reuse of other waste streams proposed for disposal at the landfill site;
(c) handling procedures for waste streams, including dewatering, storage (facilities and capacities), weighing, chemical analysis, and means and frequency of transport to the landfill or reuse site;
(d) a program for minimising the generation of waste from process areas, offices, canteens, and other areas of the activity;
(e) proposed waste minimisation and reuse volume targets;
(f) an implementation timetable;
(g) a reporting program to regularly advise the Director of the results of the plan; and
(h) a review program for regularly updating the plan.

2.2 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

2.3 The plan must be made publicly available.

2WM 3.1 Unless otherwise specified in these conditions, waste generated on the pulp mill site must only be disposed of at the landfill site, to an approved waste disposal facility, or in a manner otherwise approved in writing by the Director.

2WM 4.1 All practicable measures to identify and implement alternatives to the disposal of lime kiln electrostatic precipitator dust must be pursued to the satisfaction of the Director.

2WM 5.1 All inorganic process wastes generated by the activity must be reused to the greatest extent practicable, unless otherwise approved in writing by the Director.

2WM 6.1 All organic process wastes generated by the activity must be incinerated in either the recovery boiler or power boiler, unless otherwise approved in writing by the Director.

2WM 7.1 The off-site transport and disposal of controlled wastes must be undertaken only by persons authorised to do so under the EMPCA or the Environmental Management and Pollution Control (Waste Management) Regulations 2000.

Hazardous materials

2HZ 1.1 Other than to the extent of any inconsistency with the Dangerous Goods Act 1998 and Dangerous Good (General) Regulations 1998 and any licence pursuant to that Act, and unless otherwise approved in writing by the Director, all environmentally hazardous material, including all chemicals, fuels, and oils, held on the project site in
volumes exceeding 250 litres must be stored and handled in accordance with the following:

(a) Any storage facility must be contained within a spill collection bund designed to contain:
   i) at least 110% of the volume of the largest storage vessel; or
   ii) at least 110% of the combined volume of any interconnected vessels within that bund; or
   iii) at least 25% of the total volume of all vessels stored in that spill collection bund; or
   iv) the capacity of the largest tank and the output of any firewater system over a twenty minute period;
   whichever is the greater volume.

(b) Bunded areas and transport vehicle loading and unloading aprons must:
   i) be made of materials that are impervious to any environmentally hazardous material stored within the bund;
   ii) be graded or drained to a sump to allow recovery of liquids;
   iii) be chemically resistant to the chemicals stored or transferred;
   iv) be designed and managed such that the transfer of materials is adequately controlled by valves, pumps and meters and other equipment wherever practical. The equipment must be adequately protected (eg. with bollards) and contained in an area designed to permit recovery of any released chemicals;
   v) be designed such that chemicals which may react dangerously if they come into contact are in different compounds or, if in the same compound, have bunded containment areas that are separate and will prevent spillages mixing; and
   vi) be managed such that the capacity of the bund is maintained at all times (eg. by regular inspections and removal of obstructions);

(c) All activities that involve a significant risk of spillages, including the loading and unloading of bulk materials, must take place in a bunded containment area or on the transport vehicle loading apron.

2HZ 2.1 Unless otherwise approved in writing by the Director, each environmentally hazardous material, including chemicals, fuels and oils, held on the project site in volumes of less than 250 litres must, as far as practical and to the satisfaction of the Director, be located within bunded areas or spill trays which are designed to contain at least 110% of the volume of the largest container.

2HZ 3.1 An inventory must be kept of all environmentally hazardous materials stored and handled on the project site. The inventory must specify the
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location of storage facilities, the maximum quantities of each hazardous material likely to be kept in storage and accompanying material safety data sheets.

2HZ 4.1 Spill kits appropriate for the types and volumes of materials being handled, and which may include relocatable (temporary) bunds, must be kept in appropriate locations to assist with the containment of spilt environmentally hazardous materials.

2HZ 5.1 The CEMP, EMP (Commissioning) and OEMP must include details of proposed measures and procedures for the avoidance and management of chemical, hydrocarbon and process material spills.

2HZ 6.1 The OEMP must include details of proposed measures and procedures for the handling, recovery and disposal of environmentally hazardous material used or generated on site.

Emergency Response Plan

2ER 1.1 Prior to the completion of commissioning, or by a date specified in writing by the Director, a site-specific Emergency Response Plan must be prepared and submitted to the Director for approval. The Plan must be prepared in consultation with the Director, the State Emergency Service and the Tasmanian Fire Service. The Plan must, at a minimum, contain the following information:

(a) identification of potential emergency situations;
(b) identification of key pieces of equipment which may be a factor in causing emergency situations;
(c) description of alarm systems in place in relation to key pieces of equipment;
(d) proposed management strategies to deal with, and minimise impacts arising from, an emergency situation;
(e) proposed communication strategies to deal with, and minimise impacts arising from, an emergency situation, applicable to both normal business hours and after hours;
(f) proposed monitoring strategies to determine the impacts arising from an emergency situation; and
(g) a review program for regularly updating the plan.

1.2 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.
Aboriginal heritage

Construction management

2AH 1.1 The CEMP must include details of proposed measures and procedures for the protection and management of Aboriginal heritage relics.

1.2 The CEMP must include, but is not limited to, details of the following in relation to the protection and management of Aboriginal heritage:
   (a) procedures for the identification and protection and future management of Aboriginal heritage relics;
   (b) procedures to avoid impact to Aboriginal heritage relics when locating roads and other infrastructure, including provision for additional field studies of the preferred location of such infrastructure if not previously part of a field study;
   (c) procedures that will be followed in the event that further Aboriginal heritage relics are located during construction activities, including a commitment to avoid impact on Aboriginal heritage relics to the greatest extent practicable; and
   (d) procedures for ongoing engagement with the Aboriginal community, through the Tasmanian Aboriginal Land and Sea Council, in the identification, assessment, protection and ongoing management of identified Aboriginal heritage relics and any further Aboriginal heritage relics that are located.

1.3 Prior to the commencement of construction activities, a report must be submitted to the Director of National Parks and Wildlife for approval detailing how the requirements of these conditions relating to the Aboriginal heritage relics designated on the Tasmanian Aboriginal Sites Index (TASI) as TASI 6589, 8473, 8743, 9675, 9713, 9714, 9900, 9903, 9904, 9942, 10001, 10002, 10003, 10004, 10005, 10006, 10007, and 10009 will be implemented.

2AH 2.1 Specific locations of Aboriginal heritage relics must be kept confidential to the satisfaction of the Director of National Parks and Wildlife.

2AH 3.1 In the event that further Aboriginal heritage relics are located during construction activities the person responsible must:
   (a) cease construction activities immediately within 100 metres of the relic;
   (b) notify the Aboriginal Heritage Office within 24 hours;
   (c) assess the characteristics, condition and heritage value of the relics using suitably qualified specialists;
   (d) arrange a field inspection with staff from the Aboriginal Heritage Office, if necessary, to identify regulatory implications and options for dealing with the Aboriginal heritage relic;
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(e) engage with the Tasmanian Aboriginal Land and Sea Council on assessment and management options, as required;
(f) determine appropriate actions with regard to the continuation of works, including, as appropriate, gaining approval of a permitted action; and
(g) not recommence construction activities until written approval is received from the Director of National Parks and Wildlife.

2AH 4.1 Interference for the purpose of undertaking controlled archaeological excavation and/or removal of any Aboriginal heritage relics must be undertaken or supervised by an Aboriginal heritage specialist approved by the Director of National Parks and Wildlife.

2AH 5.1 Results of any surveys, controlled archaeological excavation and/or removal of the Aboriginal heritage relics must be fully documented to a professional standard. The documentation must be submitted to the Aboriginal Heritage Office for the purpose of updating the record(s) of an Aboriginal heritage site within 30 days of the completion of works, or by a date specified in writing by the Aboriginal Heritage Office. All material derived from the controlled archaeological excavation or retrieval must be professionally curated and documented, and submitted to the Aboriginal Heritage Office prior to its return to the Aboriginal community. All retained material derived from the controlled archaeological excavation must be stored and protected at a standard approved by the Director of National Parks and Wildlife.

Exclusion zones

2AH 6.1 Exclusion zones must be established and maintained around areas containing the Aboriginal heritage relics designated as TASI 6589, TASI 8473, TASI 9900, TASI 10001, TASI 10004, TASI 10005, TASI 10006, TASI 10007 during construction activities to the satisfaction of the Director of National Parks and Wildlife, to ensure that no damage to the area occurs. The exclusion zones must be adequately fenced or marked and must be clearly identifiable as an exclusion zone to construction personnel.

2AH 7.1 Exclusion zones must be established and maintained during construction activities and operation around areas containing the Aboriginal heritage relics designated as TASI 9904, TASI 10002, TASI 10003 and TASI 10009 to the satisfaction of the Director of National Parks and Wildlife, to ensure that no damage to the area occurs. The exclusion zones must be adequately fenced or marked and must be clearly identifiable as an exclusion zone to construction and operational personnel.

2AH 8.1 An exclusion zone must be established and maintained during construction activities and operation around the area containing the Aboriginal heritage relic designated as TASI 9903 to the satisfaction of the Director of National Parks and Wildlife, to ensure that no damage
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to the area occurs. The exclusion zone must be adequately fenced or marked and must be clearly identifiable as an exclusion zone to construction and operational personnel. The exclusion zone must extend a minimum of 10 metres from any outlying physical expression of TASI 9903.

Ongoing management and protection

2AH 9.1 The OEMP must include details of proposed measures and procedures for the ongoing protection and management of Aboriginal heritage relics.

9.2 The OEMP must include, but is not limited to, details of the following:
   (a) procedures for the ongoing protection and management of Aboriginal heritage relics;
   (b) procedures that will be followed in the event that further Aboriginal heritage relics are located during future activities, including a commitment to avoid impact on Aboriginal heritage relics to the extent practicable;
   (c) procedures for ongoing engagement with the Aboriginal community, through the Tasmanian Aboriginal Land and Sea Council, in the identification, assessment, protection and ongoing management of identified Aboriginal heritage relics and any further Aboriginal heritage relics that are located.

Historic heritage

2HH 1.1 The CEMP must include details of proposed measures and procedures for the management of historic cultural heritage places. The plan must provide site specific recommendations for the protection of places entered in the Tasmanian Heritage Register as well as other known historic cultural heritage places that may be affected by construction activities.

1.2 The CEMP must include, but is not limited to, details of the following:
   (a) exclusion zones to be imposed and maintained around known historic cultural heritage places;
   (b) management measures that will be undertaken if blasting activities are to occur within 50 metres of historic cultural heritage places, including details of peak particle velocity limits being used;
   (c) the process for visual monitoring of construction activities to detect previously unidentified historic cultural heritage places; and
   (d) procedures to be implemented in the event that further historic cultural heritage places are located during construction activities.
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2HH 2.1 In the event that additional terrestrial, underwater or maritime historic cultural heritage places are located during construction activities the following procedure must be implemented:
   (a) cease construction activities immediately within 100 metres of the place;
   (b) notify the Director within 24 hours;
   (c) assess the significance of the place utilising an appropriately qualified specialist;
   (d) determine appropriate actions with regard to the continuation of works; and
   (e) construction activities must not recommence until written approval is received from the Director.

2HH 3.1 A 10 metre exclusion zone must be established around the Big Stone Fence (site 12B) located on the project site to ensure no impact on the place from the activity.

2HH 4.1 A 10 metre exclusion zone must be established around the Big Bay Stone Piles (site 4B) and the Big Bay House Site (site 3B) located on the project site to ensure no impact on the place from the activity.

2HH 5.1 If the wastewater pipeline construction corridor is within 50 metres of the boundary of the George Town Cemetery, (being a place entered in the Tasmanian Heritage Register, Ref R968), details of mitigation processes for this place must be supplied in a plan.

   5.2 The plan must be submitted to the Director prior to construction activities commencing within 500 metres of the place. The plan must include, but is not limited to, details of the following:
      (a) proposed investigation methods that will be used in the wastewater pipeline construction corridor to identify subsurface historic cultural heritage places;
      (b) exclusion zones around the places, if necessary; and
      (c) any blasting activities in or near the vicinity of the boundary of the places, including peak particle velocity limits; and
      (d) proposed measures to avoid and/or mitigate impacts on subsurface historical cultural heritage places.

   5.3 Construction activities within 500 metres of the place must not commence unless the plan has been approved in writing by the Director.

   5.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

Decommissioning and rehabilitation

2DR 1.1 The person responsible must notify the Director in writing of any event or decision which is likely to give rise to the permanent cessation of all
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or part of the activity within 14 days of becoming aware of that event or decision. The notice must specify the date upon which the activity is expected to cease.

2DR 2.1 A draft Decommissioning and Rehabilitation Plan (DRP) must be submitted for approval to the Director within 3 years of completion of commissioning of the activity, or by a date specified in writing by the Director. Unless otherwise approved in writing by the Director, a revised DRP must be submitted to the Director:

(a) when required to reflect significant changes in rehabilitation and decommissioning obligations arising from changes to the activity; or
(b) within 30 days of the Director being notified of the planned cessation of operations; or
(c) by a date specified in writing by the Director.

2.2 The DRP must be prepared in accordance with guidelines issued by the Director. If no guidelines have been issued by the Director the measures described in this plan must include, but are not limited to, details of the following:

(a) the completion of a site history, site contamination assessment and contamination remediation plan (including consideration of groundwater);
(b) the removal of all equipment, structures and waste materials unless they are considered by the Director to be beneficial to a future use of the site;
(c) the grading and levelling/recontouring and revegetating (or other approved method of substrate stabilisation) of the surface of the disturbed area;
(d) management of drainage on the site so as to reduce erosion and prevent release of a pollutant from the site;
(e) maintenance of the rehabilitated area for a period of not less than three years from the date of cessation of operations;
(f) an itemised estimate of the costs of carrying out the works listed in the DRP and a statement of how these costs will be provided for; and
(g) any other detail requested in writing by the Director.

2DR 3.1 Following permanent cessation of the activity, rehabilitation of the site must be carried out in accordance with the most recent Decommissioning and Rehabilitation Plan approved by the Director.

3.2 The plan must be made publicly available.
SECTION 3 – PULP MILL ACTIVITY
Additional conditions relating to the pulp mill activity

General

Maximum quantities

3GN 1.1 The following production levels must not be exceeded without the written approval of the Director:
   (a) green woodchips produced on site for use on the pulp mill site and for export – 4,500,000 t/a;
   (b) total pulp production – 1,100,000 ADt/a;
   (c) pulp production from non-eucalypt woodchips – 100,000 ADt/a;
   (d) chlorine dioxide – (45 t/d or 16,000 t/a);
   (e) sodium chlorate – (200 t/d or 70,000 t/a), subject to the submission of a Chemical Plant Design Report prepared to the satisfaction of the Director and which has been accepted in writing by the Director;
   (f) sodium chlorate – (90 t/d or 31,500 t/a) if (e) does not apply; and
   (g) oxygen – (80 t/d or 28,000 t/a).

Pulp Mill Design Report

3GN 2.1 Within six months of the issue of this permit, or by a date specified in writing by the Director, a Pulp Mill Design Report must be submitted to the Director. The report must include, but is not limited to, details of the following:
   (a) the final design for the pulp mill activity, including plant layout, process diagrams, mass balances, predicted emissions and emission points;
   (b) any significant changes from that specified in the DIIS and further information;
   (c) a justification for any such changes.

2.2 Commissioning activities must not commence unless the report has been accepted in writing by the Director.

2.3 The Director must be notified of any change to the design for the pulp mill activity from that specified in the Pulp Mill Design Report that has the potential to significantly change the predicted environmental emissions from the project site. Any such change must not proceed unless it has been approved in writing by the Director.

2.4 The report must be made publicly available.
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Accepted Modern Technology

3GN 3.1 The activity must incorporate the following to the satisfaction of the Director, unless otherwise approved in writing by the Director:
   (a) a minimum excess evaporation capacity of 10% beyond the capacity required to process normal process production liquors;
   (b) sufficient evaporation and concentration capacity to achieve a dry solids content of black liquor exiting the evaporation plant of greater than 80 percent by weight (including boiler ash);
   (c) hexenuronic acid removal stage in bleach plant when processing eucalypt feedstock;
   (d) a pulp washing stage after each bleaching stage;
   (e) provision in the design for future reuse of further bleach plant filtrate within the process in future as technology allows;
   (f) a chlorate removal stage in the wastewater treatment plant; and
   (g) an emergency storage basin with a minimum available capacity of 100,000 cubic metres.

Power boiler fuel

3GN 4.1 The power boiler must only incinerate the following materials:
   (a) untreated wood waste from the pulp mill site;
   (b) untreated wood waste from other sources;
   (c) uncontaminated forest biomass;
   (d) sludge from the wastewater treatment plant clarifiers;
   (e) NCGs;
   (f) natural gas; or
   (g) any other materials approved in writing by the Director.

Chemical plant

3GN 5.1 Within three months of the issue of this permit, or by a date specified in writing by the Director, a Chemical Plant Design Report must be submitted to the Director. The report must be prepared to the satisfaction of the Director. The report must include, but is not limited to, details of the final design for the chemical plant, including plant layout, process diagrams, mass balances, predicted solid, liquid and atmospheric emissions and emission points for the range of production scenarios proposed.

5.2 The report must be made publicly available.

3GN 6.1 The concentration of chlorine in the chlorine dioxide solution exiting the chemical plant site must not exceed 0.02 kg chlorine per kg of chlorine dioxide. The concentration of chlorine in the chlorine dioxide solution must be monitored at least every four hours.
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3GN 7.1 Hydrogen produced in the sodium chlorate plant, irrespective of whether it is to be transferred to the lime kiln, discharged to the atmosphere, or transferred elsewhere, must be treated to remove elemental chlorine to the satisfaction of the Director.

3GN 8.1 Hydrogen produced in the sodium chlorate plant must be used as fuel on the pulp mill site, unless otherwise approved in writing by the Director.

3GN 9.1 Sodium chlorate produced in the sodium chlorate plant must be made into pure crystals in a crystalliser before being used for chlorine dioxide manufacture, to the satisfaction of the Director.

Chemical use

3GN 10.1 Where a choice of potentially harmful chemicals exists, the less harmful alternative must generally be used in the activity, to the satisfaction of the Director. The identification and substitution of potentially harmful chemicals with less harmful alternatives must be regularly undertaken, to the satisfaction of the Director.

3GN 11.1 All defoamers used on the pulp mill site must contain less than:
   (a) 40 ppb by weight of dibenzofuran; and
   (b) 10 ppb by weight of dibenzo-p-dioxin.

   11.2 Prior to the commencement of commissioning, the person responsible must develop and implement chemical procurement procedures to ensure compliance with this condition.

3GN 12.1 The person responsible must not use any material containing polychlorinated phenols in any of the plant processes.

   12.2 Prior to the commencement of commissioning, the person responsible must develop and implement control procedures to ensure that materials containing polychlorinated phenols, or wood or woodchips treated with polychlorinated phenols or other preservatives is not accepted for use in any of the plant processes.

3GN 13.1 Chemicals must not be added to the non-contact cooling water without the prior written approval of the Director.

Risk and safety management

Major Hazard Facility

3RK 1.1 The person responsible must comply with the National Occupational Health and Safety Commission National Standard for the Control of Major Hazard Facilities [NOHSC:1014(2002)] and National Code of
Risk management

3RK 2.1 At least 4 months prior to the commencement of plant construction activities, or by a date specified in writing by the Director, the person responsible must develop criteria for risk analysis and standards for acceptable risks and submit details to the Director. The criteria and standards must be developed in consultation with experts, government and community stakeholders, as part of the consultation undertaken for the Major Hazard Facility Safety Report required under NOHSC:1014:2002. The following criteria and standards are required.


(b) Criteria for classifying categories of risk, using a likelihood and consequence category matrix, consistent with AS/NZS HB436:2004 and AS/NZS HB203:2004. Clear criteria must be developed to differentiate between acceptable and unacceptable risk.

(c) Criteria for multi-level risk assessment, to select appropriately rigorous assessment methods for identified hazards, as illustrated in Figure 1 of NOHSC:2016(1996). These criteria must be used to determine when to use more rigorous assessment methods, progressing from qualitative assessment, to quantitative assessment, to public safety risk analysis if required.

3RK 3.1 At least 60 days prior to the commencement of plant construction activities, or by a date specified in writing by the Director, the person responsible must submit a report to the Director containing the details and outcomes of a comprehensive hazard identification and risk assessment for the operational phase of the activity and adopted risk control measures (including design changes) to meet standards for acceptable risk, as required under NOHSC:1014(2002), consistent with Australian/New Zealand Standard 4360 for Risk Management (AS/NZS 4360—2004). This must include consideration of impacts on the environment (including State waters).

3.2 The report must also include the results of hazard and operability (HAZOP) studies for all process units that store or handle hazardous materials during normal operations, or may store or handle hazardous materials in the event of a plant upset, using the methodology described in the document: Center for Chemical Process Safety, Guidelines for hazard evaluation procedures, Second edition, American Institute of Chemical Engineers, New York, 1992.
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3.3 The facilitator used for the HAZOP studies must be registered under the National Professional Engineers Register in Chemical Engineering.

3.4 Members of the study team must include, but are not limited to, the plant design engineer, operations expert, maintenance expert, computer control expert, and any other technical disciplines that may be required. The Director of Industry Safety, or delegate, must be invited to participate as an observer.

Major Hazard Facility Safety Management System

3RK 4.1 Prior to the commencement of plant construction activities, or by a date specified in writing by the Director of Industry Safety, a document describing the person responsible’s Safety Management System as required under NOHSC:1014(2002) for commissioning and operations must be submitted to the Director of Industry Safety for approval. This document must identify the model adopted for the Safety Management System.

4.2 The Safety Management System for commissioning and operations must comply with the referenced standards of one of the accepted models of safety management system core elements tabulated in Appendix 2 of NOHSC:2016(1996).

