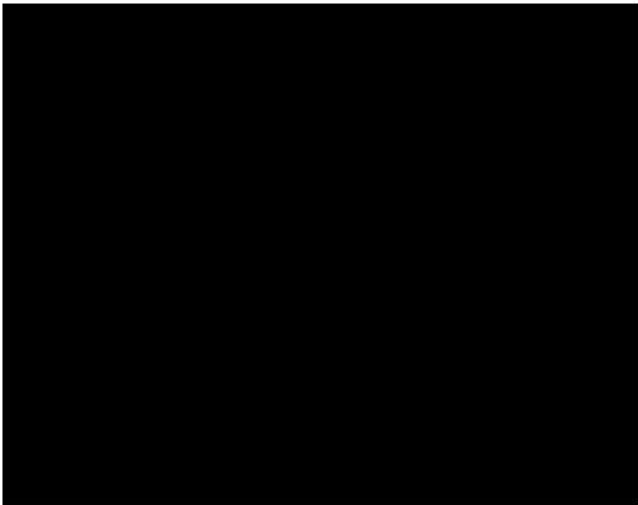




**Environmental Compliance Report – Works Approval
W6604/2021/1**

Angelo River – Wastewater Treatment Facilities



March 2022

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1. Proponent information

1.1 Premises Details

Rio Tinto Resource Development (Res Dev) are planning to execute a drilling campaign to assess the long-term development options of iron ore deposits in the Angelo River region, located approximately 40km south of the processing plant at Rio Tinto's West Angelas mine site (Appendix 1 Figure 1). The Angelo River resource areas are part of the Robe River Joint Venture (RRJV), which is 53% owned by Rio Tinto, 33% by Mitsui Iron Ore Development and 14% by Nippon Steel Sumitomo Metals Corporation. The prescribed premises operates under exploration licence E47/754.

This project aims to provide a local 120-room accommodation complex to service the Angelo River drilling campaign for at least 3 years.

Works Approval W6604/2021/1 (the Works Approval) was issued on 22 January 2022 with the operational location presented in Appendix 1 Figure 2.

1.2 Legal Land Description

The Site for this Scope of Works is the existing Angelo Camp site, located in the Shire of East Pilbara, approximately 98km north-west of Newman (Appendix 1 Figure 1).

The new Wastewater Treatment Plant (WWTP) is located within the Works Approval prescribed premise boundary (Appendix 1 Figure 2), within the indicative coordinates shown in Table 1.

Table 1: WWTP Infrastructure Location

Corner	Easting (m)	Northing (m)
Wastewater Treatment Facilities		
North West	682,200	7,421,600
North East	682,600	7,421,400
South West	682,000	7,421,150
South East	682,400	7,421,100

2. Introduction

2.1 Scope and Purpose

The purpose of this Environmental Compliance Report (ECR) is to demonstrate compliance with Conditions 1, 2 and 3 of the Works Approval.

The ECR is submitted for the following works approval:

- Works Approval No: W6604/2021/1 – Angelo River Exploration Mobile Camp
- Date of Issue: 22/01/2022
- DWER file number: DER2021/000560
- Name and location of premises: Angelo River, exploration licence E47/754.

The construction of prescribed premises category 85, the wastewater treatment facility, is the focus of this ECR. The construction of the facility was completed on 9 February 2022.

3. Works Approval Compliance

The Works Approval contains three conditions in relation to the construction phase of the wastewater treatment plant at Angelo River. A statement of compliance against each condition is presented in Table 2.

Table 2: Statement of compliance against construction phase conditions of W6604/2021/1

