



Licence Holder	Bechtel (Western Australia) Pty Ltd
ACN	147 531 226
Licence Number	L8650/2012/1
Registered business address	140 St Georges Terrace PERTH WA 6000
Prescribed Premises	Category 52: Electric power generation Category 54: Sewage facility Category 73: Bulk storage of chemicals, etc.
Premises	Ashburton North Village and LNG Plant Temporary Utilities TALANDJI WA 6710
Date of amendment	30 June 2017

Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act and follows.

Date signed: 30 June 2017

Jonathan Bailes

A/Senior Manager – Industry Regulation (Process Industries)

an officer delegated under section 20 of the Environmental Protection Act 1986 (WA)

Amendment Notice

This notice is issued under section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

The following DER Guidance Statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Setting Conditions* (October 2015)
- *Guidance Statement: Decision Making* (November 2016)
- *Guidance Statement: Risk Assessment* (November 2016)

Amendment Description

Chevron Australia Pty Ltd has engaged Bechtel (Western Australia) Pty Ltd (the Licence Holder) as the prime contractor to undertake engineering design, procurement and the management of all construction aspects of the Wheatstone LNG Project which includes the Ashburton North Village.

The Ashburton North Village has been developed to support the construction of the Wheatstone LNG Project. The village is located in the Shire of Ashburton in the Pilbara Region and is approximately 12 km south-west of the Onslow town site and approximately 10 km south-east of the proposed LNG premises. The village is surrounded by pastoral leases and the Onslow Solar Salt Project, which holds a lease approximately 6 km northeast of the site.

The Licence Holder holds Licence L8650/2012/1 for the Ashburton North Village Temporary Utilities. The premises infrastructure currently consists of a diesel-fired power station and a number of sewage treatment plants (STPs):

- 600 EP STP (168m³/day);
- Construction Village STP (1,920m³/day); and
- Fly Camp STP (205m³/day) (not yet commissioned);

The Licence Holder submitted an amendment application to add the Construction Village Expansion Camp STP (design capacity 168m³/day) approved under Works Approval W5834/2015/1, and Train 4 of the Construction Village STP (design capacity 480m³/day) approved under Works Approval W5306/2013/1.

The Licence Holder has also applied to amend the licence to include the operation of Stage 4 of the Construction Village Power Station. The power station previously consisted of ten diesel generators with a total generating capacity of 16MW. Stage 4 includes the addition of three additional diesel generators taking the generating capacity to 20.8MW.

Other administrative changes have been made to update the premises boundary description and premises plans.

The amendment application as submitted to DER included the addition of the Temporary Marine Outfall (TMO) for the disposal of treated wastewater. The TMO was constructed under Works Approval W5439/2013/1 and is designed to discharge

wastewater to the ocean via an outfall diffuser located approximately 1,800m offshore. Commissioning and validation have been undertaken by the Licence Holder in accordance with the conditions of Ministerial Statement No. 873. This aspect of the amendment application has been deferred pending further discussion with the Office of the Environmental Protection Authority (OPEA) and the Licence Holder regarding regulation of the TMO and interaction with the ministerial statement. Works Approval W5439/2013/1 remains in force.

Decision

Addition of the Construction Village Expansion Camp STP and Train 4 of the Construction Village STP

The Construction Village Expansion Camp STP and Train 4 of the Construction Village STP support the expansion of accommodation facilities at the Ashburton North Village.

The Construction Village Camp Expansion STP is a Membrane Bioreactor (MBR) type system utilising a process of biological degradation and membrane separation to treat wastewater. The system has a maximum design capacity of 168m³/day. The Construction Village Camp Expansion STP was assessed and commissioned under Works Approval W5834/2015/1.

The Construction Village STP includes four separate 480m³/day sewage processing trains. Currently, three trains are operating under the licence. The Construction Village STP is an activated sludge plant system, which uses an aerobic biological treatment process. The process involves the introduction of oxygen into sewage for aerobic biomass metabolism and a reduction in organic content. The fourth train of the STP has been assessed and commissioned under Works Approval W5306/2013/1.