4.3 Construction activities must not take place unless the Major Hazard Facility Safety Management System has been approved in writing by the Director of Industry Safety. Notwithstanding the above, some construction activities may take place prior to the approval of the system provided that the sections of the system relevant to those activities are considered satisfactory by the Director of Industry Safety, and provided that the Director of Industry Safety has given written authority for those construction activities to take place.

4.4 The Safety Management System, as updated from time to time with the approval of the Director of Industry Safety, must be implemented to the satisfaction of the Director of Industry Safety.

3RK 5.1 At least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety, a document describing an updated Safety Management System for commissioning and operations must be submitted to the Director of Industry Safety for approval. This must include the completion of all elements of the Safety Management System, in accordance with referenced standards adopted in these conditions (Appendix 2 NOHSC:2016(2002)), and risk assessment and safety management measures for process units which store or handle hazardous materials during commissioning activities and plant upset conditions.
SCHEDULE LU1

5.2 Commissioning activities must not take place unless the updated Major Hazard Facility Safety Management System has been approved in writing by the Director of Industry Safety.

3RK 6.1 An independent audit report of the Major Hazard Facility Safety Management System against the standards and codes of practice contained in NOHSC:1014(2002) and NOHSC:2016(1996) must be submitted to the Director of Industry Safety at least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety, and annually thereafter. The independent auditor must be registered under the National Professional Engineers Register in Chemical Engineering. The independent auditor must not be the facilitator of the HAZOP studies required by these conditions.

6.2 The audit report must include, but is not limited to, the auditor’s findings and recommended corrective actions.

3RK 7.1 At least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety, a Safety Management System Audit Action Plan must be submitted to the Director of Industry Safety for approval.

7.2 The action plan must include, but is not limited to, proposed actions to address all corrective actions recommended by the independent auditor and a proposed implementation timetable.

7.3 Commissioning activities must not take place unless the action plan has been approved in writing by the Director of Industry Safety.

7.4 The action plan must be implemented to the satisfaction of the Director of Industry Safety.

3RK 8.1 The Major Hazard Facility Safety Management System must be reviewed and updated at three yearly intervals after operation commences or when a modification/variation of the activity (that introduces new or modified hazards) occurs. A document describing the updated Safety Management System must be submitted to the Director of Industry Safety for approval.

Major Hazard Facility Safety Report

3RK 9.1 At least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety, a Major Hazard Facility Safety Report must be submitted to the Director of Industry Safety for approval. The report must be developed in accordance with NOHSC:1014(2002).

9.2 Commissioning activities must not take place unless the Major Hazard Facility Safety Report has been approved in writing by the Director of Industry Safety.
SCHEDULE LU1

9.3 The approved Major Hazard Facility Safety Report, as amended from time to time with the approval of the Director of Industry Safety, must be implemented to the satisfaction of the Director of Industry Safety.

3RK 10.1 An independent audit report of the Major Hazard Facility Safety Report against the standards and codes of practice contained in NOHSC:1014(2002) and NOHSC:2016(1996) must be submitted to the Director of Industry Safety at least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety. The independent auditor must be registered under the National Professional Engineers Register in Chemical Engineering.

10.2 The Audit Report for the Major Hazard Facility Safety Report must include, but is not limited to, the auditor’s findings and recommended corrective actions.

3RK 11.1 At least 90 days prior to the commencement of commissioning activities, or by a date specified in writing by the Director of Industry Safety, a Major Hazard Facility Safety Audit Action Plan must be submitted to the Director of Industry Safety for approval.

11.2 The action plan must include, but is not limited to, proposed actions to address all corrective actions recommended by the independent auditor and a proposed implementation timetable.

11.3 Commissioning activities must not take place unless the action plan has been approved in writing by the Director of Industry Safety.

11.4 The action plan must be implemented to the satisfaction of the Director of Industry Safety.

11.5 The Major Hazard Facility Safety Report must be reviewed and updated, and a revised report submitted to the Director of Industry Safety at three yearly intervals after the completion of commissioning activities, or when a change to the activity occurs that has the potential to introduce new or modified hazards, or when requested to do so by the Director of Industry Safety.

Atmospheric emissions management

General

3AM 1.1 After the commencement of commissioning activities, pollutants from the pulp mill activity that have the potential to cause material environmental harm must only be emitted to the atmosphere from nominated exhaust points and nominated area sources.
SCHEDULE LU1

3AM 2.1 Process equipment must not be operated unless and until the pollution abatement equipment associated with that process equipment, as identified in the DIIS or as otherwise specified by the Director, is fully operational.

3AM 3.1 Unless otherwise approved in writing by the Director, the pulp mill activity must be undertaken at all times (including plant startup, operation and shutdown periods) such that:
   (a) all air effluent streams from the evaporation plant surface condenser, methanol tank, turpentine decanter, foul condensate tank, firing liquor tank and spill collection sumps, the digester reboiler off-gases and any other air effluent streams specified by the Director are collected and treated in the CNCG system; and
   (b) all other air effluent streams from the fibreline area chip bin condenser off-gases, blow tank vent, all pulp, filtrate, buffer and liquor tanks, from all the evaporation plant spill collection sumps, mixing tanks, soap collection tanks, black liquor tanks, condenser tanks and spill collection sumps, from all recausticising plant green liquor tanks, white liquor tanks, lime mud tanks, causticisers, dregs filter, dregs tanks, lime mud filter, filtrate tanks, slaker scrubber, from the smelt tank vent scrubber and dump tank scrubber, and any other air effluent streams specified by the Director are collected and treated in the DNCG system.

3AM 4.1 Unless otherwise specified in writing by the Director, all air effluent streams collected in the CNCG system must be treated either by:
   (a) combustion in the recovery boiler; or
   (b) combustion in the non-condensable gas incinerators.

3AM 5.1 Unless otherwise specified in writing by the Director, all air effluent streams collected in the DNCG system must be treated either by:
   (a) combustion in the recovery boiler; or
   (b) combustion in the power boiler; or
   (c) combustion in the non-condensable gas incinerators.

3AM 6.1 Unless otherwise specified in writing by the Director, the pulp mill activity must be operated such that all air effluent streams from the bleach plant acid filtrate tanks are collected and treated in the bleach plant scrubber.

3AM 7.1 The Main Mill Stack, incorporating the nominated exhaust points discharging to Flues 1 to 4, must extend to a minimum of 130 metres above ground level.

3AM 8.1 If rupture discs are proposed in the CNCG collection system or DNCG collection system, then the integrity of each rupture disc must be continuously monitored to the satisfaction of the Director.
SCHEDULE LU1

3AM 9.1 Woodchip stockpiles must be contoured and maintained so as to minimise loss of windblown chips and fine particles of wood fibre from the stockpile area to the satisfaction of the Director.

3AM 10.1 Emissions from any emergency diesel generators must comply with the requirements of the Environment Protection Policy (Air Quality) 2004. The Director must be notified within 24 hours of commencement of use of the diesel generators unless such use is for testing or maintenance purposes. Isokinetic stack tests must be undertaken if required in writing by the Director during periods of sustained emergency diesel generator use.

Construction

3AM 11.1 Prior to the commencement of construction activities in relation to the pulp mill activity, or by a date specified in writing by the Director, a Dust Management Plan must be submitted to the Director for approval.

11.2 The plan must be prepared in accordance with any guidelines provided by the Director. The plan must include, but is not limited to, details of the following:

(a) identification of critical wind direction arc(s) which may result in dust emissions being directed over sensitive uses;

(b) identification of a wind speed threshold which may transport dust from the pulp mill site if exceeded;

(c) identification of the location(s) where wind monitoring will occur to facilitate identification of times when winds are within the critical wind direction arc(s) and/or exceed the wind speed threshold;

(d) development of a series of alert status levels, which are dependant on measured wind speed and directions;

(e) identification of dust management prescriptions that will be triggered according to the wind alert status level;

(f) a description of how site managers and workers can identify the current wind alert status level at any time;

(g) a description of how web cameras and direct visual monitoring of dust emissions will be utilised for dust mitigation purposes during construction activities;

(h) a description of how dust and particle monitoring methodologies will be utilised for dust mitigation purposes during construction activities;

(i) a table containing all of the major commitments made in the plan;

(j) an implementation timetable for key aspects of the plan; and

(k) a reporting program to regularly advise the Director of the results of implementation of the plan.
11.3 Construction activities in relation to the pulp mill activity must not take place unless the plan has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the plan provided that the sections of the plan relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

11.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

11.5 The approved plan must be made publicly available.

3AM 12.1 Dust produced by the operation of all crushing and screening plant must be controlled by the use of one or more of the following methods to the extent necessary to prevent environmental nuisance being caused:

(a) the installation of fixed water sprays at all fixed crushers and at all points where crushed material changes direction due to belt transfer;

(b) the installation of dust extraction equipment at all fixed crushers and at all points where crushed material changes direction due to belt transfer, and the incorporation of such equipment with all vibrating screens;

(c) the enclosure of the crushing and screening plant and the treatment of atmospheric emissions by dust extraction equipment; and/or

(d) any other method that has been approved in writing by the Director.

3AM 13.1 A web cam visual monitoring system must be established to the satisfaction of the Director to facilitate real time visual monitoring of dust emissions from the pulp mill site during construction activities:

(a) each camera must produce a stream of real time date and time-stamped images available for viewing on a website. An image from each camera must be archived at least every ten minutes, and remain stored for a minimum period of one year;

(b) each camera must be able to be controlled remotely in order to zoom, tilt and pan the field of view; and

(c) the Director must be given access to view and control the website and all associated functionality described in this condition.

Commissioning

3AM 14.1 The EMP (Commissioning) must include the following:

(a) details of commissioning activities that may result in exceedences of the limits specified in Annex A1, and the predicted emission levels; and
(b) details of procedures to manage and report predicted exceedences of the limits specified in Annex A1 as a result of commissioning activities.

Atmospheric emission limits

3AM 15.1 Emissions from nominated exhaust points must comply with the limits specified in Annex A1, except if:
   (a) the emission results from a commissioning activity undertaken during the commissioning phase; and
   (b) the Director was notified in writing in advance of a predicted exceedence from that commissioning activity; and
   (c) the commissioning activity was authorised in writing by the Director to proceed; and
   (d) the emission does not result in serious environmental harm or material environmental harm.

3AM 16.1 Where a pollutant in an atmospheric emission measured by continuous monitoring exceeds the limits specified in Annex A1, the person responsible must:
   (a) take all practicable measures to bring the emission into compliance with the limits specified in Annex A1 as soon as is practicable;
   (b) notify the Director of the exceedence as soon as practicable, but not later than 24 hours, after becoming aware of the exceedence;
   (c) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to bring the emission into compliance with the limits specified in Annex A1, and proposed future actions arising as a result of the exceedence; and
   (d) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.

Atmospheric emission investigation levels

3AM17.1 If an emission of a pollutant from a nominated exhaust point exceeds an investigation level specified in Annex A2, including any amendments to Annex A2 notified in writing by the Director, for the percentage of hours specified for any period of 30 consecutive days, then the person responsible must:
   (a) take all practicable measures to bring the emission into compliance with the investigation levels specified in Annex A2 as soon as is practicable;
   (b) notify the Director of the exceedence as soon as practicable but not later than 24 hours, after becoming aware of the exceedence;
   (c) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to reduce
levels to below the investigation levels specified in Annex A2, and proposed future actions arising as a result of the exceedence; and
(d) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.

Atmospheric emission monitoring

3AM 18.1 Atmospheric emissions must be monitored in accordance with the requirements of Annex A3, including any amendment to Annex A3 notified in writing by the Director.

3AM 19.1 All data from CEMs must be displayed in a control room in real time.

3AM 20.1 At least 6 months prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, a CEM Management Plan must be submitted to the Director for approval.

20.2 The plan must be prepared in accordance with any guidelines provided by the Director. The plan must include, but is not limited to, details of the following:
(a) A table providing the following information for each of the CEMs:
   i) the discharge point to be monitored;
   ii) the pollutants and in-stack parameters that will be monitored;
   iii) the monitoring technology to be used;
   iv) the reference methods to be used;
   v) the calibration methodologies to be used; and
   vi) the calibration frequency;
(b) A table containing all of the major commitments made in the plan;
(c) An implementation timetable for key aspects of the plan; and
(d) A reporting program to regularly advise the Director of the results of implementation of the plan.

20.3 Commissioning activities must not take place unless the plan has been approved in writing by the Director.

20.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

3AM 21.1 All data from CEMs must be displayed on a website in real time in a graphical form approved by the Director. Where relevant the appropriate permit limits must be displayed on the website for comparison.

21.2 Archived data must be retained for a minimum period of five years and be available via this website.
21.3 The Director must be provided with read and download access to this web site.

3AM 22.1 Stack testing facilities must be maintained at all nominated stack testing points in accordance with the following requirements:
   (a) sampling positions must be in accordance with Australian Standard AS 4323.1 (Stationary source emissions – selection of sampling positions), or as approved in writing by the Director;
   (b) safe sampling platforms must be located to allow access to the sampling positions and safe access to these sampling platforms must be provided; and
   (c) all necessary services required for the test method prescribed must be provided.

3AM 23.1 All continuous in-stack measurements, ambient air quality data and meteorological records must be archived in a digital form for a minimum of five years, and must be made available to the Director in a digital form acceptable to the Director upon request.

3AM 24.1 Continuous emission monitoring systems must meet the certification requirements of:
   (a) UK MCERTS;
   (b) TUV; or
   (c) US EPA.

3AM 25.1 All continuous emissions monitoring instrumentation must be maintained and calibrated in accordance with the manufacturer’s specifications.

3AM 26.1 Maintenance and calibration records for all CEM instruments must be retained for a minimum of three years and must be made available to an authorized officer upon request.

3AM 27.1 All CEM instruments must be calibrated against a reference stack test within 90 days of the commencement of commissioning of the pulp mill plant, or by a date specified in writing by the Director, and the calibration checked by a reference stack test annually thereafter.

Ambient investigation levels

3AM 28.1 If the ambient concentrations of TRS or ICC that could reasonably be expected to have occurred as a result of emissions from the activity, exceed the following investigation levels, or alternative investigation levels notified in writing by the Director, at or beyond the boundary of the pulp mill site:
   (a) TRS - 2 µg/m³ sustained over a minimum of four consecutive three-minute time intervals;
   (b) ICC - 10 µg/m³ when measured using discrete sampling methods; or
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(c) ICC - 30 µg/m³ sustained over a minimum of four consecutive three-minute time intervals when measured using OPSIS;

then the person responsible must:

(a) notify the Director of the exceedence as soon as practicable, but not later than 24 hours, after becoming aware of the exceedence;

(b) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to reduce ambient levels to below the investigation levels specified above, and proposed future actions arising as a result of the exceedence; and

(c) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.

Meteorological and ambient air quality monitoring

3AM 29.1 Meteorology and ambient air quality must be monitored in accordance with the requirements of Annex A4, including any amendment to Annex A4 notified in writing by the Director.

3AM 30.1 Prior to commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, the person responsible must install the necessary meteorological sensors and associated equipment to facilitate the real time air quality modelling system required for compliance with these conditions to the satisfaction of the Director.

3AM 31.1 Ambient concentrations of inorganic chlorinated compounds must be monitored continuously using OPSIS or another method approved by the Director. The OPSIS emitter and receiver/analyser must be located close to the pulp mill site’s western boundary and to the satisfaction of the Director.

3AM 32.1 All real-time ambient air quality and meteorological measurements collected from:

(a) the Gunns Rowella Monitoring Station;
(b) the mobile TRS monitor whilst located at the waste water treatment plant;
(c) the OPSIS system located at the boundary of the pulp mill site;
(d) the George Town monitoring station;
(e) the Northern monitoring station;
(f) the Southern monitoring station; and
(g) any other meteorological sensors associated with the real-time air quality modelling system,

must be displayed on a web site in real time in a graphical form to the satisfaction of the Director.
32.2 Archived data must be retained for a minimum period of five years and be available via this web site.

32.3 The Director must be provided with read and download access to this web site.

3AM 33.1 At least 30 days prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, a web cam visual monitoring system must be established and operated, at locations approved by the Director, in order to facilitate the visual monitoring of atmospheric emissions from the pulp mill site.

33.2 Each camera must produce a stream of real time date and time-stamped images available for viewing on a website. An image from each camera must be archived at least every ten minutes, and remain stored for a minimum period of one year.

33.3 Each camera must be able to be controlled remotely in order to zoom, tilt and pan the field of view.

33.4 The Director must be given access to view and control the website and all associated functionality described in this condition.

33.5 The visual monitoring system must be fully operational prior to the commencement of commissioning activities.

3AM 34.1 At least 18 months prior to the commencement of commissioning activities, or by a date specified in writing by the Director, an Ambient Dioxin Monitoring Plan must be submitted to the Director for approval.

34.2 The plan must be consistent with the commitments provided in section 4.4.2 of Volume 4 of the DIIS, and summary table 1.1 of the Pulp Mill Environmental Monitoring Program.

34.3 The plan must be prepared in accordance with any guidelines provided by the Director. The plan must include, but is not limited to, details of the following:
   (a) sampling location and frequency;
   (b) sample handling protocols;
   (c) analytical methodology;
   (d) a table containing all of the major commitments made in the plan;
   (e) an implementation timetable for key aspects of the plan; and
   (f) a reporting program to regularly advise the Director of the results of the plan.

34.4 Commissioning activities must not take place unless the plan has been approved in writing by the Director.
34.5 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

34.6 The approved plan must be made publicly available.

**Odour management**

3AM 35.1 The person responsible must ensure that all practicable measures are taken to control odourous emissions and to prevent odorous emissions from causing material environmental harm at any location beyond the pulp mill site.

3AM 36.1 At least 90 days prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, an Odour Management Plan must be submitted to the Director for approval.

36.2 The plan must be prepared in accordance with any guidelines provided by the Director. The plan must include, but is not limited to, details of the following:

(a) an odour management strategy;
(b) a protocol for each of the required odour monitoring measures required in these conditions;
(c) a protocol for response to identified odour events;
(d) an ongoing odour prevention and elimination program designed to identify the location, nature, emission and dispersion of onsite odours to characterise the odours and implement elimination and/or reduction measures in relation to these odours;
(e) a table containing all of the major commitments made in the plan;
(f) an implementation timetable for key aspects of the plan;
(g) a reporting program to regularly advise the Director of the results of the plan; and
(h) a review program for regularly updating the plan.

36.3 Commissioning activities in relation to the pulp mill activity must not take place unless the plan has been approved in writing by the Director.

36.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

36.5 The approved plan must be made publicly available.

3AM 37.1 Prior to the commencement of commissioning activities in relation to the pulp mill activity, the person responsible must acquire the following ambient odour monitoring equipment and develop appropriate methodologies for their use for approval in writing by the Director:
(a) Summa Canisters (for collecting short term grab samples);
(b) Volatiles Sampling System (utilising active sampling over 24 hour durations onto dual adsorbent tubes);
(c) Passive Adsorbent Tube Sampling (Radiello diffusive samplers to be deployed for periods of up to 10 days); and
(d) Mobile TRS (MTRS), a vehicle-mounted TRS monitor with associated basic meteorological instruments (wind speed and direction; sigma theta) to be deployed at the wastewater treatment plant, and available for campaign use or for rapid response to complaints or incidents at other locations.

3AM 38.1 A portable gas chromatography-mass spectrometer (GCMS) instrument and a suitably qualified operator must be able to be mobilised in a reasonable timeframe to the satisfaction of the Director from the commencement of commissioning activities in relation to the pulp mill activity until such time as the Director advises in writing that this requirement no longer applies.

38.2 This instrument must be used as part of the odour prevention and elimination program to facilitate the identification, characterisation and elimination of sources of odour within the mill.

3AM 39.1 Within six months of the issuing of this permit, or by a date specified in writing by the Director, a Baseline Odour Monitoring Program must be submitted to the Director for approval. The objective of the program is to determine pre-operational ambient concentrations of odourous pollutants on and in the vicinity of the pulp mill site.

39.2 The program must be prepared in accordance with any guidelines provided by the Director. The program must include, but is not limited to, details of the following:
   (a) methodology and monitoring locations;
   (b) an implementation timetable; and
   (c) a reporting program to advise the Director of the results of the program prior to the commencement of commissioning activities in relation to the pulp mill activity.

39.3 Commissioning activities in relation to the pulp mill activity must not take place unless the program has been approved in writing by the Director.

39.4 The approved program, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

3AM 40.1 Prior to the commencement of commissioning activities in relation to the pulp mill activity, and at yearly intervals thereafter, an odour nuisance survey within the community surrounding the pulp mill site must be undertaken.
40.2 The surveying instrument (questionnaire) must be developed and approved by the Director prior to its use.

40.3 Results must be collated and summarised in the annual Environmental Performance Report, and must be utilised as part of the odour management strategy.

3AM 41.1 An odour monitoring panel must be established prior to the commencement of commissioning activities in relation to the pulp mill activity.

41.2 The panel must comprise at least 10 local residents, unless otherwise approved in writing by the Director.

41.3 Prior to acceptance on the panel, potential members must be assessed to gauge their olfactory sensitivity. Potential panellists may be rejected on the basis of displaying either extremely good or extremely poor olfactory sensitivity.

41.4 Panel members must maintain daily odour diaries which list, as a minimum, the following parameters relating to an odour event:

(a) date;
(b) time;
(c) duration;
(d) continuity;
(e) character;
(f) likely source;
(g) strength;
(h) effect of the odour on the observer; and
(i) wind speed and direction;

41.5 Odour diary results must be collated and summarised in the annual Environmental Performance Report, and must be utilised as part of an odour management strategy.

3AM 42.1 The person responsible must notify the Director:

(a) within 24 hours of one or both of the non-condensable gas incinerators changing from normal standby mode to operational mode; and
(b) within 24 hours of the non-condensable gas incinerators returning to normal standby mode.