Condition	Statement of Compliance
<p>1. The works approval holder must:</p> <ul style="list-style-type: none"> (a) install the infrastructure and equipment; (b) in accordance with the corresponding installation requirements; and (c) at the corresponding infrastructure location as set out in Table 1. 	<p>Compliant</p> <p>See Appendix 3 for evidence of installation of infrastructure. Two deviations are noted for the change in design/treatment specification for Thermotolerant coliforms and an air conditioner which is not required to be installed. All infrastructure has been located at the corresponding locations approved in the Works Approval.</p>
<p>2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being installed:</p> <ul style="list-style-type: none"> (a) undertake an audit of their compliance with the requirements of condition 1; <p>And</p> <ul style="list-style-type: none"> (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance. 	<p>Compliant</p> <p>This ECR serves to provide an audit of compliance with the requirements of condition 1. See Table 3 for statements of compliance against each item of infrastructure installed. Construction of the WWTP was completed on 9 Feb 2022. Submission on 11 Feb 2022 is 30 calendar days from installation.</p>
<p>3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:</p> <ul style="list-style-type: none"> (a) certification by a qualified and experienced engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1; (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person. 	<p>Deviation</p> <p>Certification of the report, by a suitably qualified engineer has been delayed. The certifying engineer is based in Queensland and has been impacted by the recent flooding. Certification of the report will be provided, separately to this ECR, once the engineer can be engaged.</p> <p>The title page of this ECR provides the name, position and title of an authorised representative for the works approval. Appendix 1 and 2 of this ECR contains as constructed plans and a detailed site plan for each of the items of infrastructure related to the WWTP.</p>

Table 3 below, provides for an assessment of compliance against the design and installation requirements set out in condition 1 of the Works Approval.

Table 3: Compliance against Table 1 of Works Approval W6604/2021/1

Infrastructure	Condition	Statement of Compliance
Balance tank, sedimentation tank, Mixed Liquor recycle tank, RBC tank, Break tank, clarifier and treated effluent tank.	(a) All sewage storage and treatment tanks, vessels, transfer pipelines and conveyance infrastructure must be impermeable and free of leaks and defects;	<p>Compliant</p> <p>All storage and treatment tanks, vessels, transfer pipelines and conveyance infrastructure are constructed of impermeable materials such as high-density plastics and metals. Infrastructure has been visually inspected for defects and environment performance of the infrastructure will be assessed in the environmental commissioning report. Refer to Appendix 3, Figure 3 for the WWTP layout.</p>
	(b) Stormwater to be prevented from entering the sewage treatment system and storage infrastructure;	<p>Compliant</p> <p>All vessels are sealed to ingress of stormwater via impermeable covers and shields. The WWTP has been mounted to an elevated platform ensuring no stormwater ingress can occur under the unit (see Appendix 2).</p>
	(c) WWTP able to treat up to 30 m ³ of sewage per day;	<p>Compliant</p> <p>The WWTP has a basis of design assuming a throughput of 250L/person/day x 120 people, which equates to 30 m³ of sewage per day.</p>
	(d) WWTP able to treat sewage to the following discharge targets; <ul style="list-style-type: none"> • 5-day Biochemical Oxygen Demand (BOD) <20 mg/L • Total suspended solids (TSS) <30 mg/L • Total nitrogen <40 mg/L • Total phosphorus <8 mg/L • Thermotolerant coliforms <10 colony forming units (CFU)/100ml 	<p>Deviation</p> <p>The installed WWTP has been designed to meet all discharge targets contained within the Works Approval, with the exception of Thermotolerant coliforms. The WWTP has been designed to meet a discharge target of <1000 CFU/100ml.</p> <p>A discharge target of <10 CFU/100ml relates to WWTP's deemed to be class B (medium exposure risk of human contact) and a discharge target of <1000 CFU/100ml aligns with a Class C (low exposure risk of human contact). The supporting information submitted incorrectly classed the WWTP as a class B system.</p> <p>Department of Health Approval, for the WWTP, was received on the 17 November 2021, with effluent design criteria submitted in line with a class C system (<1000CFU/100ml) (see appendix 4).</p> <p>Due to the remote nature the location of the WWTP (100km from Newman town), sealed effluent treatment vessels and fenced/signposted</p>