During normal operating conditions treated effluent from the STPs is directed to the CV Effluent Sump prior to being discharged to the TMO. If necessary due to operational requirements, effluent may also be discharged to two irrigation areas.

The works approvals assessments concluded that the emissions from the STPs were acceptable and that existing licence controls regarding irrigation area nutrient loading limits and monitoring were sufficient. Commissioning data provided by the Licence Holder confirmed that the STPs were operating in accordance with the assessed performance and design criteria.

The Delegated Officer has reviewed the works approval assessments and commissioning data and is satisfied that the existing documented risk assessments for the operation of the STPs are adequate (DER references A933796 (expansion STP) and A616534 (train 4)).

Therefore, the Delegated Officer considers that the existing licence controls are sufficient to regulate discharges of wastewater and has added the Construction Village Camp Expansion STP and Train 4 of the Construction Village STP to the licence. The approved premises production or design capacity for category 54 sewage facility has been increased, and the wastewater acceptance, processing, discharge and monitoring conditions have been updated accordingly.

Addition of Stage 4 of the Construction Village Power Station (three generators)

Emissions from power generation activities were assessed by DER when the licence was amended to include the power station in November 2014. The assessment considered emissions from all four stages (13 generators) of the power station. However, only the first three phases (ten generators) were added to the licence. The Delegated Officer has reviewed the assessment carried out and has considered that the existing documented risk assessment for the activity is adequate (DER reference A838488).

In reviewing monitoring data submitted in accordance with existing licence conditions regarding the environmental performance of the existing three-stage power station, the Delegated Officer identified one exceedance in 2015 of the ambient air quality standard and licence limit of 0.12 ppm as defined in the National Environment Protection Measure for Ambient Air Quality (the Air NEPM).

The Licence Holder has implemented additional management measures to reduce the likelihood of the limit being exceeded. This includes an early warning trigger which notifies personnel of a potential exceedance (80ppb over a 10-minute averaging period).

In reviewing this data, the Delegated Officer noted that the exceedance was at the accommodation village, 200m from the power station. The accommodation village temporarily houses employees and contractors working on the project premises; is within the prescribed premises boundary, and is under the control of the Licence Holder. The nearest sensitive receptor of the Onslow town site is 12km from the premises and provided with adequate separation distance to ensure no impact from the power station emissions.

Therefore, the Delegated Officer considers that the risk is adequately managed by existing licence controls and has added Stage 4 of the power station to the licence. The approved premises production or design capacity for category 52 electric power generation has been increased, and emission points A11 to A13 added to the licence.

Amendment History

Table 1 provides the amendment history for Licence L8650/2012/1

Table 1: Licence amendments

Instrument	Issued	Amendment
L8650/2012/1	28/06/2012	New application – category 85 (Pioneer Camp).
L8650/2012/1	20/12/2012	Amendment to add the Fly Camp and 456 Bed Camp Expansion. Category upgraded from 85 to 54.
L8650/2012/1	21/11/2013	Amendment to add the 600 EP STP and second irrigation field. Licence converted to new format.
L8650/2012/1	27/11/2014	Amendment to add Trains 1 to 3 of the Construction Village STP, remove the Pioneer Camp STP, Fly Camp STP and 456 Bed Camp Expansion STP, and update the design capacity of the 600 EP STP. Addition of the first three stages of the Construction Village Power Station. Addition of the LNG Plant Long Term Fuel Facility.

Instrument	Issued	Amendment
L8650/2012/1	20/08/2015	Amendment to allow the Fly Camp STP to be recommissioned and allow the reuse of treated effluent for irrigating the sports oval.
L8650/2012/1	29/04/2016	Amendment by notice to extend the date of expiry to 1 July 2021.
L8650/2012/1	30/06/2017	Amendment Notice 1 Amendment to Train 4 of the Construction Village STP, Construction Village Expansion Camp STP, and Stage 4 of the Construction Village Power Station.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 11 January 2017. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2. A second draft Amendment Notice was issued to the Licence Holder on. On 29 June 2017, the Licence Holder provided an updated map and requested that the Amendment Notice is granted.