Air modelling

3AM 43.1 The person responsible must implement and maintain a real-time air quality modelling system using an atmospheric dispersion model approved by the Director. The system must be developed in consultation with the Director and be implemented to the satisfaction of the Director.
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43.2 The model must accept available real-time meteorological measurements from locations that include, unless otherwise specified in writing by the Director, the following:
   (a) the Gunns Rowella Monitoring Station;
   (b) wind and temperature instrumentation mounted near the top of the Main Mill Stack;
   (c) a 10 metre meteorological mast sited in the vicinity of the wastewater treatment plant;
   (d) the George Town Monitoring Station;
   (e) the Northern Monitoring Station;
   (f) the Southern Monitoring Station;
   (g) a vertical temperature profiling instrument located within the modelling domain as approved by the Director; and
   (h) any other available meteorological monitoring sites in the modelling domain as approved by the Director.

43.3 The model must accept real-time measurements from all available CEMs. In cases where continuous monitoring is not available then the best available recent isokinetic stack testing or area source monitoring data must be used.

43.4 The system must have the capacity to perform additional simulations at any time, accepting hypothetical emissions from any previously nominated source(s) using either current meteorology or archived meteorology.

43.5 The system must have a back trajectory facility, which when provided with specific coordinates for a location within the modelling domain, shows the path that the air travelled in order to reach the nominated location at a specified date and time.

43.6 The model must calculate instantaneous and hourly average isopleths for the following parameters:
   (a) NO\textsubscript{x};
   (b) SO\textsubscript{x};
   (c) PM\textsubscript{10};
   (d) PM\textsubscript{2.5};
   (e) TRS;
   (f) CO;
   (g) odour;
   (h) HCl;
   (i) ClO\textsubscript{2};
   (j) Cl\textsubscript{2}; and
   (k) ICC (as the sum of HCl; Cl\textsubscript{2} and ClO\textsubscript{2}).

43.7 Current model results, meteorological parameters for each meteorological site used, and mass emission rates for all modelled
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sources and contaminants, must be continuously displayed on a web site.

43.8 Archived data must be retained for a minimum period of five years and be available via this web site.

43.9 The Director must be provided with read and download access to this web site.

3AM 44.1 Within six months of the date of issue of this permit, or by a date specified in writing by the Director, the person responsible must provide the Director with the results of the TAPM atmospheric dispersion modelling used to characterise dispersion of NO₂, SO₂, PM₁₀ and PM₂.₅ from the nominated exhaust points and nominated area sources on the pulp mill activity, running in tracer mode, with no background concentration.

44.2 Ground level concentration isopleths must be provided for all model nests up to the nest covering the Launceston region. This data must be presented and discussed in report form, and supported by the provision of Surfer grid files.

3AM 45.1 Within 18 months of the completion of commissioning activities, or by a date specified in writing by the Director, an Air Modelling Review Report must be submitted to the Director. The purpose of the report is to provide TAPM modelling to predict ground level concentration isopleths of mill emissions in the absence of any background emissions from other sources using mill data. The modelling must, to the satisfaction of the Director:

(a) incorporate at least a year’s worth of post-production meteorological measurements from all available meteorological monitoring sites (which may include data collected under the Tamar Valley Air Quality Monitoring Project, Tasmania);

(b) incorporate measured mill emissions from all nominated exhaust points (with the exception of the emergency diesel generator) and nominated area sources. Where CEMs data exists this must be incorporated into the model as hourly averages of stack exit velocity, stack exit temperature and mass emission rate for each modelled pollutant;

(c) include dispersion of the following contaminants:
   i) NOₓ;
   ii) SOₓ;
   iii) PM₁₀;
   iv) PM₂.₅;
   v) TRS;
   vi) CO;
   vii) Odour;
   viii) HCl;
   ix) ClO₂;
   x) Cl₂; and
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xi) ICC (as the sum of HCl; Cl₂ and ClO₂);
(d) ground level concentration isopleths for all model nests up to the nest covering the Launceston region. This data must be presented and discussed in report form, and supported by the provision of Surfer grid files.

Annual Environmental Performance Report – air requirements

3AM 46.1 The annual Environmental Performance Report must include the following:

(a) a list of all nominated exhaust points and nominated area sources, and their relevant characteristics including:
   i) source identification label;
   ii) location (in the case of a nominated exhaust point) or source boundaries (in the case of a nominated area source) described using MGA eastings and northings;
   iii) terrain height at the location (masl);
   iv) stack/vent height (m);
   v) stack/vent exit diameter or dimensions (m); and
   vi) source description;

(b) a table and accompanying diagram providing the location of the corners of all plant buildings and building tiers (MGA eastings and northings) and the height of each building tier, in a form suitable for use with commonly available atmospheric dispersion models;

(c) all data from CEMs expressed as hourly averages and presented in graphical time series form.

(d) a table providing a statistical analysis of 3-minute and 1-hour CEM data containing:
   i) the number of exceedences of relevant in-stack limits; and
   ii) the maximum; 99.9th percentile; 99th percentile; 90th percentile; median; mean; and minimum values for each monitored source and parameter;

(e) for continuously monitored sources, a statistical analysis of calculated mass emission rate (g/s) for each source and pollutant. This must contain the maximum; 99.9th percentile; 99th percentile; 90th percentile; median; mean; and minimum mass emission rates;

(f) all stack test reports for measurements conducted within the reporting year;

(g) an assessment of total annual emissions loadings by source and pollutant;

(h) all ambient air monitoring results in graphical time series form expressed as 1 hour averages; and

(i) a table providing statistical analyses of all ambient air monitoring results for each of the averaging times specified in Annex A4. Each table must provide at least the following
SCHEDULE LU1

parameters: the number of exceedences of the relevant standards and permit condition levels; the maximum; 99.9th percentile; 99th percentile; 90th percentile; median; mean; and minimum measured pollutant concentrations.

Noise management

3NO 1.1 Prior to the commencement of commissioning activities in relation to the pulp mill activity, each chipper on the pulp mill site must be totally enclosed in a structure that provides effective acoustic attenuation to the satisfaction of the Director. Log in-feed and chip out-feed openings must be designed and constructed to minimise the emission of noise and its transmission toward noise sensitive premises.

3NO 2.1 Prior to the commencement of construction activities associated with any new or existing infrastructure at the woodchip mill site, or by a date specified in writing by the Director, a Woodchip Mill Acoustic Report must be submitted to the Director for approval. The report must:
   (a) provide details of the proposed new or existing infrastructure;
   (b) identify proposed noise attenuation measures; and
   (c) provide estimates of the sound power emitted from all significant noise sources and the resultant sound power from enclosed noise sources. These estimates must include all proposed noise attenuation measures.

2.2 Construction activities associated with any new or existing infrastructure on the woodchip mill site must not take place unless the report has been approved by the Director.

2.3 The proposed noise attenuation measures identified in the report, as well as any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

3NO 3.1 Noise emissions associated with the blowing of steam lines during mill startup must be mitigated to the satisfaction of the Director.

Stormwater and wastewater management

Water minimisation plan

3SW 1.1 At least 30 days prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, a Water Use Minimisation Plan must be submitted to the Director for approval.

1.2 The plan must include, but is not limited to, details of the following:
SCHEDULE LU1

(a) design and management measures to maximise the reuse of liquid waste streams within the mill (such as through countercurrent washing and maximising reuse of condensates) and stormwater (as process water, landscaping and housekeeping) to the greatest extent practicable;

(b) a table containing all of the major commitments made in the plan;

(c) an implementation timetable for key aspects of the plan;

(d) a reporting program to regularly advise the Director of the results of the plan; and

(e) a review program for regularly updating the plan.

1.3 Commissioning activities in relation to the pulp mill activity must not take place unless the plan has been approved in writing by the Director.

1.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.5 The approved plan must be made publicly available.

Authorised discharge points

3SW 2.1 From the commencement of commissioning activities in relation to the pulp mill activity, or from an earlier date if specified in writing by the Director, all stormwater from the pulp mill site must either be reused on the pulp mill site, or be discharged via an authorised discharge point for the purpose specified.

2.2 After the commencement of commissioning activities in relation to the pulp mill activity, all wastewater from the pulp mill site must be discharged from the pulp mill site via that of the following discharge points appropriate for the purpose specified.

<table>
<thead>
<tr>
<th>Authorised Discharge Points</th>
<th>Purpose</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge Point 1 (Bass Strait outfall)</td>
<td>Discharge of all treated wastewater (including all first flush stormwater) and other stormwater into Bass Strait via the wastewater pipeline and Bass Strait outfall</td>
<td>A 200 metre diffuser with end point at approximately GDA 94 5460969 Northing and 488346 Easting, or as otherwise approved in writing by the Director.</td>
</tr>
<tr>
<td>Discharge Point 2 (Tamar River)</td>
<td>Discharge of non first flush stormwater from a 1 in 20 year, 24 hour rainfall event (or greater) into the Tamar River. Discharge is only permitted if stormwater detention ponds have reached full capacity.</td>
<td>Location to be specified by the Director</td>
</tr>
</tbody>
</table>
SCHEDULE LU1

Stormwater - construction

3SW 3.1 All stormwater runoff from areas disturbed by construction activities must be directed to a detention pond or to the wastewater treatment plant and treated prior to discharge from the pulp mill site to the satisfaction of the Director. Detention ponds must be installed and maintained on the pulp mill site for the duration of construction activities as part of the stormwater management system in accordance with the following requirements:

(a) discharge from ponds must occur via a stable spillway that is not subject to erosion;
(b) all dam walls must be stable and constructed in such a manner as to prevent erosion;
(c) ponds must be regularly cleaned out to ensure that the pond design capacity is maintained; and
(d) sediment removed from the ponds must be deposited in such a manner and location as to ensure that sediment will not be transported off the site by surface run-off, to the satisfaction of the Director.

3SW 4.1 Prior to the commencement of construction activities on the pulp mill site, or by a date specified in writing by the Director, a Construction Stormwater Management Plan must be submitted to the Director for approval.

4.2 The plan must be prepared in accordance with the requirements of these conditions, and any guidelines provided by the Director. Unless otherwise approved by the Director, the plan must be generally consistent with sections 4.7 and 4.8 of volume 2 of the DIIS.

4.3 The plan must include, but is not limited to, details of the following:

(a) an integrated stormwater management system incorporating segregation, storage, treatment and reuse of stormwater to prevent the discharge of potentially contaminated stormwater from the pulp mill site for the duration of construction activities in relation to the pulp mill activity;
(b) the diversion of groundwater and surface water flows around the construction footprint by way of temporary and or permanent drainage measures;
(c) a monitoring program;
(d) details of a proposed discharge point for overflows from the stormwater detention pond, which may include a pipeline and outfall;
(e) the proposed dates after which stormwater from the pulp mill site can be discharged via the Bass Strait outfall;
(f) a table containing all of the major commitments made in the plan;
(g) an implementation timetable for key aspects of the plan; and
(h) a reporting program to regularly advise the Director of the results of the plan.

4.4 Construction activities must not take place unless the plan has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the plan provided that the sections of the plan relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

4.5 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

4.6 The approved plan must be made publicly available.

**Stormwater - operation**

3SW 5.1 At least 60 days prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, an Operational Stormwater Management Plan for the pulp mill site must be submitted to the Director for approval.

5.2 The plan must be prepared in accordance with any guidelines provided by the Director. Unless otherwise approved by the Director, the plan must be generally consistent with sections 4.7 and 4.8 of volume 2 of the DIIS. The plan must include, but is not limited to, details of the following:

(a) an integrated stormwater management system incorporating segregation, storage, treatment and reuse of stormwater from the pulp mill site;

(b) strategies to prevent the uncontrolled release of stormwater from the pulp mill site;

(c) identification of areas from which runoff could reasonably be expected to contain pollutants (including the wharf area);

(d) strategies to minimise the potential for pollution of stormwater;

(e) strategies to segregate potentially polluted stormwater from other stormwater;

(f) methods to be used to segregate and treat the first flush stormwater from the balance of the rainfall event;

(g) the location and capacity of stormwater detention ponds that would receive the first flush of rainfall events from potentially polluted areas;

(h) the location and capacity of detention ponds that would receive the balance of rainfall events from potentially polluted areas;

(i) a monitoring program for emissions from the stormwater management system (including emissions prior to mixing with the wastewater treatment plant discharge);
(j) monitoring and maintenance procedures for ensuring all stormwater infrastructure is maintained in good working order; 
(k) a table containing all of the major commitments made in the plan; 
(l) an implementation timetable for key aspects of the plan; and 
(m) a reporting program to regularly advise the Director of the results of the implementation of the plan.

5.3 Commissioning activities in relation to the pulp mill activity must not take place unless the plan has been approved in writing by the Director.

5.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

5.5 The approved plan must be made publicly available.

3SW 6.1 All potentially polluted stormwater (other than first flush stormwater) from the pulp mill site must be directed to a detention pond and treated prior to discharge from the pulp mill site to the satisfaction of the Director. Detention ponds must be installed and maintained as part of the stormwater management system in accordance with the following requirements:

(a) the capacity must be sufficient to contain stormwater from the pulp mill site from a 1 in 20 year, 24 hour rainfall event;
(b) discharge from ponds must occur via a stable spillway that is not subject to erosion;
(c) all dam walls must be stable and constructed in such a manner as to prevent erosion;
(d) ponds must be regularly cleaned out to ensure that the pond design capacity is maintained; and
(e) sediment removed from the ponds must be deposited in such a manner and location as to ensure that sediment will not be transported off the site by surface run-off, to the satisfaction of the Director.

3SW 7.1 From the commencement of commissioning activities in relation to the pulp mill activity, or from an earlier date if specified in writing by the Director, all first flush stormwater from the pulp mill site must be collected and transferred to the wastewater treatment plant for treatment prior to discharge from the pulp mill site to the satisfaction of the Director.

3SW 8.1 If a discharge event occurs involving a discharge to the Tamar River via Discharge Point 2, then the Director must be notified within 24 hours.

8.2 Daily grab samples of the discharge must be collected for the duration of the discharge event, and samples tested for BOD, TSS and TPH and oil and grease.
8.3 A report must be submitted to the Director within 14 days of the discharge event detailing the duration of the discharge event, monitoring results associated with the event, and a justification for the release based on the meteorological events associated with the event.

3SW 9.1 Any part of the wharf site from which runoff could reasonably be expected to contain pollutants must be bunded and drain to a gross pollutant trap(s) and then to the stormwater management system or wastewater treatment plant. The bunded areas must contain valves which are locked to prevent discharge when hazardous materials are being handled on the wharf.

3SW 10.1 Non-polluted stormwater collected on the pulp mill site must be reused on-site to the greatest extent practicable, and in such a manner as to prevent environmental harm.

**Stormwater emission limits**

3SW 11.1 In any discharge from pulp mill site (other than via the authorised discharge point 1 (Bass Strait outfall)) the concentration of a pollutant specified in column 1 must not exceed the limit specified in column 2 in respect of that pollutant.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2 Limit and units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
<td></td>
</tr>
<tr>
<td>TSS</td>
<td>50 mg/L</td>
</tr>
<tr>
<td>BOD</td>
<td>15 mg/L</td>
</tr>
<tr>
<td>TPH</td>
<td>0.5 mg/L</td>
</tr>
<tr>
<td>Oil and Grease</td>
<td>5 mg/L</td>
</tr>
</tbody>
</table>

**Wastewater treatment**

3WW1.1 Unless otherwise authorised in writing by the Director or provided for in these conditions, all wastewater generated on the pulp mill site must be treated in the wastewater treatment plant prior to discharge to the wastewater pipeline. This includes:

(a) process effluent streams from the pulp mill activity;
(b) laboratory wastewater (excluding hazardous waste);
(c) first flush stormwater collected on the pulp mill site;
(d) domestic sewage and grey water from the pulp mill site;
(e) leachate from the landfill site; and
(f) any other wastewater specified in writing by the Director.

3WW2.1 The wastewater treatment plant must be generally constructed, operated and maintained in accordance with the DIIS and further information, and must incorporate the following to the satisfaction of the Director:

(a) primary (solids) and secondary (biological) treatment stages;
(b) the capacity to be extended to include additional biological stages or tertiary chemical treatment stages if required;
(c) an anoxic chlorate removal stage;
(d) equipment redundancy where practicable; and
(e) temporary storage basin(s) capable of safely storing up to 100,000 cubic metres of untreated process wastewater.

3WW3.1 Temporary storage basin(s) must be operated and maintained in such a manner as to maintain an available capacity of 90,000 cubic metres for 95% of the time when calculated as an annual average.

3WW4.1 Prior to the commencement of construction of the temporary storage basin(s), or by a date specified in writing by the Director, detailed design plans must be submitted to the Director for approval. Construction activities in relation to the temporary storage basin(s) must not commence unless the design plans have been approved in writing by the Director.

4.2 The temporary storage basin(s) must be constructed, operated and maintained in accordance with any written requirements of the Director.

3WW5.1 At least 30 days prior to the commencement of commissioning activities in relation to the wastewater treatment plant, or by a date specified in writing by the Director, a Wastewater Treatment Plant Contingency Plan must be submitted to the Director for approval.

5.2 The plan must be prepared in accordance with any guidelines provided by the Director. The plan must include, but is not limited to, details of the following:
   (a) identification of potential events (such as equipment malfunction, operator error, or change in untreated wastewater quality) which have the potential to lead to a non-compliance with emission limits contained in these conditions if corrective actions are not taken;
   (b) identification of actions to be taken in response to such potential events to avoid or mitigate adverse effects (such actions must include shutdown procedures for process areas of the pulp mill activity, training and exercising of the plan);
   (c) operational procedures for the temporary storage basin(s) to achieve optimal available capacity;
   (d) a table containing all of the major commitments made in the plan;
   (e) an implementation timetable for key aspects of the plan; and
   (f) a program for regularly updating the plan.

5.3 Commissioning activities in relation to the wastewater treatment plant activity must not take place unless the plan has been approved in writing by the Director.
5.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

5.5 The approved plan must be made publicly available.

3WW6.1 Within 15 months of the completion of commissioning activities, or by a date specified in writing by the Director, a wastewater review report must be submitted to the Director for approval. The report must include, but is not limited to, details of the following:

(a) identification, characterisation and classification of the major wastewater streams generated by the pulp mill activity based on the first 12 months of operation; and

(b) comparison of the operating performance levels with the design specification for each major wastewater source specified in the DIIS.

Wastewater treatment plant influent investigation levels

3WW7.1 With respect to the total influent to the wastewater treatment plant (as measured immediately prior to the first pre-treatment stage of the wastewater treatment plant and excluding first flush stormwater), if the load of a parameter specified in column 1 exceeds the corresponding investigation level specified in column 2 or column 3, or any other investigation levels specified in writing by the Director, then the person responsible must:

(a) take all practicable measures to bring the emission into compliance with the investigation levels as soon as is practicable;

(b) notify the Director of the exceedence as soon as practicable but not later than 24 hours, after becoming aware of the exceedence;

(c) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to reduce levels to below the investigation levels, and proposed future actions arising as a result of the exceedence; and

(d) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.
**SCHEDULE LU1**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Column 1: Average daily load (kg/d)</th>
<th>Column 2: Maximum daily load (kg/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSS</td>
<td>46 000</td>
<td>64 650</td>
</tr>
<tr>
<td>BOD5</td>
<td>54 050</td>
<td>72 900</td>
</tr>
<tr>
<td>COD</td>
<td>157 500</td>
<td>215 700</td>
</tr>
<tr>
<td>AOX</td>
<td>1 600</td>
<td>1 800</td>
</tr>
<tr>
<td>TDS</td>
<td>233 000</td>
<td>314 500</td>
</tr>
<tr>
<td>Colour</td>
<td>34 600</td>
<td>55 000</td>
</tr>
<tr>
<td>Chlorate</td>
<td>5 250</td>
<td>5 850</td>
</tr>
</tbody>
</table>

**Wastewater treatment plant discharge investigation levels**

3WW8.1 If a pollutant or parameter in the total wastewater discharged from the wastewater treatment plant as measured at the plant outlet prior to any dilution (Wastewater Monitoring Point 1), exceeds an investigation level specified in Annex W2, including any amendments to Annex W2 notified in writing by the Director, then the person responsible must:

(a) take all practicable measures to bring the emission into compliance with the investigation levels as soon as is practicable;

(b) notify the Director of the exceedence as soon as practicable but not later than 24 hours, after becoming aware of the exceedence;

(c) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to reduce levels to below the investigation levels, and proposed future actions arising as a result of the exceedence; and

(d) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.

**Wastewater discharge limits**

3WW9.1 Wastewater discharged from the wastewater treatment plant as measured at the wastewater treatment plant outlet prior to any dilution (Wastewater Monitoring Point 1), must comply with the limits specified in Annex W1.

3WW10.1 The toxicity of undiluted wastewater samples collected from Wastewater Monitoring Point 1 must not;

(a) cause a greater than 50% mortality in any 96 hour *Allorchestes compressa* bioassay; or

(b) cause a greater than 50% inhibition of light in any 15 minute Microtox® bioassay.
3WW11.1 The No Observable Effects Concentration of all chronic toxicity testing of water samples collected from Wastewater Monitoring Point 1 must be greater than 0.2%.

3WW12.1 A mixture of wastewater sampled from Wastewater Monitoring Point 1, at a time when there has been no stormwater inflow to the wastewater treatment plant for a period of at least 24 hours, and receiving water, in a proportion equal to the minimum dilution predicted to be achieved at the edge of the mixing zone as nominated by the Director, must have the following properties in comparison to the receiving water alone:

(a) the visual clarity must not be reduced by more than 20%;
(b) the hue must not be reduced by more than 10 points on the Munsell Scale;
(c) the reflectance must not be changed by more than 50%;
(d) the horizontal sighting of a 200 mm black Secchi disc must be more than 1.6 m;
(e) no more than 10% change in the natural euphotic depth; and
(f) no more than 10% change in the seasonal mean nephelometric turbidity.

3WW13.1 Where wastewater measured at Wastewater Monitoring Point 1 does not comply with the limits specified in Annex W1 the person responsible must:

(a) take all practicable measures to bring the emission into compliance with the requirements of Annex W1 as soon as is practicable;
(b) notify the Director of the exceedence as soon as practicable, but not later than 24 hours, after becoming aware of the exceedence;
(c) provide a report within 48 hours of the notification describing the reasons for the exceedence, the measures taken to bring the emission into compliance with the limits in Annex W1, and proposed future actions arising as a result of the exceedence; and
(d) comply with any requirements of the Director in relation to rectifying the exceedence or preventing a future exceedence.