		irrigation area there is no increase in risk to human health or the environment from a discharge target of <1000CFU/100ml for Thermotolerant coliforms.
	(e) Flow meter installed to discharge outlet pipe to monitor volumes discharged to spray-field; and	Compliant A flow meter has been installed on the discharge outlet pipeline, Refer to Appendix 3, Figure 5.
	(f) Alarm system to warn of failure of air compressor and discharge pumps	Deviation No air compressor has been installed on the WWTP. The rotating action of the rotating biological contractor (RBC) unit performs a similar function to that of an air compressor. There is no change in risk to human health or the environment as a result of the deviation. A beacon has been installed on the unit, and an automated email fault notification system established, for failure of discharge pumps (Refer to Appendix 3, Figure 6). Email notifications are sent to the area owner supervisor should a fault be detected.
Spray-field	(a) Sprinklers installed to distribute treated effluent evenly over a minimum 1.36 ha area;	Compliant A boundary fence 160m x 85m = 13,600m ² = 1.36ha, inclusive to allow for 5m spray drift on all sides. Sprinklers have been easily spaced within the irrigation area.
	(b) minimum of 2 m vertical separation distance maintained between the irrigated ground surface and groundwater levels; and	Compliant Depth to groundwater is expected to be approximately 37m below ground level.
	(c) Fence with safety signage installed to deter access.	Compliant The irrigation area is fully fenced with signate erected to deter access. Refer to Appendix 3, Figure 4.
Pipeline	(a) Constructed of impermeable material and free of leaks or defects.	Compliant The pipeline is constructed of high-density polyethylene pipe which is butt and fusion welded. The pipeline has been inspected for defects and environment performance will be verified during commissioning.