Amendment

1. The licence prescribed premises location is amended from the address below:

Ashburton North Village and LNG Plant Temporary Utilities Part of Lot 1577 on Plan 72843 within the following coordinates:

297115E, 7590630N; 297267E, 7590573N; 297209E, 7590419N; 297381E, 7590355N; 297375E, 7590339N; 297438E, 7590316N; 297501E, 7590485N; 297537E, 7590471N; 297544E, 7590492N; 297719E, 7590427N; 297848E, 7590409N; 297853E, 7590414N; 297887E, 7590506N; 297896E, 7590514N; 297920E, 7590505N; 297916E, 7590496N; 298063E, 7590440N; 297949E, 7590138N; 298086E, 7590086N; 297249E, 7591032N; 298212E, 7590482N; 298297E, 7590454N; 298366E, 7590665N; 298023E, 7590779N; 297638E, 7590746N; 297629E, 7590749N; 297676E, 7590889N; 297250E, 7590579N; 297119E, 7590230N; 297143E, 7590220N; 297129E, 7590225N; 297137E, 7590204N; 297158E, 7590158N; 297469E, 7590042N; 297464E, 7590029N; 297556E, 7589994N; 297496E, 7589835N; 297351E, 7589889N and 297410E, 7590048N, and Part of Lot 567 on Plan 71345 within the following coordinates: 293058E, 7598699N; 293252E, 7598647N; 293235E, 7598585N and 293235E, 7598585, TALANDJI WA 6710

to the new address below:

Ashburton North Village and LNG Plant Temporary Utilities, Part of Lots 1577 on Plan 72843, 560 on Plan 71346, 509 on Plan 69198, 519 on Plan 69198, 561 on Plan 71346, 564 on Plan 71346, 565 on Plan 71346, 575 on Plan 71345, 570 on Plan 71345, 567 on Plan 71345, 569 on Plan 71345 and 400 on Plan 72906, TALANDJI WA 6710 within the coordinates as depicted in Schedule 1

2. The approved premises production or design capacity for category 52 electric power generation is amended from *16 megawatts* to *20.8 megawatts*.
3. The approved premises production or design capacity for category 54 sewage facility is amended from *1,813 cubic metres per day* to *2,461 cubic metres per day*.
4. The premises maps in Schedule 1 of the licence are replaced with the premises maps attached to this amendment notice.
5. Condition 1.1.2 of the licence is amended by the insertion of the following definitions:

‘AS 2031’ means the Australian Standard AS 2031-2012 Water quality – Sampling for microbiological analysis;

‘Continuous’ monitoring means data recovery rate of at least 90% excluding maintenance and calibration periods’;

6. Table 1.3.1 of the licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Table 1.3.1: Waste acceptance			
Waste type	Waste code	Quantity limit	Specification¹
Sewage	K130	1,813 <u>2,461</u> m ³ /day	Accepted through sewer inflow or tankered in from the Wheatstone project and port facilities
Septage wastes	K210		
Vegetable and food processing liquid wastes	K200		
Waste from grease traps	K110		
Swimming pool back wash	N/A		Accepted through sewer inflow only
Industrial wash water contaminated with a controlled waste	L150	60 m ³ /year	Tankered in from the Wheatstone project and port facilities

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the Environmental Protection (Controlled Waste) Regulations 2004.

7. Table 1.3.2 of the licence is amended by the by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Table 1.3.2: Waste processing		
Waste type	Process	Process requirements
Sewage	Biological, physical and chemical treatment via Trains 1- 3 <u>4</u> of the Construction Village STP	4,440 <u>1920</u> m ³ /day
Vegetable and food processing liquid wastes		
Waste from grease traps		
Industrial wash water contaminated with a controlled waste		
Swimming pool back wash		
Sewage	Biological, physical and chemical treatment via the 600 EP STP	168 m ³ /day
Vegetable and food processing liquid wastes		
Waste from grease traps		
Industrial wash water contaminated with a controlled waste		
Swimming pool back wash		
Sewage	Biological, physical and chemical treatment via the Fly Camp STP	205 m ³ /day
Vegetable and food processing liquid wastes		
Waste from grease traps		
Industrial wash water contaminated with a controlled waste		
Swimming pool back wash		
<u>Sewage</u>	<u>Biological, physical and chemical treatment via the Construction Village Expansion Camp STP</u>	<u>168 m³/day</u>
<u>Vegetable and food processing liquid wastes</u>		
<u>Waste from grease traps</u>		
<u>Industrial wash water contaminated with controlled waste</u>		
<u>Swimming pool back wash</u>		