Wastewater and stormwater management – woodchip mill

3WW14.1 Within six months of the issue of this permit, or by a date specified in writing by the Director, a Woodchip Mill Wastewater Strategy Report must be submitted to the Director for approval.

14.2 The report must be prepared in accordance with any guidelines provided by the Director. The strategy must include, but is not limited to, details of the following:
SCHEDULE LU1

(a) a proposal for integrating the woodchip mill wastewater and stormwater management systems with the pulp mill wastewater and stormwater management systems;
(b) a decommissioning program for existing facilities, including existing discharge points to the Tamar River;
(c) A table containing all of the major commitments made in the strategy; and
(d) An implementation timetable for key aspects of the strategy.

14.3 Commissioning activities in relation to the pulp mill activity must not take place unless the report has been approved in writing by the Director.

14.4 The commitments contained in the report and any other requirements of the Director must be implemented to the satisfaction of the Director.

3WW15.1 All wastewater from the woodchip mill site, including untreated sewage, greywater, process water and potentially polluted stormwater must be treated in the wastewater treatment plant, unless otherwise approved in writing by the Director.

Wastewater monitoring program

3WW16.1 Emissions from the wastewater treatment plant must be monitored in accordance with the requirements of Annex W3, including any amendment to Annex W3 notified in writing by the Director.

3WW17.1 Where continuous monitoring of wastewater is required by these conditions, monitoring equipment must be installed and maintained such as to ensure monitoring of wastewater is undertaken for 100% of the time wastewater is being discharged from the wastewater treatment plant, unless otherwise specified in writing by the Director.

17.2 All continuously monitored wastewater treatment plant emission levels must be displayed on a web site in real time in a graphical form approved by the Director.

17.3 Archived data must be retained for a minimum period of five years and be available via this web site.

17.4 The Director must be provided with read and download access to this web site.

Wastewater toxicological assessment program

3WW18.1 At least 90 days prior to the commencement of commissioning activities in relation to the pulp mill activity, or by a date specified in writing by the Director, a toxicological assessment program must be submitted to the Director for approval.
18.2 The program must be prepared in accordance with any guidelines provided by the Director. The program must include, but is not limited to, details of the following:

(a) a program to characterise the toxicity of wastewater sampled at Wastewater Monitoring Point 1. The assessment must include characterisation of wastewater toxicity when the activity is processing eucalyptus feedstock and pine feedstock;

(b) details of the laboratory, testing methods, standard operating procedures, quality assurance/control procedures and proposed statistical analyses and software to be used; and

(c) details of sample storage and transport to a toxicological assessment laboratory including temperature control, delivery timeframes and chain of custody procedures.

18.3 Commissioning activities in relation to the pulp mill activity must not take place unless the program has been approved in writing by the Director.

18.4 The approved program, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

3WW19.1 After the completion of commissioning activities, toxicity testing must be conducted on a grab sample collected from Wastewater Monitoring Point 1 in accordance with the test type and frequency specified below.

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microtox® (15 minute exposure)</td>
<td>Weekly</td>
</tr>
<tr>
<td>96 hr survival of the juvenile amphipod <em>Allorchestes compressa</em></td>
<td>Weekly</td>
</tr>
<tr>
<td>72 hr micro-algal growth inhibition test using <em>Nitzschia closterium</em></td>
<td>Monthly</td>
</tr>
<tr>
<td>72 hr macro-algal germination assay using <em>Hormosira banksii</em></td>
<td>Monthly</td>
</tr>
<tr>
<td>Sea urchin fertilisation success using <em>Heliocidaris tuberculata</em></td>
<td>Monthly</td>
</tr>
<tr>
<td>72 hr larval development using sea urchin, <em>Heliocidaris tuberculata</em></td>
<td>Monthly</td>
</tr>
<tr>
<td>48 hr larval development using the doughboy scallop <em>Mimachlamys asperrima</em></td>
<td>Monthly</td>
</tr>
<tr>
<td>96 hr larval fish imbalance test (using e.g., striped trumpeter <em>Latris lineate</em>).</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

19.2 Unless otherwise approved in writing by the Director, test concentrations must include the raw sample and at least four serial dilutions at a 0.5 dilution factor, and a control. In the event that the response in the lowest wastewater concentration is statistically significantly different from the control, the Director may require that additional test concentrations be used for subsequent testing.
SCHEDULE LU1

19.3 The toxicity of the raw effluent must not elicit a greater than 50% effect in 96hr *Allorchestes compressa* and 15 minute Microtox® bioassays.

19.4 In the event that the mortality of the test organisms in *Allorchestes compressa* or light inhibition in Microtox® (15 minute exposure) bioassays, is 50% or greater, the person responsible must:
   (a) notify the Director within 24 hours; and
   (b) within two days, initiate a program to collect water samples twice a week and assess toxicity using the same test method. This program must continue until the inhibitory response in three consecutive bioassays is less than 50%.

19.5 In the event that the results for a test do not meet quality assurance/quality control acceptability criteria, the person responsible must notify the Director within 24 hours. The Director may require an additional sample to be tested.

19.6 Unless otherwise approved in writing by the Director, the results of laboratory toxicity testing must be submitted to the Director within 14 days of completion of the testing by the laboratory. Reports are to be submitted in both digital and paper form. Reports are to include at a minimum; raw data, statistical methods and results.

*Surface water monitoring- construction*

3WW20.1 During construction on the mill site, monitoring of pH, turbidity, conductivity, dissolved oxygen and TPH must be undertaken daily at surface water monitoring locations identified in summary table 2.2 of the *Pulp Mill Environmental Monitoring Program*, and from all sediment detention pond discharge points.

20.2 If turbidity exceeds 130 NTU/50ppm, a water sample must be collected for overnight analysis of TSS to validate, or otherwise, the results.

*Marine activities*

*Wharf construction*

3MR 1.1 Prior to the commencement of construction activities in State waters in relation to the wharf, or by a date specified in writing by the Director, a Wharf Construction Management Plan must be submitted to the Director for approval.

1.2 The plan must include, but is not limited to, details of the following:
   (a) the proposed construction method;
   (b) a map showing the proposed location and extent of the wharf;
SCHEDULE LU1

(c) the methodology and results of a sediment survey of the riverbed where the wharf is to be installed, to be carried out in accordance with a sediment survey design approved by the Director, which must include analysis of particle size distribution, redox status, metals and nutrients;

(d) the methodology and results of a program to characterise potential impacts of sediment disturbance, including elutriate testing of sediment cores;

(e) proposed measures relating to siting, design and/or management to minimise adverse impacts due to disturbance of sediments and other construction activities;

(f) the proposed construction method to be used;

(g) a map showing the proposed location and extent of the wharf;

(h) proposed rehabilitation measures, including measures to stabilise disturbed riverbanks;

(i) a table containing all of the major commitments made in the plan;

(j) an implementation timetable for key aspects of the plan; and

(k) a reporting program to regularly advise the Director of the progress of implementing the plan.

1.3 Construction activities in relation to the wharf must not commence unless the plan has been approved in writing by the Director. Notwithstanding the above, some construction activities may take place prior to the approval of the plan provided that the sections of the plan relevant to those activities are considered satisfactory by the Director, and provided that the Director has given written authority for those construction activities to take place.

1.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.5 The plan must be made publicly available.

3MR 2.1 Dredging is not permitted in relation to wharf construction activities, unless approved in writing by the Director.

Underwater blasting

3MR 3.1 No underwater blasting is permitted, unless an Underwater Blasting Plan has been prepared and submitted as prescribed below and the plan has been approved in writing by the Director:

3.2 The Underwater Blasting Plan must be submitted to the Director for approval prior to blasting commencing.

3.3 The plan must include, but is not limited to, details of the following:

(a) justification for why blasting is required;
(b) the number, location, timing and magnitude of proposed underwater blasts;
(c) potential impacts that the blasting may produce;
(d) mitigation measures that will be put in place to avoid or mitigate potential impacts;
(e) a monitoring programme to monitor impacts due to the blasting; and
(f) a reporting program to regularly advise the Director of the results of the plan.

3.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

3.5 The plan must be made publicly available.

**Marine pest management**

3MR 4.1 The CEMP must include details of proposed measures and procedures for the management of marine pests.

4.2 The CEMP must, as a minimum, be consistent with the current International Ballast Water Management Arrangements implemented under the *Quarantine Act 1908* (Commonwealth). The CEMP must also contain appropriate measures to manage domestic ballast water and biofouling arrangements for all vessels associated with construction activities consistent with the *Draft Domestic Ballast Water Management Arrangements* and the *National Best Management Practice Guidelines for Commercial Non-Trading Vessels* (with respect to managing translocation of marine pests), that are currently being finalised by the National Introduced Marine Pest Coordination Group.

4.3 The CEMP must include, but is not limited to, details of the following:
   (a) the number and type of sea going vessels that will be involved in the construction activities and their history of movement for the last twelve months;
   (b) the manner in which all construction sea going vessels, plant, equipment and materials will be managed and treated to minimise the potential for translocating introduced marine pests prior to arrival at, and/or departure from, each construction site; and
   (c) the manner in which any international or domestic sea going vessels will be managed with regard to the translocation of marine pests.

**Dinoflagellate Cyst Monitoring Report**

3MR 5.1 Prior to the commencement of construction activities in relation to the wharf, or by a date specified in writing by the Director, a
SCHEDULE LU1

Dinoflagellate Cyst Monitoring Report must be submitted to the Director for approval.

5.2 The report must include, but is not limited to, details of the following:
   (a) the methodology and results of dinoflagellate cyst surveys undertaken in areas to be disturbed by construction activities in relation to the wharf; and
   (b) proposed recommendations relating to siting, design and/or management measures to minimise adverse impacts.

5.3 Construction activities in relation to the wharf must not commence unless the report has been approved in writing by the Director.

5.4 The recommendations of the approved report, and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

Marine fauna management

3MR 6.1 The CEMP must include details of proposed measures and procedures for the management of marine mammals and turtles.

6.2 The CEMP must include, but is not limited to, details of the following:
   (a) proposed management measures to avoid and/or minimise impacts to marine mammals and turtles due to wharf construction activities;
   (b) methods to be used and procedures for the visual assessment of the water within the prescribed cetacean monitoring zone and pinniped and turtle monitoring zone to detect the presence of marine mammals and turtles prior to the commencement and for the duration of construction activities;
   (c) proposed procedures for vessels encountering marine mammals or turtles once they are within a monitoring, alert or exclusion zone or when the vessel is close enough to affect the mammals or turtles; and
   (d) mitigation measures for construction activities to prevent acoustic disturbance to marine mammals or turtles.

Marine mammals and turtles surveillance

3MR 7.1 When construction activities are occurring within State waters, regular visual surveillance at 10 to 15 minute intervals within a cetacean monitoring zone must be conducted in accordance with the CEMP.

3MR 8.1 When construction activities are occurring within State waters, continual visual surveillance must occur within the cetacean alert area when listed cetaceans species are known to be present, in accordance with the CEMP.
SCHEDULE LU1

3MR 9.1 Construction activities within State waters must not occur or must cease if any listed cetacean species is known to be present within the cetacean exclusion area.

3MR 10.1 When construction activities are occurring within State waters, visual surveillance at 10 to 15 minute intervals within a pinniped and turtle monitoring zone must be conducted in accordance with the CEMP.

3MR 11.1 When construction activities are occurring within State waters, continual visual surveillance must occur within the pinniped and turtle alert area when listed pinniped and/or turtle species are known to be present, in accordance with the CEMP.

3MR 12.1 Construction activities within State waters must not occur or must cease if any listed pinniped and/or turtle species is known to be present within the pinniped and turtle exclusion area.

3MR 13.1 Visual surveillance and assessments within a cetacean monitoring zone or a pinniped and turtle monitoring zone must be conducted by appropriately qualified person(s).

3MR 14.1 Soft start procedures must be adopted when undertaking construction activities within State waters.

Marine monitoring

3MR 15.1 Prior to the commencement of construction activities, ten sediment core samples must be taken to a depth of 30cm, and equally spaced throughout the sub tidal part of the wharf site.

15.2 Samples must be analysed for the pollutants or parameters specified in Column 1 of Annex M1 to these conditions, and any other pollutants or parameters specified in writing by the Director.

3MR 16.1 In situ profile monitoring of pH, turbidity, temperature and dissolved oxygen must be undertaken daily in one location directly up-current and one location directly down-current of wharf construction activities during periods where construction activity is occurring in State waters.

3MR 17.1 Where a substantial suspended solids plume is generated by the wharf construction activity, water samples must be collected from within the turbid plume, and as near as is practicable to the source of the plume.

17.2 Where substantial suspended solids plumes are being generated on a daily basis, water samples must be collected from within the turbid plume as a minimum every second day.

17.3 Samples must be analysed for the pollutants and parameters specified in Column 2 of Annex M1 to these conditions, and any other parameters specified in writing by the Director.
SCHEDULE LU1

3MR 18.1 Within 90 days of the completion of construction activities associated with the wharf, or by a date specified in writing by the Director, a report must be submitted to the Director which contains the results of an ecological monitoring program for construction activities in relation to the wharf undertaken using the monitoring design described in Section 4.2.1-4.2.7 of the Aquental Pty Ltd December 2006 report titled Ecological Monitoring Program for Marine and Estuarine Habitats during the construction and operation phases of Gunns Limited’s proposed pulp mill.

3MR 19.1 The ecological monitoring program for State waters for the operational phase must replicate the principles of sample design, statistical methods and sample locations used for the pre operational phase baseline monitoring implemented and agreed to by the Director. The control stations characteristics must be representative of the proposed impact sites.

3MR 20.1 All results of any ecological monitoring in State waters undertaken in accordance with these conditions must be made available to the Director within 90 days of the monitoring being completed.

3MR 21.1 Marine fauna (excluding marine mammals and seabirds) or flora collected as part of any monitoring programs associated with State waters must be identified to the lowest possible taxonomic level, which as a minimum must be at least down to family level or in the case of introduced species and molluscs down to species level.

3MR 22.1 All marine fauna (excluding marine mammals and seabirds) and flora collected must be appropriately preserved and placed in storage jars that must be labelled (inside and outside) with details of date of collection, site location, collection method, and collector’s and identifier’s name. These jars are to be stored for at least 5 years in a safe place so that confirmation of species identification can be investigated at a later date, if required.
SECTION 4 – LANDFILL
Additional conditions relating to the landfill activity

General

4GN 1.1 The landfill must be constructed and operated in accordance with the landfill design described in the document entitled *Gunns Pulp Mill Solid Waste Landfill Conceptual Design*, dated June 2006, prepared by Pitt & Sherry Holdings Pty Ltd, contained in Volume 16, Appendix 55 of the DIIS, unless otherwise required by these conditions or approved in writing by the Director.

4GN 2.1 The landfill must be designed, constructed and operated to maintain its structural integrity and to prevent the escape of pollutants to surface water, groundwater or outside the boundaries of the landfill site.

4GN 3.1 Details of the design and location of the proposed septic tank and absorption trench for the staff facilities must be approved by the General Manager, George Town Council prior to the commencement of construction activities in relation to the landfill activity.

4GN 4.1 Deposition of waste must be confined within the landfilling footprint as defined by the area labelled LANDFILL and surrounded by a heavy black line on diagram H05069-R1 Site Plan and Geotechnical Testing Locations in Appendix F, Conceptual Site Infrastructure, of *Gunns Pulp Mill Solid Waste Landfill Conceptual Design*, dated June 2006, prepared by Pitt & Sherry Holdings Pty Ltd, as provided in Volume 16, Appendix 55 of the DIIS, unless otherwise required by these conditions or approved in writing by the Director.

Revision of landfill design

4GN 5.1 Prior to the commencement of construction activities in relation to the landfill activity, or by a date specified in writing by the Director, a Landfill Design Report must be submitted to the Director for approval.

5.2 The report must include, but is not limited to, details of the following:

(a) groundwater table control;
(b) modelling of leachate production;
(c) leachate storage capacity;
(d) leachate collection system,
(e) choice of liner material and design specifications;
(f) landfill capping;
(g) the witness system; and
(h) perimeter drains.
SCHEDULE LU1

5.3 The report must demonstrate compliance with the Landfill Sustainability Guide as relates to secure landfills.

5.4 Construction activities in relation to the landfill activity must not commence until the Landfill Design Report has been approved in writing by the Director.

5.5 The landfill must be constructed in accordance with the recommendations of the approved Landfill Design Report, unless otherwise approved in writing by the Director.

5.6 The report must be made publicly available.

Maximum quantity

4GN 6.1 No more than 50,000 tonnes of waste may be deposited or stored on the landfill site per year.

Permitted waste types

4GN 7.1 Only the following wastes are authorised for deposition or storage on the landfill site:

(a) inert waste;
(b) green liquor dregs;
(c) slaker sand;
(d) lime kiln electrostatic precipitator dust;
(e) boiler ash; or
(f) any other waste approved in writing by the Director.

7.2 Waste from sources other than the pulp mill activity must not be deposited or stored at the landfill site without the prior written approval of the Director.

7.3 The following waste types must not be deposited or stored at the landfill site:

(a) controlled wastes other than controlled waste approved under these conditions for disposal at the landfill site;
(b) liquid waste;
(c) putrescible waste including canteen and office waste;
(d) waste of organic (living) origin; and
(e) wastewater treatment plant sludge.

Release of heat of hydration

4GN 8.1 The heat of hydration of lime kiln electrostatic precipitator dust must be released prior to it being disposed of at the landfill site.
SCHEDULE LU1

Reporting requirements

4GN 9.1 Any seismic activity identified in the immediate vicinity of the landfill site must be reported to the Director within 24 hours.

4GN 10.1 The annual Environmental Performance Report must review the environmental performance of the landfill activity over the preceding year. The review report must include details of:
   (a) a statement by the General Manager or Chief Executive Officer acknowledging the contents of the annual review report;
   (b) volume and mass deposited;
   (c) records of waste types received;
   (d) compaction density achieved;
   (e) an assessment of the performance of the leachate collection system;
   (f) a characterisation of the chemical composition of the leachate;
   (g) an assessment of the degree of compliance with these conditions;
   (h) a summary of environment related complaints received and actions taken in relation to complaints; and
   (i) any other matters of significance to the environmental management of the activity.

Commencement of works

4GN 11.1 Preparatory works must not be undertaken for a new cell unless at least 14 days prior notice in writing has been given to the Director of the intention to do so. Such notice must include details of the proposed works and timeframes.

4GN 12.1 As new cells are constructed, a suitably qualified person with sound knowledge and relevant experience in landfill design must be present for as much time as is necessary to enable him/her to properly discharge the responsibilities specified in this condition.

12.2 The suitably qualified person must supervise liner installation and construction quality control. The suitably qualified person must be directly responsible for:
   (a) the supervision of all technical staff involved;
   (b) approval of all quality control testing;
   (c) the recording of engineering construction and quality assurance activities; and
   (d) full testing of clay material (where used) using methods outlined in Australian Standard 1289.5 (Methods of Testing Soils for Engineering Purposes, Soil Compaction and Density Tests).
SCHEDULE LU1

4GN 13.1 Quality assurance specifications must be prepared for construction and testing of landfill engineering works, including liners, capping and the leachate collection system. In particular:

(a) construction supervision must include Level 1 supervision and field testing by a qualified geotechnician, as per Australian Standard 3798 (Guidelines on Earth Works for Commercial and Residential Developments), for Type 1 earthworks;

(b) the geometry and thickness of clay liners must be measured and documented by a registered surveyor;

(c) all testing and certification must be performed by a person who is independent of both the person responsible and the construction contractor; and

(d) a report documenting conformity with these requirements must be submitted to the Director prior to any wastes being disposed of in the new cell.

Leachate

4LC 1.1 All leachate must be collected and transferred to the wastewater treatment plant for treatment.

Leachate barrier

4LC 2.1 The landfill must be designed, constructed and operated so that pollution of groundwater or surface water by leachate is prevented.

4LC 3.1 Waste must not be deposited in any new cell at the landfill site until the liner and leachate collection system for that cell has been constructed and completed in accordance with these conditions.

4LC 4.1 Unless otherwise approved by the Director the landfill liner for any new cell must comply with Table 3.1 of the Landfill Sustainability Guide as it relates to Category C (secure) landfills.

4LC 5.1 In addition to the requirements specified in the Landfill Sustainability Guide the landfill liner must incorporate a witness system. The witness system must be designed to detect liner failure by collecting leachate passing through the liner. The witness system must be installed in the lowest layer of the landfill liner and must provide a contiguous preferential drainage pathway for leachate from the liner to the witness sump.

Leachate collection system

4LC 6.1 A leachate collection system must be designed, constructed and maintained so as to collect all leachate likely to arise from waste deposited at the landfill site and to prevent it from escaping from the landfill site into groundwater or surface waters.
SCHEDULE LU1

4LC 7.1 The landfill leachate system must be designed and constructed to ensure that leachate accumulating on the landfill liner does not exceed a hydraulic head of 0.3 metres above any part of the landfill liner.

4LC 8.1 Leachate must be managed to prevent nuisance odours, and to minimise human contact with the leachate.

Detection of leachate in the witness sump

4LC 9.1 If any leachate is detected in the witness sump the Director must be notified within 24 hours of this being known and the person responsible must measure the daily flow reporting to the witness sump at least once per month while that flow continues.

4LC 10.1 If the flow of leachate reporting to the witness sump exceeds 10 litres per day, deposition of waste must cease immediately and the person responsible must undertake a detailed investigation of the integrity of the landfill liner. Deposition of waste must not recommence without the prior written approval of the Director.

Groundwater

4GW 1.1 Unless otherwise approved by the Director, sub-liner drainage must be provided to ensure that groundwater always remains at least 5 metres below the lowest point of the landfill liner.

Stormwater

4SW 1.1 Unpolluted stormwater must be prevented as far as practicable from mixing with deposited waste.