4. Appendices

Appendix 1: Maps

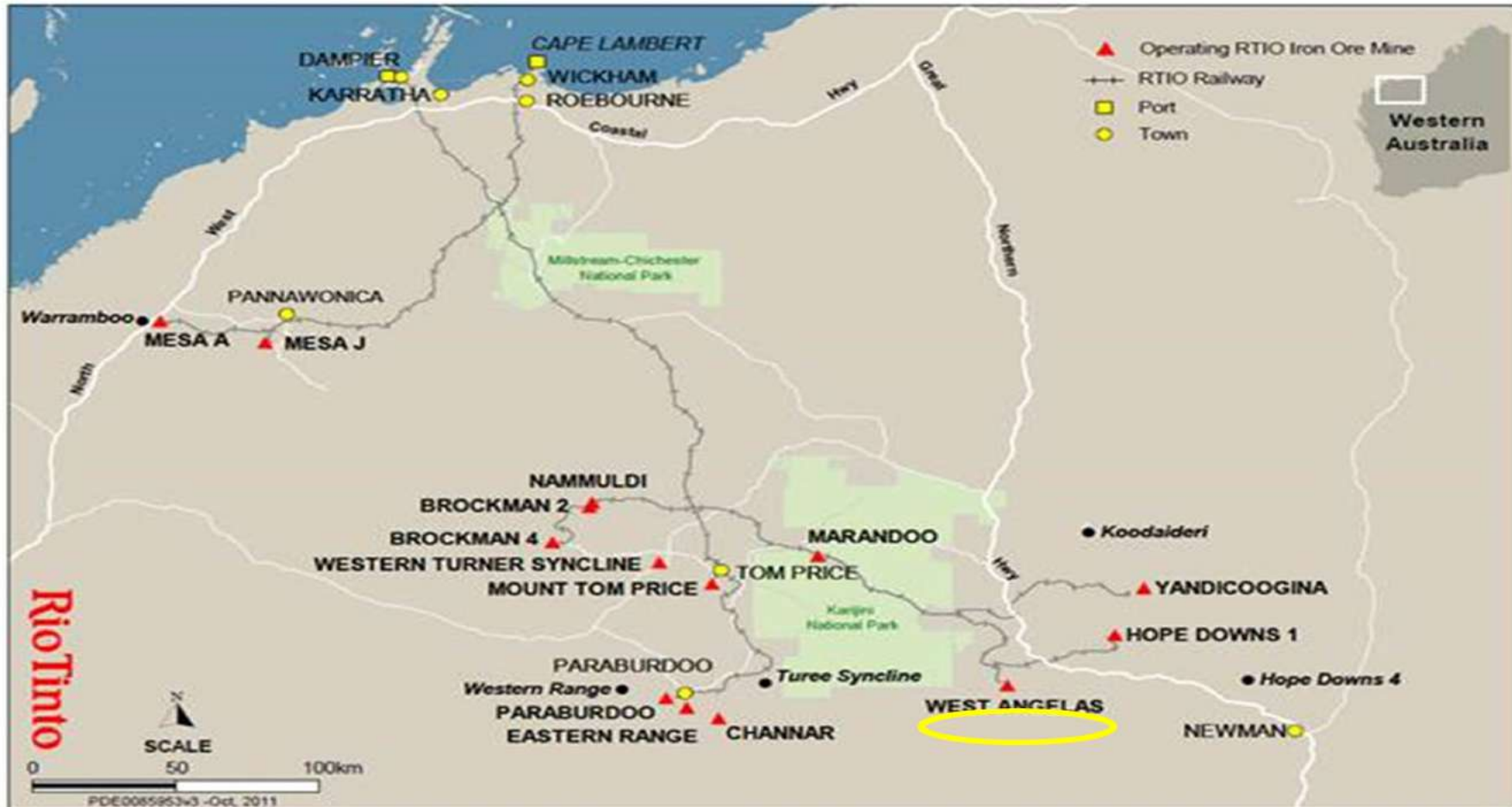


Figure 1: Regional location of the Angelo River and West Angelas Iron Ore Site

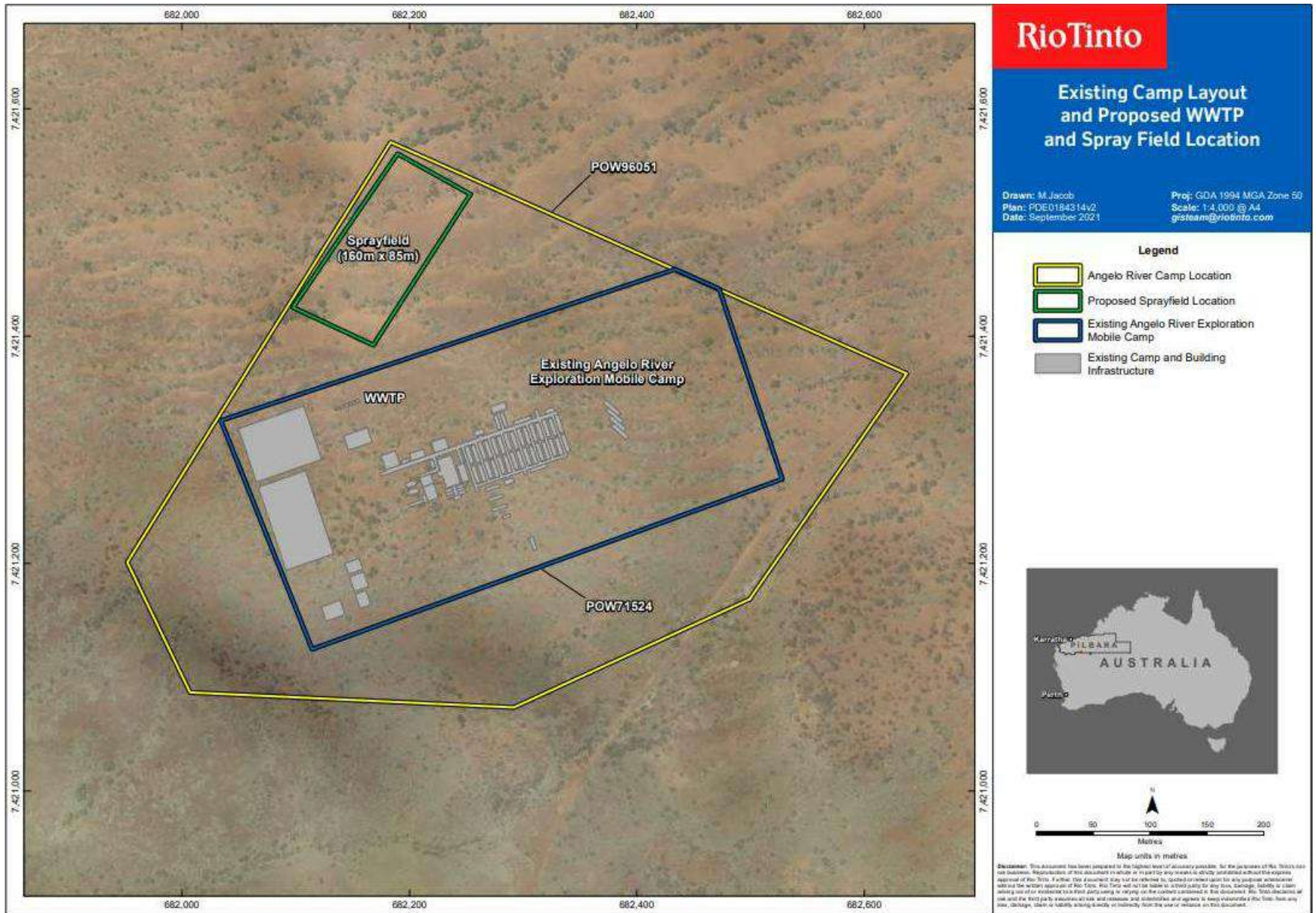
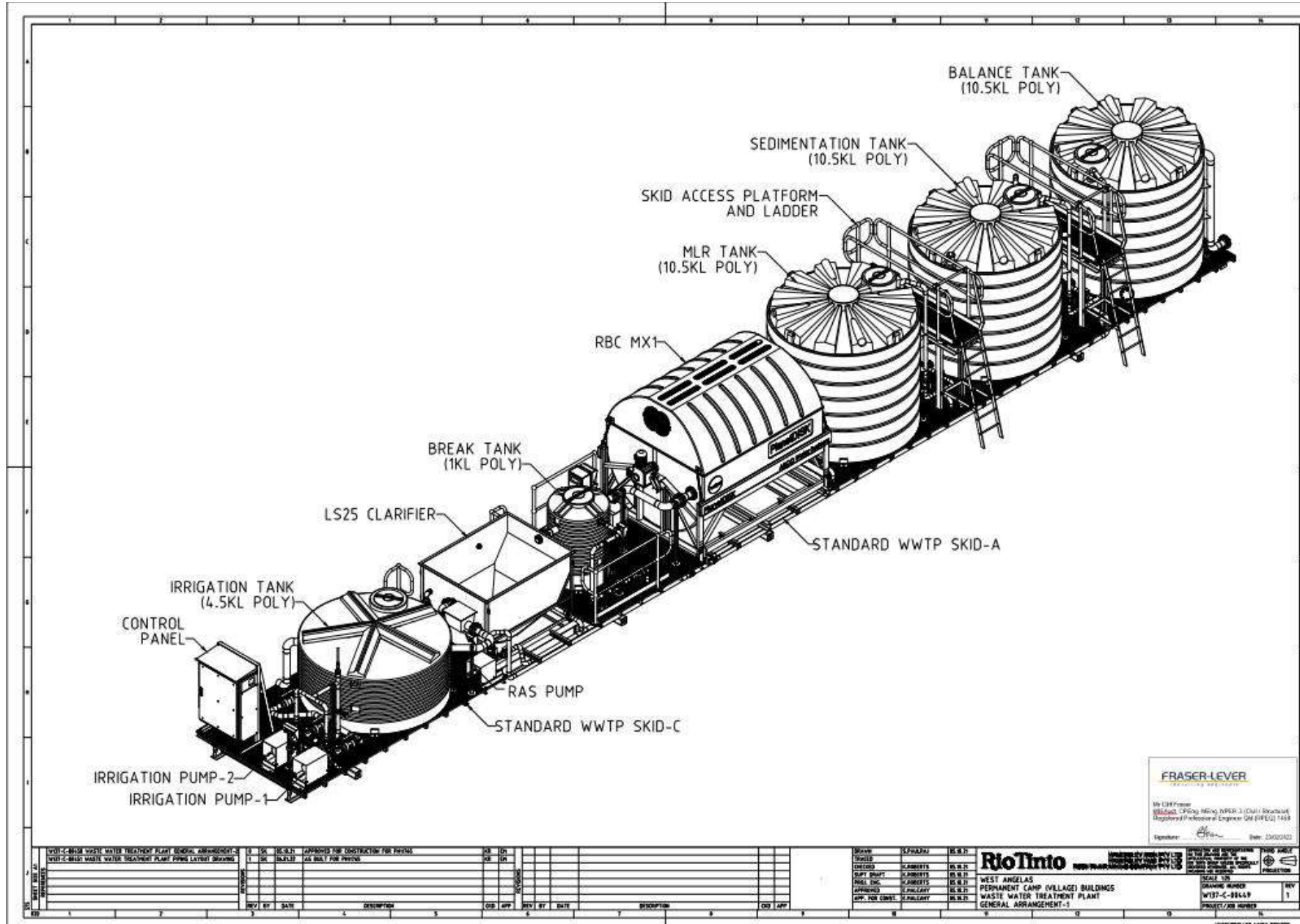