8. Table 2.2.1 of the licence is amended by the insertion of the red text shown in underline below:

Table 2.2.1: Emission points to air			
Emission point reference and location on Map of emission points and monitoring locations	Emission Point and source	Emission point height (m)	Source, including any abatement
A1	Construction Village Diesel Generator 1	2.9	Caterpillar 3516B Diesel generator
A2	Construction Village Diesel Generator 2	2.9	Caterpillar 3516B Diesel generator
A3	Construction Village Diesel Generator 3	2.9	Caterpillar 3516B Diesel generator
A4	Construction Village Diesel Generator 4	2.9	Caterpillar 3516B Diesel generator
A5	Construction Village Diesel Generator 5	2.9	Caterpillar 3516B Diesel generator
A6	Construction Village Diesel Generator 6	2.9	Caterpillar 3516B Diesel generator
A7	Construction Village Diesel Generator 7	2.9	Caterpillar 3516B Diesel generator
A8	Construction Village Diesel Generator 8	2.9	Caterpillar 3516B Diesel generator
A9	Construction Village Diesel Generator 9	2.9	Caterpillar 3516B Diesel generator
A10	Construction Village Diesel Generator 10	2.9	Caterpillar 3516B Diesel generator
<u>A11</u>	<u>Construction Village Diesel Generator 11</u>	<u>2.9</u>	<u>Caterpillar 3516B Diesel generator</u>
<u>A12</u>	<u>Construction Village Diesel Generator 12</u>	<u>2.9</u>	<u>Caterpillar 3516B Diesel generator</u>
<u>A13</u>	<u>Construction Village Diesel Generator 13</u>	<u>2.9</u>	<u>Caterpillar 3516B Diesel generator</u>

9. Table 2.3.1 of the licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

Table 2.3.1: Emission points to land		
Emission point reference and location on Map of emission points and monitoring locations	Description	Source including abatement
L1 – L2	Discharge to two irrigation fields (Irrigation Field East L1 and Irrigation Field West L2) with total area of 26.2ha	Treated wastewater from the Construction Village STP (via the Off-Spec Tank), Fly Camp STP, and 600 EP STP <u>and Construction Village Expansion Camp STP</u>
L3	Discharge to the 2.15ha sports oval	Treated wastewater from the Construction Village STP via the On-spec Tank
L4	Oily Water Separator (LNG Plant Long Term Fuel Facility)	Stormwater that has been treated by an oily water separator