1.2 The landfill site must incorporate a surface water diversion system designed and maintained to prevent surface water run off from adjacent land which might reasonably result from a 24 hour, 1 in 50 year storm from entering the landfill cells.

4SW 2.1 All reasonable measures must be implemented to ensure that sediment transported along stormwater drains remains on the landfill site. Such measures may include provision of strategically located sediment fences, and appropriately sized and maintained sediment settling ponds.

4SW 3.1 In the event that stormwater becomes polluted by leachate, measures must be implemented immediately to prevent pollutants from discharging beyond the boundaries of the landfill site. Polluted stormwater must be:

(a) transferred to the leachate collection system; or

(b) irrigated over the landfill cells; or
SCHEDULE LU1

(c) collected and transferred to the wastewater treatment plant for treatment.

Fire management

4WF 1.1 Fire control measures on the landfill site must be to the satisfaction of the Tasmania Fire Service. Correspondence from the Tasmania Fire Service indicating the suitability of fire control measures must be submitted to the Director within 6 months of the date of issuing of this permit.

4WF 2.1 Any fire occurring on the landfill site must be immediately reported to the Director.

4WF 3.1 Fires occurring on the landfill site must be extinguished as soon as possible using all practical means available.

4WF 4.1 Fires must not be lit on the landfill site.

Dust management

4DS 1.1 Measures must be implemented and maintained throughout the operational life of the landfill to control and monitor the escape of dust from the landfill site as follows:

(a) the person responsible must ensure that any waste disposed of on the landfill site that is reasonably likely to be dispersed by wind is:
   i) wetted to the extent necessary to prevent dispersal of dust; and
   ii) covered daily to minimise dispersal of dust;

(b) dust emissions from areas of the landfill site used by vehicles must be controlled by dampening of the areas or by other measures to prevent environmental nuisance.

Miscellaneous

Waste cover

4MS 1.1 The source and nature of the material to be used to cover the waste must be specified by the person responsible and approved in writing by the Director prior to any waste being deposited on the landfill site.

Waste capping

4MS 2.1 Unless otherwise approved by the Director, final capping must be installed within one year of the completion of filling of each landfill
cell and must comply with Table 5.1 of the Landfill Sustainability Guide.

**Site security**

4MS 3.1 The person responsible must restrict access to the landfill site to prevent unauthorised entry. When unattended, the landfill site must be securely closed and locked to deter unauthorised entry by persons and vehicles.

4MS 4.1 Unless otherwise approved by the Director a 2.4-metre high security fence must be constructed and maintained to restrict access to areas that are actively being used for waste deposition.

**Site staffing**

4MS 5.1 While the site is open for reception of waste, the site must be attended by a person or persons whose duties must include supervising the management of waste deposition and ensuring compliance with these conditions.

**Vehicle wash facilities**

4MS 6.1 Facilities for cleaning vehicles to remove waste and mud must be provided and utilised to the satisfaction of the Director to prevent excess waste or mud being deposited on public roads.

**Operations manual**

4MS 7.1 A site operations manual or environmental management system (EMS) must be developed within 12 months of the date of issuing of this permit. The manual or EMS must provide detailed information relating to landfill operations and must detail operational procedures as required to ensure compliance with these conditions.

7.2 The person responsible must ensure that landfill personnel carry out their duties in accordance with the manual.

7.3 A copy of the manual or EMS must be submitted to the Director upon request.
Decommissioning and rehabilitation

Progressive rehabilitation

4DR 1.1 Progressive rehabilitation and revegetation must be conducted in accordance with the following:
   (a) rehabilitation must commence, on a progressive basis, immediately after completion of filling and capping of each cell;
   (b) rehabilitation must include planting or seeding compatible with the proposed end use of the site; and
   (c) maintenance and monitoring of rehabilitated areas must continue until the Director is satisfied that there is no further risk of environmental harm from the activity arising from those areas.

Decommissioning

4DR 2.1 The person responsible for the activity must notify the Director in writing of any event or decision which is likely to give rise to the permanent cessation of waste receipt within 14 days of becoming aware of that event or decision. The notice must specify the date upon which the activity is expected to cease.

Decommissioning and Rehabilitation Plan

4DR 3.1 A draft Decommissioning and Rehabilitation Plan (DRP) for the landfill activity must be submitted to the Director for approval within three years of completion of commissioning activities in relation to the landfill activity, or by a date specified in writing by the Director. Unless otherwise approved in writing by the Director, a revised DRP must be submitted to the Director:
   (a) when required to reflect significant changes in rehabilitation and decommissioning obligations arising from changes to the activity; or
   (b) within 30 days of the Director being notified of the planned cessation of operations; or
   (c) by a date specified in writing by the Director.

3.2 The DRP must be prepared in accordance with the Acceptable Standards provisions of Section 5 of the Landfill Sustainability Guide and must include, but is not limited to, details of the following:
   (a) closure date;
   (b) procedures for the removal of redundant site structures and equipment;
   (c) details of interim and final cover material;
SCHEDULE LU1

(d) maintenance (or erection) of perimeter fences and security measures to prevent unauthorised access and/or waste deposition on the landfill site;

(e) management of the leachate collection and containment system post-closure;

(f) maintenance of stormwater drains;

(g) intended final profile of the landfill site;

(h) revegetation activities;

(i) proposed groundwater and surface water monitoring regime; and

(j) other matters specified in writing by the Director.

4DR 4.1 Following permanent cessation of the activity, rehabilitation of the landfill site must be carried out in accordance with the Acceptable Standards provisions of Section 5 of the Landfill Sustainability Guide and in accordance with the most recent DRP approved by the Director.

4.2 The plan must be made publicly available.

Installation of lysimeters

4DR 5.1 Unless otherwise approved by the Director, lysimeters must be installed in final landfill capping to monitor rainfall infiltration rates through the cap, as follows:

(a) the number of lysimeters and the lysimeter design must be determined during the capping design phase and must be submitted to the Director for approval;

(b) lysimeters must be monitored regularly, in accordance with their design specifications, in order to determine the rate of infiltration of rainwater through the capping; and

(c) results of lysimeter monitoring must be submitted to the Director as part of the annual review report.
SCHEDULE LU1

SECTION 5 – WASTEWATER PIPELINE
Additional conditions relating to the wastewater pipeline activity

General

APIA Code

5GN 1.1 The activity must be undertaken in accordance with the following provisions of the APIA Code:

(a) the management measures specified in Section 4 (Environmental Guidelines – Construction);
(b) the environmental management measures specified in Section 5 (Environmental Guidelines – Operations); and
(c) the management measures specified in Section 7 (Environmental Guidelines – Decommissioning).

1.2 The person responsible for the activity must comply with any requirement specified by an authorized officer for the purpose of securing compliance with any of these provisions of the APIA Code.

Construction corridor

5GN 2.1 Construction activities in relation to the wastewater pipeline activity, except for the construction of vehicle access tracks to the wastewater pipeline construction corridor, must only occur within the wastewater pipeline construction corridor, unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

5GN 3.1 The width of the wastewater pipeline construction corridor must not exceed 20 metres, unless otherwise approved in writing by the Director.

5GN 4.1 Construction activities within a particular section of the wastewater pipeline construction corridor, from initial site disturbance to the commencement of revegetation, must be completed within 6 weeks, unless otherwise approved in writing by the Director.

5GN 5.1 The person responsible must notify the Director of any proposed change of location of the wastewater pipeline construction corridor of greater than 10 metres prior to commencing construction activities in relation to the proposed change. The notification must include the following:

(a) details of the proposed change of location of the construction corridor, including a plan showing the change;
(b) the reason for the proposed change;
SCHEDULE LU1

(c) details of any additional environmental (including heritage) surveys undertaken or proposed to be undertaken in relation to the proposed change of location;
(d) details of any environmental impact which is expected to or which may arise from the proposed change of location; and
(e) details of any proposed management measures to avoid or mitigate these impacts.

5.2 Any such proposed change of location of the wastewater pipeline construction corridor which has the potential to result in an increase in adverse environmental impacts, or which may otherwise result in material environmental harm, must be approved in writing by the Director prior to the commencement of construction activities in relation to the proposed change of location.

5.3 The management measures contained in the notification of proposed change of location of the wastewater pipeline construction corridor, and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

5GN 6.1 Where the person responsible proposes to change the location of the wastewater pipeline construction corridor such that one or more of the following applies:
(a) native vegetation is likely to be disturbed;
(b) there are known threatened flora or fauna species locations on or within 50 metres of the proposed changed location;
(c) there are known acid sulphate soils on or within 50 metres of the proposed changed location; or
(d) there are known Aboriginal heritage relics and/or historic cultural heritage places on or within 50 metres of the proposed changed location;
the Director must be notified in writing of the proposed change of location prior to the commencement of construction activities in relation to the proposed change.

6.2 The notification must include the following:
(a) details of the proposed change of location of the construction corridor, including a plan showing the change;
(b) the reason for the proposed change;
(c) details of any additional surveys undertaken or proposed to be undertaken in relation to the proposed change of location;
(d) details of any environmental impact which is expected to or which may arise from the proposed change of location; and
(e) details of any proposed management measures to avoid or mitigate these impacts.

6.3 Construction activities in relation to the proposed change of location of the wastewater pipeline construction corridor must not take place
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unless the proposed change of location has been approved in writing by the Director.

6.4 The management measures contained in the approved notification of proposed change of location of the wastewater pipeline construction corridor, and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

Erosion and sediment control

5ER 1.1 Erosion control berms must be installed and maintained along the wastewater pipeline construction corridor to ensure runoff water does not lead to erosion or sediment movement. The berms must be designed, constructed and maintained in accordance with the management measures specified in Section 4.13 of the APIA Code and must be to the satisfaction of the Director.

5ER 2.1 Erosion control structures must be regularly inspected and maintained to ensure that they are performing effectively, particularly after high intensity rainfall or run-off events. The inspection and maintenance must be carried out to the satisfaction of the Director.

5ER 3.1 Existing access tracks must be utilised wherever practicable to access the wastewater pipeline construction corridor. Reasonable steps must be taken to ensure that vehicles remain on designated access roads and tracks and within the wastewater pipeline construction corridor.

Surface water

5SW 1.1 Construction methods used for watercourse crossings must be consistent with Section 4.12 of the APIA Code, unless otherwise approved in writing by the Director.

5SW 2.1 On moderate to steep slopes which lead down to watercourses, the period between clearing of vegetation within the wastewater pipeline construction corridor and the commencement of construction activities on the watercourse crossing must be kept to the minimum practicable.

5SW 3.1 On moderate to steep slopes which lead down to watercourses, the period between trenching of the slope and the commencement of construction activities in the watercourse crossing must be kept to the minimum practicable.

5SW 4.1 Sediment movement from the wastewater pipeline construction corridor to a watercourse, wetland or State waters must be prevented. Sediment control measures such as erosion control berms and sediment pits must be installed immediately following clearing and grading activities on and at the base of any slope in the wastewater pipeline...
construction corridor which leads down to a watercourse, and the installation must be to the satisfaction of the Director.

5SW 5.1 Cleared vegetation must be stockpiled away from watercourses and must not be stored or, where practicable, felled so as to land in watercourses.

5SW 6.1 Soil must be stockpiled at an appropriate distance from the watercourse or behind adequate berms to the satisfaction of the Director.

5SW 7.1 Once installed, watercourse crossings must not preclude up- or down-stream migration of aquatic life.

5SW 8.1 Refuelling of equipment must not occur within 50 metres of a watercourse.

Surface water monitoring

5SW 9.1 In situ meter monitoring of pH, turbidity, conductivity and dissolved oxygen must be undertaken daily in one location directly up-current and one location directly down-current of construction activities during periods where construction disturbance is occurring within a permanent watercourse.

Hydrotest Water Management Plan

5HT 1.1 At least 30 days prior to the intended commencement of pipeline hydrotest activities in relation to the wastewater pipeline activity, or by a date specified in writing by the Director, a Hydrotest Water Management Plan must be submitted to the Director for approval. The plan must be consistent with the management measures specified in Section 4.7.1 of the APIA Code, unless otherwise approved in writing by the Director. The plan must be site-specific and must include, but is not limited to, details of the following:

(a) volume and source of hydrotest water;
(b) additives to be used and their potential environmental effects;
(c) measures for maximising reuse of hydrotest water for multiple test pipeline sections;
(d) contaminants that are likely to be present in the hydrotest water requiring disposal (eg iron/rust, sand etc) and their likely concentrations;
(e) pre-disposal treatment methods;
(f) a map showing the location and extent of any extra workspace required at hydrotest locations along with the justification for the extent of the extra workspace area;
(g) proposed monitoring program prior to reuse and/or prior to and after disposal of hydrotest water;
(h) any proposed holding dams;
SCHEDULE LU1

(i) proposed method and location of reuse and/or disposal of hydrotest water;

(j) proposed management measures to avoid or minimise environmental impacts associated with hydrotesting, including sourcing, storage, treatment, reuse and/or disposal of hydrotest water; and

(k) an implementation timetable for key aspects of the plan.

1.2 Hydrotest activities in relation to the wastewater pipeline activity must not take place unless the plan has been approved in writing by the Director.

1.3 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.4 The plan must be made publicly available.

Donovans Bay

5DB 1.1 Prior to the commencement of pipeline construction activities in State waters at Donovans Bay, or by a date specified in writing by the Director, a Donovans Bay Crossing Management Plan must be submitted to the Director for approval.

1.2 The plan must include, but is not limited to, details of the following:

(a) the proposed construction methodology;

(b) a monitoring program using the monitoring design described in Section 3.2.1-3.2.6 of the Aquenal Pty Ltd report to Gunns Limited titled Ecological Monitoring Program for Marine and Estuarine Habitats during the construction and operation phases of Gunns Limited’s proposed pulp mill 21st December 2006; and

(c) any proposed recommendations relating to siting, design and/or management measures to minimise adverse impacts.

1.3 Construction activities in State waters at Donovans Bay must not commence unless the plan has been approved in writing by the Director.

1.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.5 The plan must be made publicly available.

5DB 2.1 Construction activities in relation to State waters at Donovans Bay must only occur between 1 December and 1 March, unless otherwise approved in writing by the Director.

5DB 3.1 Construction activities within and in the immediate vicinity of Donovans Bay must only occur at low tide and during the first two-
threethirds of outgoing tides, unless sediment control barriers to prevent sediment movement into the Tamar River have been installed and maintained to the satisfaction of the Director.

5DB 4.1 The reinstatement of the foreshore and mudflats disturbed during construction activities must, as far as is practicable, be in a manner such that the pre-construction bottom and foreshore topographic profiles are reinstated.

5DB 5.1 Rocks removed from the foreshore must be temporarily stockpiled. When the pipeline trench has been backfilled and the foreshore bed has been reinstated, the temporarily stockpiled rocks must be returned to the foreshore in such a manner as to, as far as is practicable, reinstate the topography and appearance of the foreshore prior to disturbance.

5DB 6.1 During trenching, surficial soft sediments must be stockpiled separately to deeper sediments, in such a manner that backfilling results in the original stratigraphy being reinstated (i.e. the final trench covering must be the stockpiled surficial soft sediments).

5DB 7.1 Turbid water that accumulates behind the sediment control barriers must be pumped onshore and filtered to remove the sediment before being released back into State waters in a controlled manner to the satisfaction of the Director.

5DB 8.1 Within 90 days of the completion of construction activities in relation to the Donovans Bay crossing, or by a date specified in writing by the Director, a report must be submitted to the Director which contains the results of all monitoring in relation to the Donovans Bay crossing, and an assessment of the effectiveness of rehabilitation measures.

**Donovans Bay crossing monitoring**

5DB 9.1 An annual survey for rice grass (*Spartina anglica*) must be undertaken where the wastewater pipeline construction corridor crosses Donovans Bay for a minimum of five years. If rice grass is detected, the person responsible must eradicate the rice grass in accordance with the current *Rice Grass Management Plan for the Tamar Estuary* in a manner approved by the Secretary, Department of Primary Industries and Water.

5DB 10.1 Prior to the commencement of construction activities in relation to the Donovans Bay crossing, ten sediment core samples must be taken to a depth of 30cm, and equally spaced throughout the subtidal part of the footprint area of the Donovans Bay crossing.

10.2 Samples must be analysed for the parameters and analyses specified in Column 1 of Annex M1 to these conditions, and any other parameters or analyses specified in writing by the Director.
SCHEDULE LU1

5DB 11.1 In situ profile monitoring of pH, turbidity, temperature and dissolved oxygen must be undertaken daily in one location directly up-current and one location directly down-current of construction activities during periods where construction disturbance is occurring below the high water mark.

5DB 12.1 Where a substantial suspended solids plume is generated by the construction activity, water samples must be collected from within the turbid plume, and as near as is practicable to the source of the plume.

12.2 Where substantial turbid plumes are being generated on a daily basis, water samples must be collected from within the turbid plume as a minimum every second day.

12.3 Samples must be analysed for the parameters and analyses specified in Column 2 of Annex M1 to these conditions, and any other parameters or analyses specified in writing by the Director.

Shore Crossing Management Plan

5SC 1.1 Prior to the commencement of construction activities in relation to the wastewater pipeline shore crossing, or by a date specified in writing by the Director, a Shore Crossing Management Plan must be submitted to the Director for approval. The plan must consider construction activities from the extreme low water mark to 1500 metres inland of the extreme low water mark.

1.2 The plan must include, but is not limited to, details of the following:
   (a) the construction method(s) to be used;
   (b) the proposed area of disturbance;
   (c) methodology and results of coastal engineering studies. These studies must:
      i) examine the potential impacts on coastal processes of the proposed construction methods and infrastructure;
      ii) demonstrate the ability of the infrastructure to withstand a storm with a return period of 100 years; and
      iii) describe any changes to coastal morphology that might reasonably be expected to occur within the lifespan of the infrastructure;
   (d) methodology and results of a fauna survey conducted;
   (e) proposed management measures to avoid or minimise environmental impacts, including erosion, and impacts on coastal processes and flora and fauna. This must include but not be limited to:
      i) details of erosion and sediment control measures, optimal batter angles, storage areas for excavated material, and procedures for minimising migration of mobilised sediments and associated pollutants;
SCHEDULE LU1

ii) management measures to be implemented to prevent seawater flowing into swale areas behind the dunes.
iii) proposed dune stabilisation and revegetation measures;
iv) details relating to acid sulphate soil management if acid sulphate soils are present
(f) a map showing the location and extent of proposed laydown areas along with the justification for the extent of the laydown area;
(g) details of monitoring to be undertaken during construction;
(h) an implementation timetable for key aspects of the plan;
(i) details of any maintenance works that may be required from time to time; and
(j) a reporting program to regularly advise the Director of the results of the plan.

1.3 Construction activities in relation to the wastewater pipeline shore crossing must not take place unless the plan has been approved in writing by the Director.

1.4 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.5 The plan must be made publicly available.

Fauna management

5FN 1.1 Permanent access tracks located in native vegetation areas must be as narrow as practicable in order to minimise the clearance of native vegetation. The construction and maintenance of permanent access tracks must avoid any impact on threatened fauna species unless otherwise approved in writing by the Director.

5FN 2.1 Effective measures must be implemented to enable the escape of animals from the open trench. Measures may include trench plugs or ramps with slopes of no greater than 50 percent located at regular intervals along the trench. The measures must be implemented to the satisfaction of the Director.

5FN 3.1 Effective measures must be implemented to prevent the ingress of animals into pipe sections, particularly at night. The measures must be implemented to the satisfaction of the Director.

5FN 4.1 All sections of open trench must be monitored daily for trapped animals by appropriately trained personnel, and trapped animals identified must be released outside the wastewater pipeline construction corridor.
Vegetation management

5VG 1.1 Except where otherwise specified in the CEMP, the removal of felled coarse woody material must be minimised.

5VG 2.1 Where removed, topsoil must be stockpiled separately from subsoil and the original soil profile must be reinstated when the trench is backfilled.

5VG 3.1 To the extent practicable, tree, shrub and groundcover material (including seeds and/or cuttings for propagation) must be collected from known populations of threatened flora species and threatened native vegetation, prior to them being disturbed or cleared, for use in subsequent rehabilitation works.

5VG 4.1 Stockpiling of soil, or other material associated with construction activities in relation to the wastewater pipeline activity, must not occur outside the wastewater pipeline construction corridor, unless otherwise approved in writing by the Director.

Rehabilitation management

5RH 1.1 The CEMP must include details of proposed measures and procedures for the rehabilitation of disturbed areas consistent with the management measures specified in Section 4.8 of the APIA Code, unless otherwise approved in writing by the Director.

5RH 2.1 All areas disturbed by construction activities must be rehabilitated such that they are stable and resistant to erosion, to the satisfaction of the Director.

5RH 3.1 Rehabilitation (including revegetation) of any disturbed area must occur as soon as practicable following the completion of pipeline installation activities in that area, and must be carried out to the satisfaction of the Director.

Construction noise management

Noise restrictions

5NC 1.1 Construction activities in relation to the wastewater pipeline activity within 200 metres of noise sensitive premises must only occur between the following times:

(a) 0700hrs to 1800hrs Monday to Friday; and
(b) 0800hrs to 1300hrs Saturday;

unless the written consent of the occupant(s) of the affected noise sensitive premises has been obtained.
SCHEDULE LU1

5NC 2.1 Unless authorised elsewhere in these conditions or otherwise approved in writing by the Director, noise emissions from construction activities in relation to the wastewater pipeline activity, when measured at any noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 35 dB(A); or
   (b) the ambient sound pressure level from all other noise sources plus 5 dB(A).

2.2 Between the hours of 0700hrs and 1800hrs, Monday to Friday, or 0800hrs and 1300hrs on Saturday, for a maximum period of six consecutive months, unless authorised elsewhere in these conditions or otherwise approved by the Director, noise emissions from construction activities in relation to the wastewater pipeline activity, when measured at any noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 45 dB(A); or
   (b) the ambient sound pressure level from all other noise sources plus 10 dB(A).

2.3 Between the hours of 0700hrs and 1800hrs, Monday to Friday, or 0800hrs and 1300hrs on Saturday, for a maximum period of six consecutive weeks, unless otherwise approved by the Director, noise emissions from construction activities in relation to the wastewater pipeline activity, when measured at any noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 60 dB (A); or
   (b) the ambient sound pressure level from all other noise sources plus 20dB(A).

5NC 3.1 All air release valves, flow control valves and pump stations on the pipeline must be specifically designed to mitigate adverse noise impacts on surrounding areas.

Blasting

5NC 4.1 The occupiers of all noise sensitive premises within 200 metres of a proposed blasting event in relation to the wastewater pipeline activity must be notified at least 24 hours prior to the blasting event commencing.

5NC 5.1 Blasting in relation to the wastewater pipeline activity may only take place between the hours of 100hrs and 1600hrs, Monday to Friday. No blasting is permitted on Saturday, Sunday or gazetted public holidays observed Statewide.
SCHEDULE LU1

5NC 6.1 Blasting must be carried out in accordance with blasting best practice environmental management principles, and must be carried out such that, when measured at the nearest noise sensitive premises, air blast and ground vibration comply with the relevant criteria of Australian Standard AS2187.

5NC 7.1 All blasting events must be monitored for both ground vibration and airblast over-pressure.

5NC 8.1 Results of all blast monitoring must be forwarded to the Director within 24 hours following the blast.

Waste and hazardous materials

5WM1.1 The storage and transportation of dangerous goods or controlled waste within the wastewater pipeline construction corridor must be kept to the minimum practicable.

5WM2.1 All containers containing dangerous goods or controlled waste within the wastewater pipeline construction corridor must, as far as practicable, be located within impervious bunded areas or spill trays of appropriate capacity, and in accordance with relevant Australian Standards, including AS 1940 and AS 2507, and in accordance with any written requirements of the Director.

5WM3.1 The CEMP must include details of proposed measures and procedures for the avoidance and management of chemical and hydrocarbon spills.

5WM4.1 Portable toilet facilities must be provided and maintained at all major work sites, including major watercourse crossings and hydrotest locations.

Operations

Wastewater pipeline integrity testing

5OP 1.1 The integrity of the wastewater pipeline must be tested at least annually following the completion of commissioning activities, unless otherwise approved in writing by the Director.

5OP 2.1 Within 90 days of commissioning activities in relation to the wastewater pipeline corridor being completed, a Wastewater Pipeline Integrity Testing Management Plan must be submitted to the Director.

2.2 The plan must include, but is not limited to, details in relation to the following:
   (a) the proposed testing method;
   (b) actions that will be taken if leaks are observed; and
SCHEDULE LU1

(c) the manner in which results will be reported.

2.3 Integrity testing of the wastewater pipeline must be undertaken in accordance with the plan, as amended from time to time.

2.4 The plan must be made publicly available.
SECTION 6 – WATER SUPPLY
Additional conditions relating to the water supply activity

General

APIA Code

6GN 1.1 The activity must be undertaken in accordance with the following provisions of the APIA Code:
(a) the management measures specified in Section 4 (Environmental Guidelines – Construction);
(b) the environmental management measures specified in Section 5 (Environmental Guidelines – Operations); and
(c) the management measures specified in Section 7 (Environmental Guidelines – Decommissioning).

1.2 The person responsible for the activity must comply with any requirement specified by an authorized officer for the purpose of securing compliance with any of these provisions of the APIA Code.

Construction corridor

6CN 1.1 Construction activities in relation to the water supply pipeline, except for the construction of vehicle access tracks to the water supply construction corridor, must only occur within the water supply construction corridor, unless otherwise specified in these conditions or unless otherwise approved in writing by the Director.

6CN 2.1 Notwithstanding the above, construction activities in relation to the water reservoir must be undertaken in the area generally indicated on Figure 1-5 of Volume 1A of the DIIS for the construction of the water reservoir and associated infrastructure unless otherwise approved in writing by the Director.

6CN 3.1 The width of the water supply construction corridor must not exceed 20 metres, unless otherwise approved in writing by the Director.

6CN 4.1 Construction activities in a particular section of the water supply construction corridor, from initial site disturbance to the commencement of revegetation, must be completed within 6 weeks, unless otherwise approved in writing by the Director.

6CN 5.1 The person responsible must notify the Director of any proposed change of location of the water supply construction corridor of greater than 10 metres prior to commencing construction activities in relation to the proposed change. The notification must include the following:
SCHEDULE LU1

(a) details of the proposed change of location of the construction corridor, including a plan showing the change;
(b) the reason for the proposed change;
(c) details of any additional environmental (including heritage) surveys undertaken or proposed to be undertaken in relation to the proposed change of location;
(d) details of any environmental impact which is expected to or which may arise from the proposed change of location; and
(e) details of any proposed management measures to avoid or mitigate these impacts.

5.2 Any such proposed change of location of the water supply construction corridor which has the potential to result in an increase in adverse environmental impacts, or which may otherwise result in material environmental harm, must be approved in writing by the Director prior to the commencement of construction activities in relation to the proposed change of location.

5.3 The management measures contained in the notification of proposed change of location of the water supply construction corridor, and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

6CN 6.1 Where the person responsible proposes to change the location of the water supply construction corridor such that one or more of the following applies:

(a) native vegetation is likely to be disturbed;
(b) there are known threatened flora or fauna species locations on or within 50 metres of the proposed changed location;
(c) there are known acid sulphate soils on or within 50 metres of the proposed changed location; or
(d) there are known Aboriginal heritage relics and/or historic cultural heritage places on or within 50 metres of the proposed changed location;

the Director must be notified in writing of the proposed change of location prior to the commencement of construction activities in relation to the proposed change.

6.2 The notification must include the following:
(a) details of the proposed change of location of the construction corridor, including a plan showing the change;
(b) the reason for the proposed change;
(c) details of any additional surveys undertaken or proposed to be undertaken in relation to the proposed change of location;
(d) details of any environmental impact which is expected to or which may arise from the proposed change of location; and
(e) details of any proposed management measures to avoid or mitigate these impacts.
SCHEDULE LU1

6.3 Construction activities in relation to the proposed change of location of the water supply construction corridor must not take place unless the proposed change of location has been approved in writing by the Director.

6.4 The management measures contained in the approved notification of proposed change of location of the water supply construction corridor, and any other requirements specified in writing by the Director, must be implemented to the satisfaction of the Director.

Erosion and sediment control

6ER 1.1 Erosion control berms must be installed and maintained along the water supply construction corridor to ensure runoff water does not lead to erosion or sediment movement. The berms must be designed, constructed and maintained in accordance with the management measures specified in Section 4.13 of the APIA Code and must be to the satisfaction of the Director.

6ER 2.1 Erosion control structures must be regularly inspected and maintained to ensure that they are performing effectively, particularly after high intensity rainfall or run-off events. The inspection and maintenance must be carried out to the satisfaction of the Director.

6ER 3.1 Existing access tracks must be utilised wherever practicable to access the water supply construction corridor. Reasonable steps must be taken to ensure that vehicles remain on designated access roads and tracks and within the water supply construction corridor.

Surface water

6SW 1.1 Construction methods used for watercourse crossings must be consistent with Section 4.12 of the APIA Code, unless otherwise approved in writing by the Director.

6SW 2.1 On moderate to steep slopes which lead down to watercourses, the period between clearing of vegetation within the water supply construction corridor and the commencement of construction activities on the watercourse crossing must be kept to the minimum practicable.

6SW 3.1 On moderate to steep slopes which lead down to watercourses, the period between trenching of the slope and the commencement of construction activities on the watercourse crossing must be kept to the minimum practicable.

6SW 4.1 Sediment movement from the water supply construction corridor to a watercourse, wetland or State waters must be prevented. Sediment control measures such as erosion control berms and sediment pits must be installed immediately following clearing and grading activities on
SCHEDULE LU1

and at the base of any slope in the water supply construction corridor which leads down to a watercourse, and the installation must be to the satisfaction of the Director.

6SW 5.1 Cleared vegetation must be stockpiled away from watercourses and must not be stored or, where practicable, felled so as to land in watercourses.

6SW 6.1 Soil must be stockpiled at an appropriate distance from the watercourse or behind adequate berms to the satisfaction of the Director.

6SW 7.1 Once installed, watercourse crossings must not preclude up- or down-stream migration of aquatic life.

6SW 8.1 Refuelling of equipment must not occur within 50 metres of a watercourse.

Surface water monitoring

6SW 9.1 In situ meter monitoring of pH, turbidity, conductivity and dissolved oxygen must be undertaken daily in one location directly up-current and one location directly down-current of construction activities during periods where construction disturbance is occurring within a permanent watercourse.

Hydrotest Water Management Plan

6HT 1.1 At least 30 days prior to the intended commencement of pipeline hydrotest activities, or by a date specified in writing by the Director, a Hydrotest Water Management Plan must be submitted to the Director for approval. The plan must be consistent with the management measures specified in Section 4.7.1 of the APIA Code, unless otherwise approved in writing by the Director. The plan must be site-specific and must include, but is not limited to, details of the following:

(a) volume and source of hydrotest water;
(b) additives to be used and their potential environmental effects;
(c) measures for maximising reuse of hydrotest water for multiple test pipeline sections;
(d) contaminants that are likely to be present in the hydrotest water requiring disposal (eg iron/rust, sand etc) and their likely concentrations;
(e) pre-disposal treatment methods;
(f) a map showing the location and extent of any extra workspace required at hydrotest locations along with the justification for the extent of the extra workspace area;
(g) proposed monitoring program prior to reuse and/or prior to and after disposal of hydrotest water;
(h) any proposed holding dams;
SCHEDULE LU1

(i) proposed method and location of reuse and/or disposal of hydrotest water;
(j) proposed management measures to avoid or minimise environmental impacts associated with hydrotesting, including sourcing, storage, treatment, reuse and/or disposal of hydrotest water; and
(k) an implementation timetable for key aspects of the plan.

1.2 Hydrotest activities must not take place unless the Hydrotest Water Management Plan has been approved in writing by the Director.

1.3 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.

1.4 The plan must be made publicly available.

Fauna management

6FN 1.1 Permanent access tracks located in native vegetation areas must be as narrow as practicable in order to minimise the clearance of native vegetation. The construction and maintenance of permanent access tracks must avoid any impact on threatened fauna species unless otherwise approved in writing by the Director.

6FN 2.1 Effective measures must be implemented to enable the escape of animals from the open trench. Measures may include trench plugs or ramps with slopes of no greater than 50 percent located at regular intervals along the trench. The measures must be implemented to the satisfaction of the Director.

6FN 3.1 Effective measures must be implemented to prevent the ingress of animals into pipe sections, particularly at night. The measures must be implemented to the satisfaction of the Director.

6FN 4.1 All sections of open trench must be monitored daily for trapped animals by appropriately trained personnel, and trapped animals identified must be released outside the water supply construction corridor.

Vegetation management

6VG 1.1 Except where otherwise specified in the CEMP, the removal of felled coarse woody material must be minimised.

6VG 2.1 Where removed, topsoil must be stockpiled separately from subsoil and the original soil profile must be reinstated when the trench is backfilled.
SCHEDULE LU1

6VG 3.1 To the extent practicable, tree, shrub and groundcover material (including seeds and/or cuttings for propagation) must be collected from known populations of threatened flora species and threatened native vegetation, prior to them being disturbed or cleared, for use in subsequent rehabilitation works.

6VG 4.1 Stockpiling of soil, or other material associated with the construction activities, must not occur outside the water supply construction corridor, unless otherwise approved in writing by the Director.

Rehabilitation management

6RH 1.1 The CEMP must include details of proposed measures and procedures for the rehabilitation of disturbed areas consistent with the management measures specified in Section 4.8 of the APIA Code, unless otherwise approved in writing by the Director.

6RH 2.1 All areas disturbed by construction activities must be rehabilitated such that they are stable and resistant to erosion, to the satisfaction of the Director.

6RH 3.1 Rehabilitation (including revegetation) of any disturbed area must occur as soon as practicable following the completion of pipeline installation activities in that area, and must be carried out to the satisfaction of the Director.

Construction noise management

Noise restrictions

6NC 1.1 Construction activities in relation to the water supply activity within 200 metres of noise sensitive premises must only occur between the following times:
   (a) 0700hrs to 1800hrs Monday to Friday; and
   (b) 0800hrs to 1300hrs on Saturday;

unless the written consent of the occupant(s) of the affected noise sensitive premises has been obtained.

6NC 2.1 Unless authorised elsewhere in these conditions or otherwise approved in writing by the Director, noise emissions from construction activities in relation to the water supply activity, when measured at any noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 35 dB(A); or
   (b) the ambient sound pressure level from all other noise sources plus 5 dB(A).
2.2 Between the hours of 0700hrs and 1800hrs, Monday to Friday, or 0800hrs and 1300hrs on Saturday, for a maximum period of six consecutive months, unless authorised elsewhere in these conditions or otherwise approved by the Director, noise emissions from construction activities in relation to the water supply activity, when measured at any noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 45 dB(A); or
   (b) the ambient sound pressure level from all other noise sources plus 10 dB(A).

2.3 Between the hours of 0700hrs and 1800hrs, Monday to Friday, or 0800hrs and 1300hrs on Saturday, for a maximum period of six consecutive weeks, unless otherwise approved by the Director, noise emissions from construction activities in relation to the water supply activity, when measured at any particular noise sensitive premises and expressed as the 10-minute equivalent continuous A-weighted sound pressure level must not exceed the greater of:
   (a) 60 dB(A); or
   (b) the ambient sound pressure level from all other noise sources plus 20dB(A).

6NC3.1 All air release valves, flow control valves and pump stations on the pipeline must be specifically designed to mitigate adverse noise impacts on surrounding areas.

**Blasting**

6NC 4.1 The occupiers of all noise sensitive premises within 200 metres of a proposed blasting event in relation to the water supply activity must be notified at least 24 hours prior to the blasting event commencing.

6NC 5.1 Blasting in relation to the water supply activity may only take place between the hours of 1000hrs and 1600hrs, Monday to Friday. No blasting is permitted on Saturday, Sunday or gazetted public holidays observed Statewide.

5NC 6.1 Blasting must be carried out in accordance with blasting best practice environmental management principles, and must be carried out such that, when measured at the nearest noise sensitive premises, air blast and ground vibration comply with the relevant criteria of Australian Standard AS2187.

6NC 7.1 All blasting events must be monitored for both ground vibration and airblast over-pressure.

6NC 8.1 Results of all blast monitoring must be forwarded to the Director within 24 hours following the blast.
Waste and hazardous materials

6WM1.1 The storage and transportation of dangerous goods or controlled waste within the water supply construction corridor must be kept to the minimum practicable.

6WM2.1 All containers containing dangerous goods or controlled waste must, as far as practicable, be located within impervious bunded areas or spill trays of appropriate capacity, and in accordance with relevant Australian Standards, including AS 1940 and AS 2507, and in accordance with any written requirements of the Director.

6WM3.1 The CEMP must include details of proposed measures and procedures for the avoidance and management of chemical and hydrocarbon spills.

6WM4.1 Portable toilet facilities must be provided and maintained at all major work sites, including major watercourse crossings and hydrotest locations.
SECTION 7 – QUARRY
Additional conditions relating to the quarry activity

General

Maximum quantities

7GN 1.1 The quarry activity must not exceed the following limits unless otherwise approved in writing by the Director:

(a) 100,000 cubic metres per annum of rock or gravel: or
(b) 180,000 cubic metres of rock or gravel in total.

Quarry Management Plan

7MP 1.1 Prior to the commencement of the quarry activity, or by a date specified in writing by the Director, a Quarry Management Plan must be submitted to the Director for approval.

1.2 The plan must be prepared in accordance with the requirements of these conditions, and any guidelines provided by the Director. Unless otherwise approved by the Director, the plan must be consistent with the measures set out in the Quarry Code of Practice.

1.3 The plan must include, but is not limited to, details of the following:

(a) a site map or plan of the proposed quarry activity identifying the working faces and direction of mining, topsoil stockpiles, overburden dumps, product stockpiles, access roads, drainage and erosion control measures;

(b) a step-by-step description and timetable for the development of the quarry;

(c) major items of equipment;

(d) a description of blasting methods applied and the frequency of blasting;

(e) methodology for progressive rehabilitation of the quarry;

(f) a monitoring program;

(g) a table containing all of the major commitments made in the plan; and

(h) a reporting program.

1.4 The quarry activity must not take place unless the plan has been approved in writing by the Director.

1.5 The approved plan, as amended from time to time with the approval of the Director, must be implemented to the satisfaction of the Director.
1.6 The approved plan must be made publicly available.

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**Stormwater management**

*Perimeter drains*

7SW 1.1 Perimeter cut-off drains must be constructed at strategic locations on the quarry site to prevent surface run-off from entering the area used or disturbed in carrying out the quarry activity.

7SW 2.1 Drains must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 24 hour, 1 in 20 year rainfall event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

*Stormwater*

7SW 3.1 Polluted stormwater that will be discharged from the quarry site must be collected and treated prior to discharge to the extent necessary to prevent material environmental harm.

7SW 4.1 Other stormwater that is released to the downstream environment must be visibly free of oil, grease and unnatural discolouration and must not be visibly more turbid than the receiving waters.

7SW 5.1 All reasonable measures must be implemented to ensure that solids entrained in stormwater are retained on the quarry site to the satisfaction of the Director. Such measures may include provision of strategically located sediment fences, and appropriately sized and maintained sediment settling ponds.

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**Atmospheric**

*Covering of vehicles*

7AM 1.1 Vehicles carrying loads containing material which may blow or spill must be equipped with effective control measures to prevent the escape of the materials when those vehicles leave the quarry site or travel on public roads. Effective control measures may include tarpaulins and load dampening.

*Control of dust emissions*

7AM 2.1 Dust emissions from roads, disturbed areas, storage heaps, and machinery on the quarry site must be controlled to the extent necessary to prevent environmental nuisance.
SCHEDULE LU1

Blasting

Blasting times

7BL 1.1 Blasting in relation to the quarry activity must only take place between 1000 hours and 1600 hours Monday to Friday unless otherwise approved by the Director. Blasting must not take place on Saturdays, Sundays or public holidays unless prior written approval of the Director has been obtained.

Decommissioning and rehabilitation

Stockpiling of surface soil

7DR 1.1 Prior to commencement of quarrying activities on any portion of the quarry site all surface soils must be removed and stockpiled for later use in rehabilitation of the quarry site. Topsoil must be kept separate from other overburden and protected from erosion or other disturbance.

Progressive rehabilitation

7DR 2.1 Worked out or disused sections of the quarry site must be rehabilitated concurrently with ongoing quarrying activities on other sections of the quarry site. Progressive rehabilitation must be carried out in accordance with the relevant provisions of the Quarry Code of Practice, unless otherwise approved in writing by the Director.

Rehabilitation on cessation

7DR 3.1 Unless otherwise approved in writing by the Director, rehabilitation upon permanent cessation of the quarry activity must be undertaken in accordance with relevant provisions of the Quarry Code of Practice and in accordance with the following:

(a) rehabilitation earthworks must be substantially completed within 12 months of cessation of the quarry activity; and

(b) revegetation must be monitored and maintained for a period of at least three years after the cessation of the quarry activity after which time the person responsible for the quarry activity may apply in writing to the Director for a written statement that rehabilitation has been successfully completed.

Suspension of activity

7DR 4.1 During temporary suspension of quarrying activity the quarry site must be managed and monitored by the person responsible for the quarry
SCHEDULE LU1

activity to ensure that emissions from the quarry site do not cause material environmental harm.