10. Condition 3.1.1 of the licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

3.1.1 The Licensee shall ensure that:

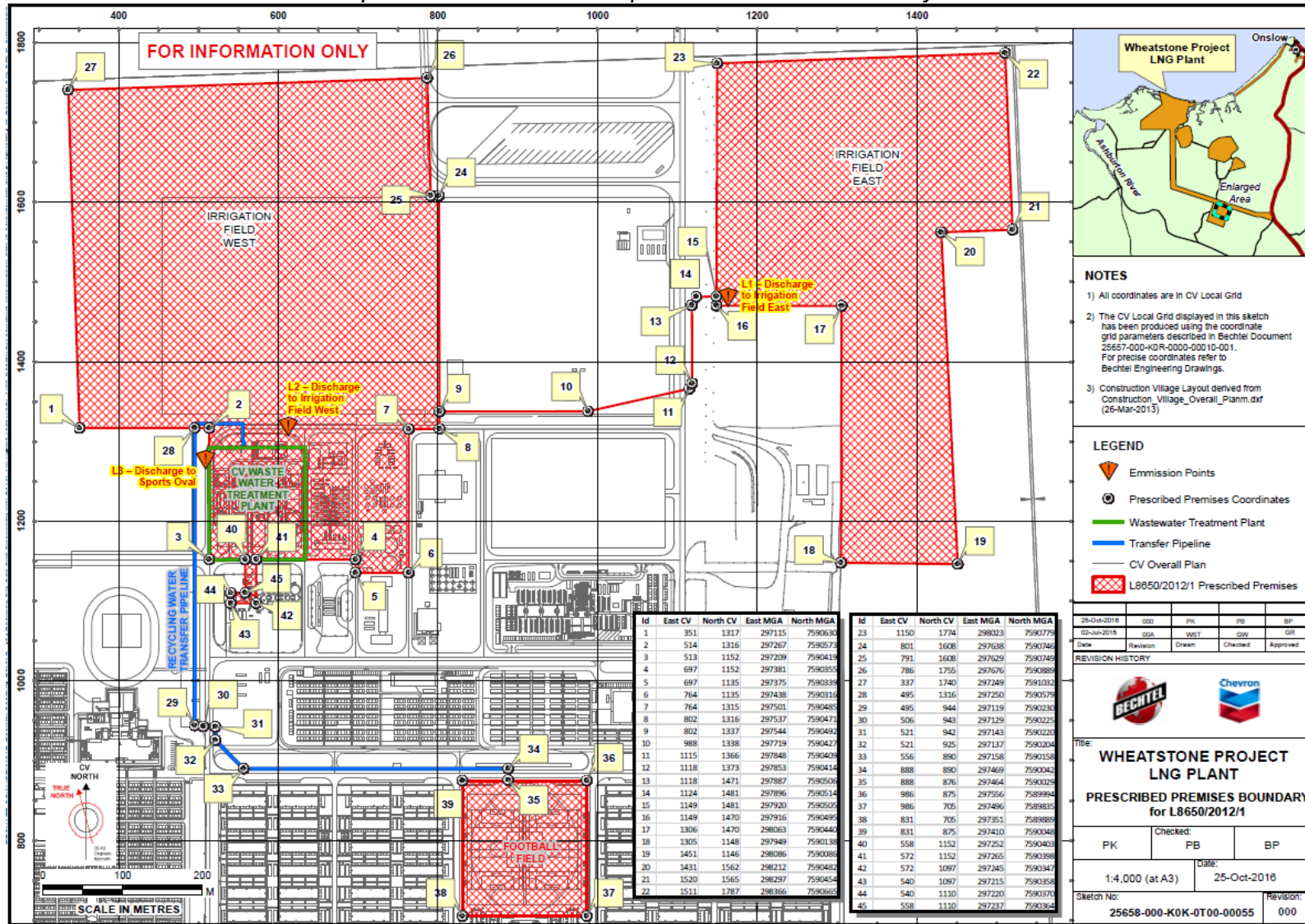
- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1, with the exception of holding times where these are not achievable;*
 - (b) all wastewater samples are collected in accordance with AS/NZS 5667.10; and*
 - (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.*
 - (d) all microbiological samples are collected and preserved in accordance with AS 2031;*
11. Table 3.3.1 of the licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