7DR 5.1 Unless otherwise approved in writing by the Director, if there has been no quarrying activity on the quarry site for a period greater than 2 years, rehabilitation of the quarry site must be carried out in accordance with the requirements of these conditions as if the quarry activity had permanently ceased.
**SECTION 8 – ANNEXURES**

Annex A1 - Atmospheric emission limits

The concentration of a pollutant specified in Column 2, emitted from the corresponding nominated exhaust point specified in Column 1, must not exceed the limit specified in Column 3 in respect of that pollutant.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant</td>
<td>Limits and Units</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>12 mg/m³</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
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<td>7 mg/m³ (not to be exceeded for more than 1 percent of the hours in any 30 day period)</td>
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<td>SO₂</td>
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<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOx</td>
<td>375 mg/m³</td>
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<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particulates (TSP)</td>
<td>50 mg/m³ (average concentration calculated for any 24 hour period)</td>
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<td>Particulates (TSP)</td>
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<td>Dioxins and Furans</td>
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<td>34 mg/m³</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>300 mg/m³</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOx</td>
<td>975 mg/m³</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>40 mg/m³ (average concentration calculated for any 24 hour period)</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>100 mg/m³ (applies to measurements using isokinetic stack test only)</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Dioxins and Furans</td>
<td>0.1 ng TEQ/m³</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>30 mg/m³ (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>7 mg/m³ (applies to normal standby mode only - not applicable)</td>
</tr>
<tr>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant</td>
<td>Limits and Units</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>200 mg/m³ (applies to NCG treatment mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO₂</td>
<td>450 mg/m³</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>NOₓ</td>
<td>900 mg/m³ (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>NOₓ</td>
<td>2600 mg/m³ (applies to NCG treatment mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Particulates (TSP)</td>
<td>60 mg/m³ (applies to measurements using isokinetic stack test only)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TRS</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO₂</td>
<td>300 mg/m³</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOₓ</td>
<td>384 mg/m³</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOₓ</td>
<td>220 mg/m³ (average concentration calculated for any 24 hour period)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>50 mg/m³ (average concentration calculated for any 24 hour period)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>100 mg/m³ (applies to measurements using isokinetic stack test only)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Dioxins and Furans</td>
<td>0.1 ng TEQ/m³</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>tbd *</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>ClO₂</td>
<td>tbd *</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>tbd *</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>ClO₂</td>
<td>tbd *</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Cl₂</td>
<td>tbd *</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>ClO₂</td>
<td>tbd *</td>
</tr>
</tbody>
</table>

**Notes:**
1. Unless otherwise stated in Column 3, concentrations are expressed as hourly averages, except for those measured using isokinetic stack tests where the averaging time is equal to the sampling duration.
2. Concentrations are expressed as dry gases at 0 °C, 101.325 kPa and 3 % O₂, with the exception of those for the Power Boiler Flue which are adjusted to a reference gas value of 8 % O₂.
3. * To be determined and specified in writing by the Director.
Table 2

The pollutant specified in Column 2, emitted from the corresponding nominated exhaust points specified in Column 1, must not exceed the limit specified in Column 3 in respect of that pollutant.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant</td>
<td>Limit and Units</td>
</tr>
<tr>
<td>The sum of emissions expressed as kg/ADt of pulp produced from all nominated exhaust points but excluding power boiler</td>
<td>NOx</td>
<td>1.6 kg NO₂/ADt (annual average)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.3 kg NO₂/ADt (annual average) to apply from a date to be specified in writing by the Director*</td>
</tr>
<tr>
<td>The sum of emissions expressed as kg/ADt of pulp produced from all nominated exhaust points</td>
<td>S</td>
<td>0.4 kg S/ADt (annual average)</td>
</tr>
<tr>
<td>For any individual nominated exhaust point</td>
<td>Inorganic chlorinated compounds</td>
<td>50 mg Cl₂/NDm³ **</td>
</tr>
</tbody>
</table>

Notes:
* Based on advice that the activity is processing predominately plantation-derived woodchips
** NDm³ = Normal cubic metre of dry gas, measured at atmospheric pressure (101.325 kPa) and 273.15 K (0 °C).
## Annex A2- Atmospheric emission investigation levels

### Table 1

<table>
<thead>
<tr>
<th>Nominated exhaust point</th>
<th>Pollutant</th>
<th>Investigation levels</th>
<th>Percentage of hours (in any period of 30 consecutive days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>6 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>4 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>2 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₂</td>
<td>100 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₂</td>
<td>50 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₂</td>
<td>12 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOx</td>
<td>250 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOx</td>
<td>220 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOx</td>
<td>200 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particulates (TSP)</td>
<td>80 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particulates (TSP)</td>
<td>50 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particulates (TSP)</td>
<td>40 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>CO₂</td>
<td>340,000 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TRS</td>
<td>16 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TRS</td>
<td>15 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TRS</td>
<td>5 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>200 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>100 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>50 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOx</td>
<td>650 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOx</td>
<td>550 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOx</td>
<td>500 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>75 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>50 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>40 mg/m³</td>
<td>10</td>
</tr>
</tbody>
</table>
## SCHEDULE LU1

<table>
<thead>
<tr>
<th>Nominated exhaust point</th>
<th>Pollutant</th>
<th>Investigation levels</th>
<th>Percentage of hours (in any period of 30 consecutive days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>CO₂</td>
<td>192,000 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>6 mg/m³</td>
<td>1 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>16 mg/m³</td>
<td>0 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO₂</td>
<td>300 mg/m³</td>
<td>0 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO₂</td>
<td>200 mg/m³</td>
<td>1 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>NOx</td>
<td>550 mg/m³</td>
<td>1 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Particulates (TSP)</td>
<td>50 mg/m³</td>
<td>0 (applies to normal standby mode only)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO₂</td>
<td>166,000 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO</td>
<td>600 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TRS</td>
<td>8 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TRS</td>
<td>2 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TRS</td>
<td>1 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO₂</td>
<td>250 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO₂</td>
<td>200 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOx</td>
<td>146 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOx</td>
<td>320 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOx</td>
<td>220 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOx</td>
<td>200 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>60 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>30 mg/m³</td>
<td>1</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>25 mg/m³</td>
<td>10</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO₂</td>
<td>133,000 mg/m³</td>
<td>0</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>ClO₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
</tbody>
</table>
## SCHEDULE LU1

<table>
<thead>
<tr>
<th>Nominated exhaust point</th>
<th>Pollutant</th>
<th>Investigation levels</th>
<th>Percentage of hours (in any period of 30 consecutive days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>ClO₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Cl₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>ClO₂</td>
<td>tbd *</td>
<td>tbd *</td>
</tr>
</tbody>
</table>

**Notes:**
1. Concentrations are expressed as hourly averages, except for those measured using isokinetic stack tests where the averaging time is equal to the sampling duration.
2. Concentrations are expressed as dry gases at 0 °C, 101.325 kPa and 3 % O₂, with the exception of those for the Power Boiler Flue which are adjusted to a reference gas.
3. * To be determined and specified in writing by the Director.
### Table 1- Requirements for continuous monitoring of emissions

The concentration of the pollutant or the parameter specified in Column 2, emitted from the corresponding nominated exhaust point specified in Column 1, must be continuously monitored using the method specified in Column 3 in respect of that pollutant.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>CO</td>
<td>US EPA Performance Specification 4 or ISO/CD 12039</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>US EPA Performance Specification 5</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₂</td>
<td>US EPA Performance Specification 2 or ISO 7935/BS 6069 Section 4.4 (1993)</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOx</td>
<td>US EPA Performance Specification 2 or ISO/DIS 10849-2</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particulates (TSP)</td>
<td>US EPA Performance Specification 11 or BS ISO 10155</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>HCl</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>CO₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>O₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Volumetric Flow</td>
<td>PS-6 or ISO 10708</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Temperature</td>
<td>No standard available</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Moisture</td>
<td>No standard available</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>CO</td>
<td>US EPA Performance Specification 4 or ISO/CD 12039</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TRS</td>
<td>US EPA Performance Specification 5</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>US EPA Performance Specification 2 or ISO 7935/BS 6069 Section 4.4 (1993)</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOx</td>
<td>US EPA Performance Specification 2 or ISO/DIS 10849-2</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particulates (TSP)</td>
<td>US EPA Performance Specification 11 or BS ISO 10155</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>CO₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>O₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Volumetric Flow</td>
<td>PS-6 or ISO 10708</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Temperature</td>
<td>No standard available</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Moisture</td>
<td>No standard available</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>CO</td>
<td>US EPA Performance Specification 4 or ISO/CD 12039</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>---------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>H₂S</td>
<td>US EPA Performance Specification 7</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>US EPA Performance Specification 5</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO₂</td>
<td>US EPA Performance Specification 2 or ISO 7935/BS6069 Section 4.4 (1993)</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>NOx</td>
<td>US EPA Performance Specification 2 or ISO/DIS 10849-2</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Particulates (TSP)</td>
<td>US EPA Performance Specification 11 or BS ISO 10155</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>CO₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>O₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Volumetric Flow</td>
<td>PS-6 or ISO 10708</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Temperature</td>
<td>No standard available</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Moisture</td>
<td>No standard available</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO</td>
<td>US EPA Performance Specification 4 or ISO/CD 12039</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO₂</td>
<td>US EPA Performance Specification 2 or ISO 7935/BS6069 Section 4.4 (1993)</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NOx</td>
<td>US EPA Performance Specification 2 or ISO/DIS 10849-2</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particulates (TSP)</td>
<td>US EPA Performance Specification 11 or BS ISO 10155</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>O₂</td>
<td>PS-3</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Volumetric Flow</td>
<td>PS-6 or ISO 10708</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Temperature</td>
<td>No standard available</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Moisture</td>
<td>No standard available</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>ClO₂</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
<tr>
<td>Chlorate Plant Hydrogen Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Cl₂</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>ClO₂</td>
<td>OPSIS DOAS or equivalent approved by the Director</td>
</tr>
</tbody>
</table>
Table 2- Requirements for regular emissions tests for specified emission sources

The concentration of the pollutant or the parameter specified in Column 2, emitted from the corresponding nominated exhaust point specified in Column 1, must be monitored using the method specified in Column 3 at the frequency of testing specified in Column 4.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>PCDD / PCDF</td>
<td>USEPA Method 23</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TRS</td>
<td>USEPA Method 16</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>PAH</td>
<td>CARB Method 429; or USEPA SW846 Method 0010</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>TSP</td>
<td>AS4323.2— 1995</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>PM₁₀</td>
<td>USEPA Method 201</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Particle Size Distribution</td>
<td>ISO 13320-1:1999, Particle size analysis -- Laser diffraction methods</td>
<td>Post commissioning; Quarterly in first year; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>NOₓ</td>
<td>USEPA Method 7</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₂</td>
<td>USEPA Method 6</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>SO₃ + H₂SO₄</td>
<td>USEPA Method 8</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>HCl</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Cl₂</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>ClO₂</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>VOC</td>
<td>Sampling USEPA Method 18; Analysis USEPA SW846 Method 8260</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Metals</td>
<td>USEPA Method 29</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>CO</td>
<td>USEPA Method 10</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>O₂</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>CO₂</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Moisture</td>
<td>USEPA Method 4</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Recovery Boiler Flue (Main Stack, Flue 1)</td>
<td>Odour</td>
<td>ASNZS4323.3—2001</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>PCCD / PCDF</td>
<td>USEPA Method 23</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TRS</td>
<td>USEPA Method 16</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>PAH</td>
<td>CARB Method 429; or USEPA SW846 Method 0010</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>TSP</td>
<td>AS4323.2—1995</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>PM₁₀</td>
<td>USEPA Method 201</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Particle Size</td>
<td>ISO 13320-1:1999, Particle size analysis - Laser diffraction methods</td>
<td>Post commissioning; Quarterly in first year; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>NOₓ</td>
<td>USEPA Method 7</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₂</td>
<td>USEPA Method 6</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>SO₃ + H₂SO₄</td>
<td>USEPA Method 8</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>HCl</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Cl2</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>ClO2</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>VOC</td>
<td>Sampling USEPA Method 18; Analysis USEPA SW846 Method 8260</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Metals</td>
<td>USEPA Method 29</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>CO</td>
<td>USEPA Method 10</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>O2</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>CO2</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Moisture</td>
<td>USEPA Method 4</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Lime Kiln Flue (Main Stack, Flue 2)</td>
<td>Odour</td>
<td>ASNZS4323.3—2001</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TRS</td>
<td>USEPA Method 16</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>PAH</td>
<td>CARB Method 429; or USEPA SW846 Method 0010</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>TSP</td>
<td>AS4323.2—1995</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>PM10</td>
<td>USEPA Method 201</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Particle Size Distribution</td>
<td>ISO 13320-1:1999, Particle size analysis -- Laser diffraction methods</td>
<td>Post commissioning; Quarterly in first year; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>NOx</td>
<td>USEPA Method 7</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO2</td>
<td>USEPA Method 6</td>
<td>Post commissioning;</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------</td>
<td>--------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>SO$_3$ + H$_2$SO$_4$</td>
<td>USEPA Method 8</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>HCl</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Cl$_2$</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>ClO$_2$</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>VOC</td>
<td>Sampling USEPA Method 18; Analysis USEPA SW846 Method 8260</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Metals</td>
<td>USEPA Method 29</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>CO</td>
<td>USEPA Method 10</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>O$_2$</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>CO$_2$</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Moisture</td>
<td>USEPA Method 4</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Non-condensable Gas Flue (Main Stack, Flue 3)</td>
<td>Odour</td>
<td>ASNZS4323.3—2001</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>PCCD / PCDF</td>
<td>USEPA Method 23</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TRS</td>
<td>USEPA Method 16</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>PAH</td>
<td>CARB Method 429; or USEPA SW846 Method 0010</td>
<td>Post commissioning; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>TSP</td>
<td>AS4323.2—1995</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>---------------------</td>
<td>-------------------------------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>PM$_{10}$</td>
<td>USEPA Method 201</td>
<td>Post commission; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Particle Size Distribution</td>
<td>ISO 13320-1:1999, Particle size analysis -- Laser diffraction methods</td>
<td>Post commission; Quarterly in first year; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>NO$_x$</td>
<td>USEPA Method 7</td>
<td>Post commission; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO$_2$</td>
<td>USEPA Method 6</td>
<td>Post commission; Six monthly thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>SO$_3$ + H$_2$SO$_4$</td>
<td>USEPA Method 8</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>HCl</td>
<td>USEPA Method 26A</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Cl$_2$</td>
<td>USEPA Method 26A</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>ClO$_2$</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>VOC</td>
<td>Sampling USEPA Method 18; Analysis USEPA SW846 Method 8260</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Metals</td>
<td>USEPA Method 29</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO</td>
<td>USEPA Method 10</td>
<td>Post commission; Annually thereafter.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>O$_2$</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>CO$_2$</td>
<td>USEPA Method 3A</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Moisture</td>
<td>USEPA Method 4</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Power Boiler Flue (Main Stack, Flue 4)</td>
<td>Odour</td>
<td>ASNZS 4323.3—2001</td>
<td>Post commission; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>ClO$_2$</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commission;</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
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</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Chlorine Dioxide Plant Vent Gas Scrubber</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Cl₂</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Chlorate Plant Vent Gas Scrubber</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>ClO₂</td>
<td>NCASI Method (03.B.001)</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Cl₂</td>
<td>USEPA Method 26A</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>TRS</td>
<td>USEPA Method 16</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Odour</td>
<td>ASNZS4323.3—2001</td>
<td>Post commissioning; Quarterly in first year; Six monthly thereafter.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Velocity</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Temperature</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Bleach Plant Vent</td>
<td>Flow Rate</td>
<td>USEPA Method 2; or AS4323.2</td>
<td>Twice in each sampling campaign.</td>
</tr>
<tr>
<td>Wastewater Treatment Plant Equalising Basin</td>
<td>TRS</td>
<td>A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies:</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Nominated exhaust point</td>
<td>Pollutant/parameter</td>
<td>Method</td>
<td>Frequency of Testing</td>
</tr>
<tr>
<td>--------------------------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
</tbody>
</table>
| Wastewater Treatment Plant Equalising Basin                  | Odour               | A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies:  
  • Emission isolation flux chamber;  
  • Wind tunnel; or  
  • Equipment enclosure  
  Analysis using USEPA Method 16                                                                 | Post commissioning; Six monthly thereafter. |
| Wastewater Treatment Plant Buffer Basin                       | TRS                 | A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies:  
  • Emission isolation flux chamber;  
  • Wind tunnel; or  
  • Equipment enclosure  
  Analysis using USEPA Method 16                                                                 | Post commissioning; Six monthly thereafter. |
| Wastewater Treatment Plant Buffer Basin                       | Odour               | A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies:  
  • Emission isolation flux chamber;  
  • Wind tunnel; or  
  • Equipment enclosure  
  Analysis using USEPA Method 16                                                                 | Post commissioning; Six monthly thereafter. |
| Wastewater Treatment Plant Aeration Basin                     | TRS                 | A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies:  
  • Emission isolation flux chamber;  
  • Wind tunnel; or  
  • Equipment enclosure  
  Analysis using USEPA Method 16                                                                 | Post commissioning; Six monthly thereafter. |
<table>
<thead>
<tr>
<th>Nominated exhaust point</th>
<th>Pollutant/parameter</th>
<th>Method</th>
<th>Frequency of Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment Plant Aeration Basin</td>
<td>Odour</td>
<td>A sampling program to be approved by the Director involving measurements at a minimum of 3 sites, using either of the following methodologies: • Emission isolation flux chamber; • Wind tunnel; or • Equipment enclosure Analysis using ASNZS 4323.3—2001</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
<tr>
<td>Cooling Tower fan exhausts</td>
<td>Odour</td>
<td>ASNZS 4323.3—2001</td>
<td>Post commissioning; Six monthly thereafter.</td>
</tr>
</tbody>
</table>
Annex A4- Meteorological and ambient air quality monitoring requirements

Table 1  Monitoring requirements at the Gunns Rowella Monitoring Station

The pollutant specified in Column 1 must be monitored at the Gunns Rowella Monitoring Station using the sampling technique, frequency of sampling, averaging times, and analysis/measurement techniques specified in the corresponding Columns 2 to 5 respectively. Sampling and analysis/measurement must be conducted in accordance with the reference method specified in the corresponding Column 6, or in accordance with an alternate method approved in writing by the Director.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Sampling Technique</th>
<th>Frequency of Sampling</th>
<th>Averaging Time</th>
<th>Analysis/ Measurement Technique</th>
<th>Reference Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Reduced Sulfides (TRS)</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour</td>
<td>Thermal Oxidation and chemiluminescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Nitric Oxide (NO)</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour, 1 year</td>
<td>Chemiluminescence</td>
<td>AS 3580.5.1—1993</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Not sampled</td>
<td>Not sampled</td>
<td>3 minutes, 1 hour, 1 year</td>
<td>Calculated from NO and NOx data</td>
<td>AS 3580.5.1—1993</td>
</tr>
<tr>
<td>Nitrogen Oxides (NOₓ)</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour, 1 year</td>
<td>Chemiluminescence</td>
<td>AS 3580.5.1—1993</td>
</tr>
<tr>
<td>Respirable Particles (PM₁₀)</td>
<td>TEOM</td>
<td>Continuous</td>
<td>10 minutes, 1 hour, 24 hour</td>
<td>TEOM</td>
<td>AS 3580.9.8—2001</td>
</tr>
<tr>
<td>Fine Particles (PM₂.₅)</td>
<td>Low Volume Sampler</td>
<td>2 samples per week</td>
<td>24 hours, 1 year</td>
<td>Gravimetric (PM₂.₅) PIXE elemental composition including chloride and sulfate</td>
<td>Ansto ion-beam method</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour, 24 hour, 1 year</td>
<td>UV fluorescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Pollutant</td>
<td>Sampling Technique</td>
<td>Frequency of Sampling</td>
<td>Averaging Time</td>
<td>Analysis/ Measurement Technique</td>
<td>Reference Method</td>
</tr>
<tr>
<td>-------------------------------</td>
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<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour, 8 hour, Daily 8 hour maximum</td>
<td>Non-dispersive infrared</td>
<td>AS 3580.7.1—1992</td>
</tr>
<tr>
<td>Inorganic Chlorinated</td>
<td>To be approved by the Director</td>
<td>Pre-commissioning:</td>
<td>Pre-commissioning: Quarterly sampling for 30 months; Post-commissioning: Ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compounds (ICC)</td>
<td></td>
<td>Sampling for 30 months; Post-commissioning: Sampling for 12 months</td>
<td>To be specified by the Director</td>
<td>ion chromatography</td>
<td>Based on USEPA Method 26</td>
</tr>
<tr>
<td>Dioxins and Furans</td>
<td>High volume sampling with particulate and PUF filters</td>
<td>Pre-commissioning:</td>
<td>7 days</td>
<td>High resolution GC/MS</td>
<td>USEPA Method TO-9A</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Summa canisters</td>
<td>Sampling for 30 months; Post-commissioning: Sampling for 12 months</td>
<td>Grab sample</td>
<td>GC/MS</td>
<td>USEPA Method TO-15</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>VSS dual adsorbent tubes (XAD &amp; carbon), active sampling</td>
<td>Pre-commissioning:</td>
<td>24 hours</td>
<td>GC/MS</td>
<td>USEPA Method TO-17</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Adsorbents, Passive sampling</td>
<td>Pre-commissioning:</td>
<td>7 to 10 days</td>
<td>GC/MS</td>
<td>BS EN 13528-2:2002 and BS EN 13528-3:2003 (sampling)</td>
</tr>
<tr>
<td>Hydrogen sulfide (H2S) and</td>
<td>VSS impinger train</td>
<td>Pre-commissioning:</td>
<td>24 hours</td>
<td>GC/MS</td>
<td>CSIRO (Ensis) &amp; Covey</td>
</tr>
<tr>
<td>Column 1</td>
<td>Column 2</td>
<td>Column 3</td>
<td>Column 4</td>
<td>Column 5</td>
<td>Column 6</td>
</tr>
<tr>
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</tr>
<tr>
<td>Pollutant</td>
<td>Sampling Technique</td>
<td>Frequency of Sampling</td>
<td>Averaging Time</td>
<td>Analysis/ Measurement Technique</td>
<td>Reference Method</td>
</tr>
<tr>
<td>speciated thiols and sulfides</td>
<td>Quarterly sampling for 30 months; Post-commissioning: Quarterly sampling for 30 months;</td>
<td></td>
<td></td>
<td></td>
<td>Consulting in-house method.</td>
</tr>
<tr>
<td>Temperature at 2 m</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Solid state thermistor</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Temperature at 10 m</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Solid state thermistor</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Relative humidity at 2 m</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Thin film capacitor</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Relative humidity at 10 m</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Thin film capacitor</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Rainfall</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Tipping bucket rain gauge</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Barometric pressure</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Solid state transducer</td>
<td>USEPA 450/4-87-013</td>
<td></td>
</tr>
<tr>
<td>Solar radiation</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Pyranometer</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Net radiation</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Net radiometer</td>
<td>USEPA 450/4-87 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind speed</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Sigma theta</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
<td></td>
</tr>
</tbody>
</table>
Table 2  Monitoring requirements at locations other than the Gunns Rowella Monitoring Station