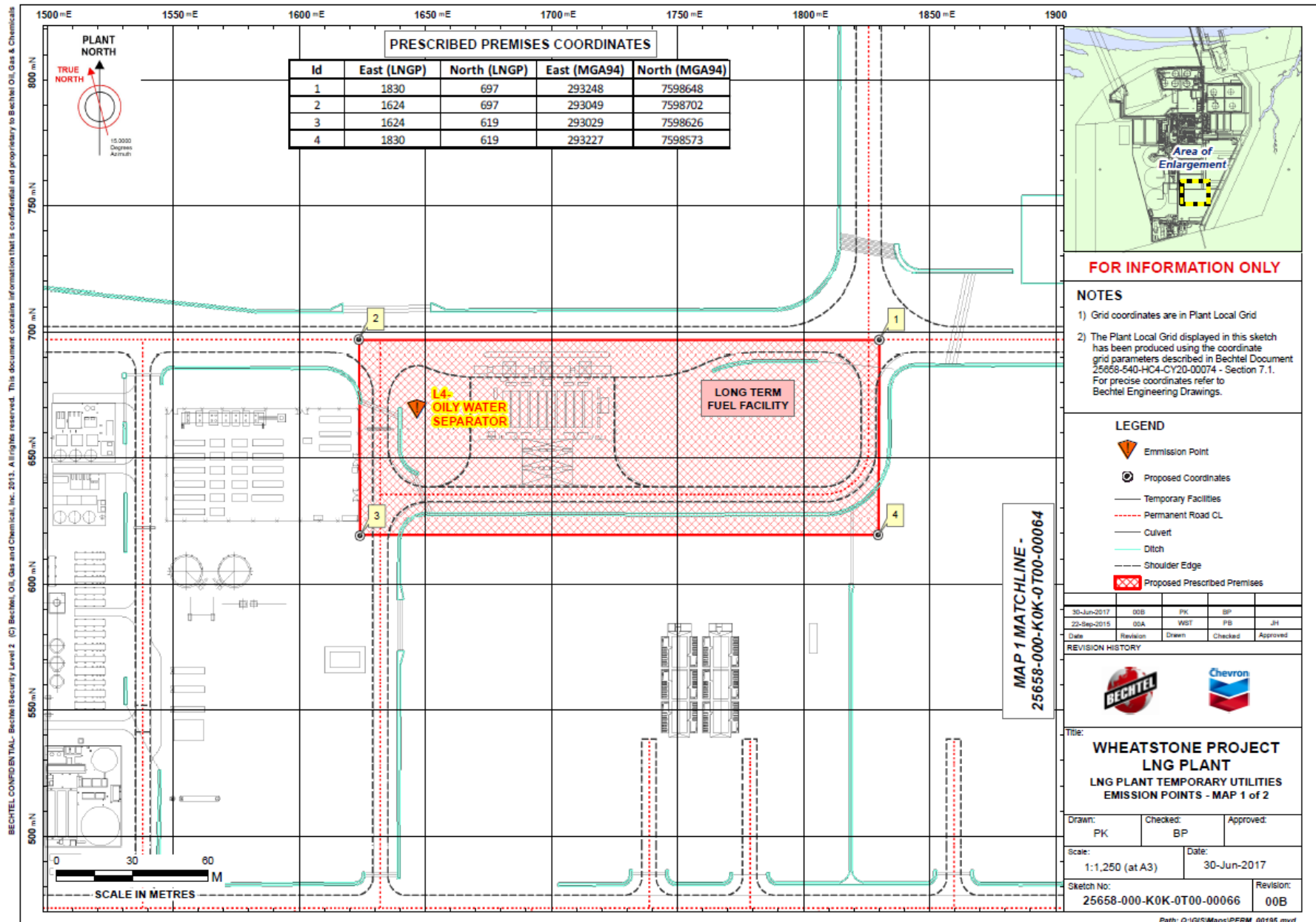
Table 3.3.1: Monitoring of inputs and outputs					
Monitoring point reference and location	Process description	Parameter	Units	Averaging period	Frequency
Construction Village STP Train 1 – M1	Discharge from STP to Off-Spec Tank or CV Effluent Sump	Volumetric flow rate	m³/day	Monthly	Continuous
Construction Village STP Train 2 – M2		Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
		Total Suspended Solids	mg/L		
		pH¹	pH units		
		Total Nitrogen	mg/L		
Construction Village STP Train 3 – M3		Total Phosphorus	mg/L		
<u>Construction Village STP Train 4 – M4</u>	E.coli	cfu/100mL			
600 EP STP – M4 <u>6</u>	Discharge from STP to irrigation fields <u>or CV Effluent Sump</u>	Volumetric flow rate	m³/day	Monthly	Continuous
		Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
		Total Suspended Solids	mg/L		
		pH¹	pH units		
		Total Nitrogen	mg/L		
		Total Phosphorus	mg/L		
	E.coli	cfu/100mL			
Fly Camp STP – M5 <u>8</u>	Discharge from STP to irrigation fields <u>or CV Effluent Sump</u>	Volumetric flow rate	m³/day	Monthly	Continuous
		Biochemical Oxygen Demand	mg/L	Spot sample	Quarterly
		Total Suspended Solids	mg/L		
		pH¹	pH units		
		Total Nitrogen	mg/L		
		Total Phosphorus	mg/L		
	E.coli	cfu/100mL			
<u>Construction Village Expansion Camp STP – M7</u>	<u>Discharge from STP to irrigation fields or CV Effluent Sump</u>	<u>Volumetric flow rate</u>	<u>m³/day</u>	<u>Monthly</u>	<u>Continuous</u>
		<u>Biochemical Oxygen Demand</u>	<u>mg/L</u>	<u>Spot sample</u>	<u>Quarterly</u>
		<u>Total Suspended Solids</u>	<u>mg/L</u>		
		<u>pH¹</u>	<u>pH units</u>		
		<u>Total Nitrogen</u>	<u>mg/L</u>		
		<u>Total Phosphorus</u>	<u>mg/L</u>		
	<u>E.coli</u>	<u>cfu/100mL</u>			
On-Spec Tank – M6 <u>5</u>	Treated wastewater used for dust suppression	Volumetric flow rate	m³/day	Monthly	Continuous

Note 1: In-field non-NATA accredited analysis permitted.

Premises maps

The Premises is shown in the maps below. The red line depicts the Premises boundary.





Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 11 January 2017 for review and comment. The Licence Holder responded on 16 February 2017. The following comments were received on the draft Amendment Notice.

Comments received	DER consideration of risk
<p>Replace Lot 409 on Plan 69198 in the Premises location description to Lot 509 on Plan 69198</p> <p>Query whether coordinates for the amended premises boundary need to be included in the prescribed premises location description in Condition 1 of the Amendment Notice</p>	<p>The administrative error has been corrected in Amendment 1 of the Amendment Notice.</p> <p>The Delegated Officer has determined that coordinates of the premises boundary are not required as part of the prescribed premises location description as they are depicted in the updated premises plan in Schedule 1.</p>
<p>Request the inclusion of the following waste types for the Construction Village Expansion Camp STP in Table 1.3.2.:</p> <p>1) Industrial wash water contaminated with a controlled waste; and</p> <p>2) Swimming pool back wash.</p>	<p>The Delegated Officer is satisfied that the existing sewer network at the premises has been designed to combine wastewater prior to treatment in order to maximise the operational efficiency of the STPs. The Delegated Officer considers that there is no additional risk associated with the inclusion of the requested waste types as suitable waste for treatment via the Construction Village Expansion Camp STP. Table 1.3.2 has been modified to include the requested waste types.</p>
<p>Request that the heading of condition 2.4 be amended from <i>Point Source Emissions to Surface Water</i> to <i>Point Source Emissions to Marine Environment</i> or similar to avoid confusion with discharges to surface water bodies on land.</p>	<p>The heading of section 2.4 has been changed to <i>Point Source Emissions to Marine Water</i>.</p>
<p>Request that Table 2.4.1 heading be amended from <i>Emission Points to Land</i> to <i>Emissions to Marine Environment</i> or similar and that the source '<i>Treated Wastewater from the Construction Village STP (via the Off-Spec Tank)</i>' be amended to '<i>Treated Wastewater from the Construction Village STP (via the Effluent Sump)</i>' as the TMO accepts water from the effluent sump, not the off-spec tank.</p>	<p>This aspect of the amendment has been deferred.</p>
<p>Request a definition of continuous monitoring to be included in the definitions listed in condition 1.1.2 of the Licence. The Licence Holder has suggested a definition of 'data recovery rate of at least 90% excluding maintenance and calibration periods'.</p>	<p>The Delegated Officer has included a definition of 'continuous' in the licence to provide clarity for the Licence Holder.</p>