The pollutant specified in Column 1 must be determined at the locations specified in Column 2 using the sampling technique, frequency of sampling, averaging time, and analysis technique specified in the corresponding Columns 3 to 6 respectively. Sampling and analyses must be conducted in accordance with the reference method specified in the corresponding Column 7, or in accordance with an alternate method approved by the Director.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Measurement/ Sampling Location</th>
<th>Sampling Technique</th>
<th>Frequency of Sampling</th>
<th>Averaging Time</th>
<th>Analysis Technique</th>
<th>Reference Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Reduced Sulfides (TRS)</td>
<td>Adjacent to waste water treatment plant except when in use for campaign monitoring or incident investigation procedures.</td>
<td>Vehicle-mounted sample pump and analyser. (MTRS)</td>
<td>Continuous</td>
<td>3 minutes, 1 hour</td>
<td>Thermal Oxidation and chemiluminescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Total Reduced Sulfides (TRS)</td>
<td>At location in George Town to be approved by the Director, referred to as the “George Town Monitoring Station”.</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour</td>
<td>Thermal Oxidation and chemiluminescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Total Reduced Sulfides (TRS)</td>
<td>At a location to the north of the mill site to be approved by the Director, referred to as the “Northern Monitoring Station”.</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour</td>
<td>Thermal Oxidation and chemiluminescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Total Reduced Sulfides (TRS)</td>
<td>At a location to the south of the mill site to be approved by the Director, referred to as the “Southern Monitoring Station”.</td>
<td>Sample pump into analyser</td>
<td>Continuous</td>
<td>3 minutes, 1 hour</td>
<td>Thermal Oxidation and chemiluminescence</td>
<td>AS 3580.4.1—1990</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Relevant locations chosen in response to campaign or incident requirements.</td>
<td>Summa canisters</td>
<td>As required for campaign monitoring and incident investigation</td>
<td>Grab sample</td>
<td>GC/MS</td>
<td>USEPA Method TO-15</td>
</tr>
<tr>
<td>Pollutant</td>
<td>Measurement/ Sampling Location</td>
<td>Sampling Technique</td>
<td>Frequency of Sampling</td>
<td>Averaging Time</td>
<td>Analysis Technique</td>
<td>Reference Method</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
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<td>-----------------</td>
<td>-------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Relevant locations chosen in response to campaign or incident requirements.</td>
<td>VSS dual adsorbent tubes (XAD &amp; carbon), active sampling</td>
<td>As required</td>
<td>24 hours</td>
<td>GC/MS</td>
<td>USEPA Method TO-17</td>
</tr>
<tr>
<td>Hydrogen sulfide (H₂S) and speciated thiols and sulfides</td>
<td>Relevant locations chosen in response to campaign or incident requirements.</td>
<td>VSS impinger train</td>
<td>As required</td>
<td>24 hours</td>
<td>GC/MS</td>
<td>CSIRO (Ensis) &amp; Covey Consulting in-house method.</td>
</tr>
<tr>
<td>VOCs and speciated thiols and sulfides</td>
<td>For use in preventing and detecting leaks and fugitive emissions from the land.</td>
<td>Portable GC/MS</td>
<td>As required</td>
<td>5 to 10 minutes</td>
<td>GC/MS</td>
<td>Analysis protocols based on USEPA Method TO-15 and TO-17</td>
</tr>
<tr>
<td>Inorganic chlorinated compounds (HCl; ClO₂; Cl₂; total ICC)</td>
<td>Emitter and receiver/analyser must be sited close to the pulp mill’s boundary with the Tamar River at locations approved by the Director.</td>
<td>No sample required</td>
<td>Continuous</td>
<td>3 minutes, 1 hour, 24 hours</td>
<td>OPSIS DOAS</td>
<td></td>
</tr>
<tr>
<td>Respirable Particles (PM₁₀)</td>
<td>The George Town Monitoring Station</td>
<td>As approved by Director</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
</tr>
<tr>
<td>Fine Particles (PM₁₀)</td>
<td>The Northern Monitoring Station</td>
<td>As approved by Director</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
</tr>
<tr>
<td>Fine Particles (PM₂.₅)</td>
<td>The Southern Monitoring Station</td>
<td>As approved by Director</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
<td>As approved by</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Measurement/ Sampling Location</th>
<th>Sampling Technique</th>
<th>Frequency of Sampling</th>
<th>Averaging Time</th>
<th>Analysis Technique</th>
<th>Reference Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vector average wind speed</td>
<td>At the site of the mobile TRS monitor when not monitoring at the waste water treatment plant.</td>
<td>Logged continuous data</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>At the site of the mobile TRS monitor when not monitoring at the waste water treatment plant.</td>
<td>Logged continuous data</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Sigma theta</td>
<td>At the site of the mobile TRS monitor when not monitoring at the waste water treatment plant.</td>
<td>Logged continuous data</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
<td></td>
</tr>
<tr>
<td>Vector average wind speed</td>
<td>Adjacent to waste water treatment plant.</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>Adjacent to waste water treatment plant.</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Sigma theta</td>
<td>Adjacent to waste water treatment plant.</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
<td></td>
</tr>
<tr>
<td>Vector average wind speed</td>
<td>The George Town Monitoring Station</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>The George Town Monitoring Station</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Sigma theta</td>
<td>The George Town Monitoring Station</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
<td></td>
</tr>
<tr>
<td>Vector average wind speed</td>
<td>The Northern Monitoring Station</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>The Northern Monitoring Station</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic</td>
<td>AS 2923— 1987</td>
<td></td>
</tr>
<tr>
<td>Pollutant</td>
<td>Measurement/ Sampling Location</td>
<td>Sampling Technique</td>
<td>Frequency of Sampling</td>
<td>Averaging Time</td>
<td>Analysis Technique</td>
<td>Reference Method</td>
</tr>
<tr>
<td>------------------------</td>
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<td>------------------------------------------------------</td>
</tr>
<tr>
<td>Sigma theta</td>
<td>The Northern Monitoring Station</td>
<td>anemometer</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
</tr>
<tr>
<td>Vector average wind speed</td>
<td>The Southern Monitoring Station</td>
<td>anemometer</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Anemometer</td>
<td>AS 2923— 1987</td>
</tr>
<tr>
<td>Vector average wind direction</td>
<td>The Southern Monitoring Station</td>
<td>anemometer</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Wind vane or Ultrasonic anemometer</td>
<td>AS 2923— 1987</td>
</tr>
<tr>
<td>Sigma theta</td>
<td>The Southern Monitoring Station</td>
<td>anemometer</td>
<td>Continuous</td>
<td>5 minutes, 1 hour</td>
<td>Calculated parameter</td>
<td>AS 2923— 1987 or US EPA 454/R-99-005 2000</td>
</tr>
<tr>
<td>Visual images</td>
<td>Localities surrounding the land</td>
<td>Web cams aimed at the plant plumes</td>
<td>Continuous</td>
<td>Continuous viewing with an archived image every 10 minutes</td>
<td>Images and live feed available from secure web site</td>
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</tbody>
</table>
Annex V1 – Vegetation Clearance Area
Annex D1 – Further information

Table 1 – Further information

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Details</th>
<th>Date received</th>
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<tr>
<td>RFI 001</td>
<td>Analyses of data from marine benthic monitoring around the proposed outfall of the Gunns Pulp Mill – Report prepared for Aquenal Pty Ltd Feb 2007</td>
<td>Report by Dr Leon Barmuta, University of Tasmania</td>
<td>20 July 2007</td>
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<td>RFI 005</td>
<td>Updated details following design alterations to mill specifications based on the selection of equipment suppliers</td>
<td>Memo from Poyry to Gunns dated 11 May 2007 Ref 16B0104</td>
<td>14 May 2007</td>
</tr>
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<td>RFI 012</td>
<td>Response to request for clarification of the location and width of the water supply pipeline, the location of the balancing tank, the degree of revegetation proposed and the configuration of the above ground sections of the pipeline within the Trevallyn Reserve</td>
<td>Written information, Maps</td>
<td>18 May 2007</td>
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<tr>
<td>RFI 018</td>
<td>Response to request for confirmation of option for wharf design</td>
<td>Written information</td>
<td>26 May 2007</td>
</tr>
<tr>
<td>RFI 026(a)</td>
<td>Response to request for details of mill site preparation equipment, construction operating hours and construction noise</td>
<td>Written information</td>
<td>31 July 2007</td>
</tr>
<tr>
<td>RFI 026(b)</td>
<td>Revised site preparation/excavation plan</td>
<td>Plan</td>
<td>31 July 2007</td>
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<tr>
<td>RFI 027(a)</td>
<td>Revised proposed site layout plan</td>
<td>Plan</td>
<td>8 June 2007</td>
</tr>
<tr>
<td>RFI 027(b)</td>
<td>Details of proposed transmission line location</td>
<td>Map</td>
<td>8 June 2007</td>
</tr>
<tr>
<td>RFI 027(c)</td>
<td>Details of proposed vegetation clearance area</td>
<td>Map</td>
<td>8 June 2007</td>
</tr>
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<td>RFI 028</td>
<td>Response to request for information regarding chlorate production in the chemical plant and amount and composition of gaseous, liquid and solid emissions from the chemical plant</td>
<td>Written information</td>
<td>7 June 2007</td>
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<td>RFI 029(a)</td>
<td>Response to request for information regarding conditions at the edge of the mixing zone in Bass Strait</td>
<td>EnviroGulf report to Gunns dated 5 June 2007, Ref Gunss/LH/05062007</td>
<td>4 June 2007</td>
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<td>Response to request for information regarding conditions at the edge of the mixing zone in Bass Strait</td>
<td>Poyry report to Gunns dated 7 June 2007, Ref 16B0104</td>
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<td>RFI 029(c)</td>
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<td>GHD memo to Gunns dated 7 June 2007, Ref 41/16384/359359</td>
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<td>RFI 030</td>
<td>Additional information about the hydrodynamic model for Bass Strait</td>
<td>GHD report, Patterson-Britton report</td>
<td>14 June 2007</td>
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<tr>
<td>RFI</td>
<td>Description</td>
<td>Date</td>
<td></td>
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<td>-----------------------------------------------------------------------------</td>
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<td>RFI 031</td>
<td>Gunns response to concerns raised by Professor Andrew Wadsley</td>
<td>Toxikos report to Gunns dated 4 July 2007, Ref TR170607-RJF</td>
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<td>RFI 033(a)</td>
<td>Detailed plan for the location of and design of the landfill, reservoir, quarry and infrastructure connections</td>
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<td>RFI 033(b)</td>
<td>Detailed plan for the bale warehouse</td>
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<td>RFI 033(c)</td>
<td>Detailed plan for the wharf, office and wharf amenities</td>
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<td>RFI 033(d)</td>
<td>Response to request for details of amount of wood chips produced on site and amount imported from other chip mills</td>
<td>10 August 2007</td>
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<td>RFI 035</td>
<td>Response to request for information about chemical plant emission points and predicted emissions for base-case and merchant-base production levels</td>
<td>Written information 27 July 2007</td>
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<td>RFI 036</td>
<td>Response to request for information about the chemical plant</td>
<td>Written information 31 July 2007</td>
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<td>RFI 037(a)</td>
<td>Details of the effect of the reduced scale of earthworks on 24 hour construction</td>
<td>Written information. 10 August 2007</td>
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<td>RFI 037(b)</td>
<td>Details of various chemical processes and emissions from the chemical plant</td>
<td>Written information, Flow diagram 10 August 2007</td>
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<td></td>
<td>Information from Gunns regarding layout changes at the mill site for an improved environmental outcome</td>
<td>Written information, Plan 8 May 2007</td>
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<td></td>
<td>Map from Gunns showing the areas for revocation and construction corridors in Trevallyn Reserve</td>
<td>Map L07131_TrevallyRevocationMap1_Rev04 17 June 2007</td>
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<td></td>
<td>Details of concurrency and use of data for calibration/verification of the hydrodynamic model</td>
<td>Written text 18 June 2007</td>
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<tr>
<td></td>
<td>Map from Gunns showing the areas for revocation and construction corridors in Trevallyn Reserve</td>
<td>Map L07131_TrevallyRevocationMap2_Rev04 27 June 2007</td>
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Annex W1 - Wastewater limits

Table 1 – Wastewater limits

The pollutant or parameter specified in Column 1 must not exceed the limits specified in Columns 2 to 6 respectively in respect of that pollutant or parameter.

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<tr>
<th>Pollutant or Parameter</th>
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<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
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<tbody>
<tr>
<td></td>
<td>Limits</td>
<td>Average in any 30 day period</td>
<td>Daily maximum</td>
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<tr>
<td></td>
<td></td>
<td>kg/ADt</td>
<td>kg/d</td>
<td>mg/L</td>
<td>kg/d</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 8.5</td>
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<td>-</td>
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<td>-</td>
<td>1.1</td>
<td>3840</td>
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<td>6650</td>
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<tr>
<td>BOD5</td>
<td>-</td>
<td>0.5</td>
<td>1750</td>
<td>-</td>
<td>3000</td>
</tr>
<tr>
<td>COD</td>
<td>-</td>
<td>20</td>
<td>52400</td>
<td>-</td>
<td>89000</td>
</tr>
<tr>
<td>AOX</td>
<td>-</td>
<td>0.2</td>
<td>700</td>
<td>-</td>
<td>1400</td>
</tr>
<tr>
<td>Colour</td>
<td>-</td>
<td>20</td>
<td>52400</td>
<td>-</td>
<td>89800</td>
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<tr>
<td>Chlorate</td>
<td>-</td>
<td>-</td>
<td>352</td>
<td>10</td>
<td>600</td>
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<tr>
<td>Total nitrogen</td>
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<td>0.2</td>
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<td>-</td>
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<tr>
<td>Total phosphorus</td>
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<td>110</td>
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<td>180</td>
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<tr>
<td>Dioxins and Furans</td>
<td>13 (TEQ pg/L)</td>
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<td>-</td>
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<td>Trihalomethanes</td>
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<td>-</td>
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<td>2</td>
<td>-</td>
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<tr>
<td>Oil and Grease</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
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Annex W2 – Wastewater treatment plant investigation levels

Table 1: Wastewater treatment plant investigation levels

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<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
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<tr>
<td></td>
<td></td>
<td>Investigation levels (concentration)</td>
<td>Average over any period of 30 consecutive days</td>
<td>Maximum</td>
<td>Average over any period of 30 consecutive days</td>
<td>Maximum Continuous</td>
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<td>Colour</td>
<td>mg Pt/L</td>
<td>600</td>
<td>800</td>
<td>37800</td>
<td>54800</td>
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<tr>
<td>Dissolved oxygen</td>
<td>mg/L</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>pH</td>
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<td>6.5</td>
<td>8.5</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total suspended solids</td>
<td>mg/L</td>
<td>25</td>
<td>35</td>
<td>1540</td>
<td>2530</td>
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<tr>
<td>AOX</td>
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<td>8160</td>
<td>10800</td>
<td>530</td>
<td>760</td>
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<tr>
<td>BOD5</td>
<td>mg/L</td>
<td>13</td>
<td>35</td>
<td>850</td>
<td>2550</td>
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<td>COD</td>
<td>mg/L</td>
<td>430</td>
<td>780</td>
<td>28000</td>
<td>55000</td>
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<td>µg/L</td>
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<td>6000</td>
<td>190</td>
<td>420</td>
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<td>Total phosphorus</td>
<td>µg/L</td>
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<td>2160</td>
<td>60</td>
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<tr>
<td>Aluminium</td>
<td>µg/L</td>
<td>-</td>
<td>720</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Copper</td>
<td>µg/L</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Chlorinated alkanes</td>
<td>µg/L</td>
<td>-</td>
<td>1000</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Trihalomethanes</td>
<td>µg/L</td>
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<td>450</td>
<td>-</td>
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<tr>
<td>Chlorofom</td>
<td>µg/L</td>
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<td>Chlorinated alkenes</td>
<td>µg/L</td>
<td>-</td>
<td>15</td>
<td>-</td>
<td>-</td>
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<tr>
<td>1,3-dichloropropene</td>
<td>µg/L</td>
<td>-</td>
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<td>Aromatic hydrocarbons</td>
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<tr>
<td>Dioxins and Furans</td>
<td>pgTEQ/L</td>
<td>3.38</td>
<td>7.34</td>
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<td>Generic groups of chemicals</td>
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<td>Organic acids</td>
<td>µg/L</td>
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<td>5400</td>
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<td>Chloroacetic acids</td>
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<td>Monochloroacetic acid</td>
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<td>Trichloroacetic acid</td>
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<td>Resin acids</td>
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<td>Dehydroabietic acid</td>
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<td>Fatty acids, pine</td>
<td>µg/L</td>
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<td>230</td>
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<td>Fatty acids, eucalypt</td>
<td>µg/L</td>
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<tr>
<td>Chlorinated natural phenolics</td>
<td>µg/L</td>
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<td>30</td>
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<td>2-chlorosyringaldehyde</td>
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<td>6</td>
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<td>Other aromatic compounds</td>
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<td>Sterols</td>
<td>µg/L</td>
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<td>520</td>
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Annex W3 – Wastewater monitoring requirements

Table 1: Wastewater Monitoring Point 1 requirements

The pollutant or parameter specified in Column 1 must be monitored at Wastewater Monitoring Point 1 at the frequency of testing specified in Column 2.

<table>
<thead>
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<th>Pollutant or parameter</th>
<th>Frequency of testing</th>
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<tr>
<td>Flow</td>
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<td>Colour</td>
<td>Continuous</td>
</tr>
<tr>
<td>Dissolved oxygen</td>
<td>Continuous</td>
</tr>
<tr>
<td>pH</td>
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<tr>
<td>Temperature</td>
<td>Continuous</td>
</tr>
<tr>
<td>Turbidity</td>
<td>Continuous</td>
</tr>
<tr>
<td>Salinity / conductivity</td>
<td>Continuous</td>
</tr>
<tr>
<td>Nitrate -N</td>
<td>Continuous</td>
</tr>
<tr>
<td>Ammonia</td>
<td>Continuous</td>
</tr>
<tr>
<td>Phosphorus (total and FRP)</td>
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<td>Total suspended solids</td>
<td>Daily</td>
</tr>
<tr>
<td>COD</td>
<td>Daily</td>
</tr>
<tr>
<td>AOX</td>
<td>Three times weekly</td>
</tr>
<tr>
<td>BOD5</td>
<td>Three times weekly</td>
</tr>
<tr>
<td>Chlorate</td>
<td>Three times weekly</td>
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<tr>
<td>Oil and Grease (analyse)</td>
<td>Weekly</td>
</tr>
<tr>
<td>Nitrite -N</td>
<td>Weekly</td>
</tr>
<tr>
<td>Total nitrogen</td>
<td>Weekly</td>
</tr>
<tr>
<td>Aluminium (total and dissolved)</td>
<td>Weekly</td>
</tr>
<tr>
<td>Copper (total and dissolved)</td>
<td>Weekly</td>
</tr>
<tr>
<td>Trihalomethane</td>
<td>Weekly</td>
</tr>
<tr>
<td>Chloroform</td>
<td>Weekly</td>
</tr>
<tr>
<td>Sterols</td>
<td>Weekly</td>
</tr>
<tr>
<td>Dioxins and Furans TEQ(pg/L)</td>
<td>Weekly</td>
</tr>
<tr>
<td>2,3,7,8 TDDF (pg/L)</td>
<td>Weekly</td>
</tr>
<tr>
<td>2,3,7,8-TCDD (pg/L)</td>
<td>Weekly</td>
</tr>
<tr>
<td>Chloroacetic acids *</td>
<td>Weekly</td>
</tr>
<tr>
<td>Resin acids*</td>
<td>Weekly</td>
</tr>
<tr>
<td>Fatty acids*</td>
<td>Weekly</td>
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<tr>
<td>Chlorinated natural phenolics*</td>
<td>Weekly</td>
</tr>
<tr>
<td>Enterococci</td>
<td>Monthly</td>
</tr>
<tr>
<td>Faecal coliform</td>
<td>Monthly</td>
</tr>
<tr>
<td>Metals and metaloids (total and dissolved)*</td>
<td>Monthly</td>
</tr>
<tr>
<td>Sulphides</td>
<td>Monthly</td>
</tr>
<tr>
<td>Ethanol</td>
<td>Monthly</td>
</tr>
<tr>
<td>Bromoform</td>
<td>Monthly</td>
</tr>
<tr>
<td>Dichloromethane</td>
<td>Monthly</td>
</tr>
<tr>
<td>Chloropropanes*</td>
<td>Monthly</td>
</tr>
<tr>
<td>Pollutant or parameter</td>
<td>Frequency of testing</td>
</tr>
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<td>-----------------------------</td>
<td>----------------------</td>
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<tr>
<td>Chlorinated alkenes*</td>
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</tr>
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<td>Aniline</td>
<td>Monthly</td>
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<tr>
<td>Benzene</td>
<td>Monthly</td>
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<td>Camphene</td>
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<td>Phenols*</td>
<td>Monthly</td>
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<td>Chlorophenols*</td>
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<td>2-nitrophenol</td>
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<td>Carbon disulfide</td>
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<td>Surfactant (MBAS)</td>
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<td>Polyelectrolyte flocculants (OPFs)</td>
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<tr>
<td>Methanol</td>
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<td>Limonene</td>
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**Note:** * refer to Annex W2, Table 1 for individual parameters within groups
### ANNEX M1 – Parameters and Analyses for Construction Monitoring in State Waters

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<th>Parameters/Analysis</th>
<th>Column 1</th>
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<td><strong>Sediment Quality</strong></td>
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<td><strong>Water Quality</strong></td>
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<tr>
<td>Particle size</td>
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<td>Dissolved oxygen</td>
</tr>
<tr>
<td>Weak acid extraction</td>
<td></td>
<td>Turbidity</td>
</tr>
<tr>
<td>Arsenic *</td>
<td></td>
<td>Redox</td>
</tr>
<tr>
<td>Cadmium *</td>
<td></td>
<td>Total suspended solids</td>
</tr>
<tr>
<td>Chromium</td>
<td></td>
<td>Total nitrogen</td>
</tr>
<tr>
<td>Cobalt *</td>
<td></td>
<td>Ammonia</td>
</tr>
<tr>
<td>Copper *</td>
<td></td>
<td>Kjeldahl nitrogen</td>
</tr>
<tr>
<td>Lead *</td>
<td></td>
<td>Total phosphorous</td>
</tr>
<tr>
<td>Manganese *</td>
<td></td>
<td>Reactive phosphorous</td>
</tr>
<tr>
<td>Nickel</td>
<td></td>
<td>Total organic carbon</td>
</tr>
<tr>
<td>Vanadium *</td>
<td></td>
<td>Dissolved organic carbon</td>
</tr>
<tr>
<td>Zinc</td>
<td></td>
<td>Arsenic *</td>
</tr>
<tr>
<td>Total organic carbon</td>
<td></td>
<td>Barium</td>
</tr>
<tr>
<td>Redox</td>
<td></td>
<td>Beryllium *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cadmium *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cobalt *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nickel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chromium *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Copper *</td>
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<tr>
<td></td>
<td></td>
<td>Lead *</td>
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<tr>
<td></td>
<td></td>
<td>Zinc *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Manganese *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vanadium *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vanadium *</td>
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<tr>
<td></td>
<td></td>
<td>Mercury *</td>
</tr>
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**Note:** Sediments must be analysed for total metals. Water samples must be analysed for both total and dissolved metals.