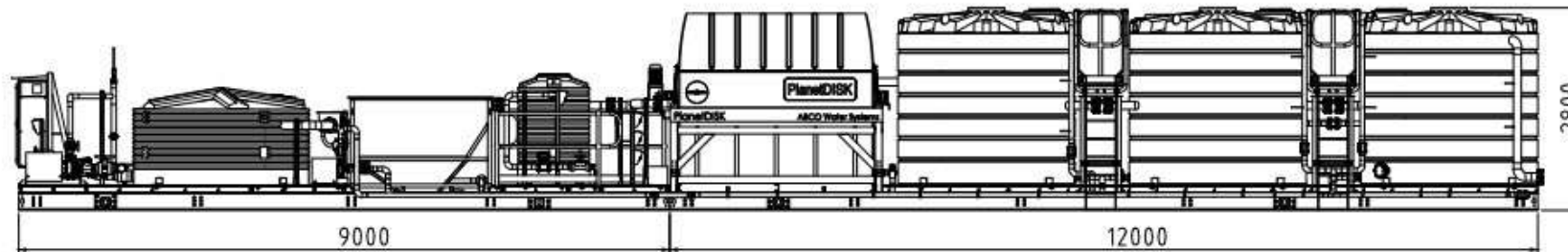
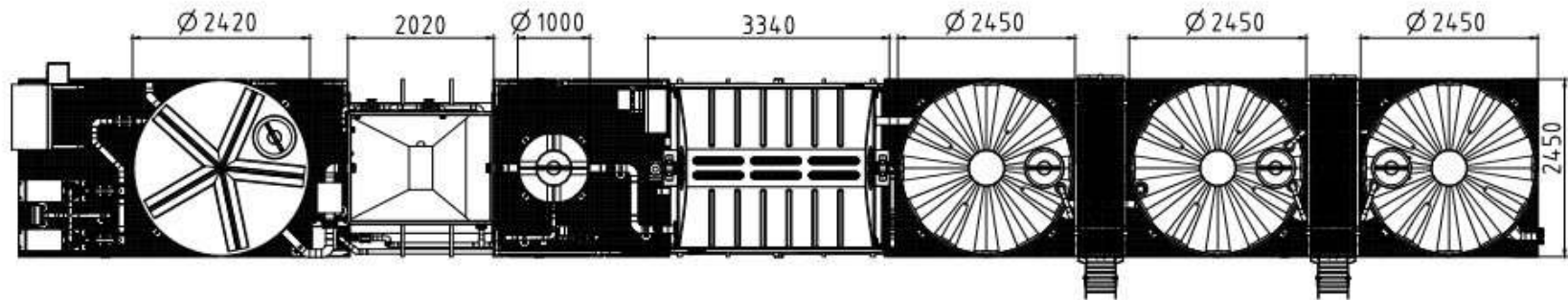


Figure 2: Location of Wastewater Treatment Plant.

Appendix 2: Evidence of compliance – as-built drawings.





FRASER-LEVER
CORPORATION

Mr. Cliff Fraser
NSIC No. 1234567890, NRC 2 (Civil) Structural
Registered Professional Engineer (in P.E.C.) 1418
Signature: [Signature] Date: 2012/02/02



NO.	REV.	BY	DATE	DESCRIPTION	APP.
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2	02	SK	04.11.12	AS BUILT FOR PRINTS	SK

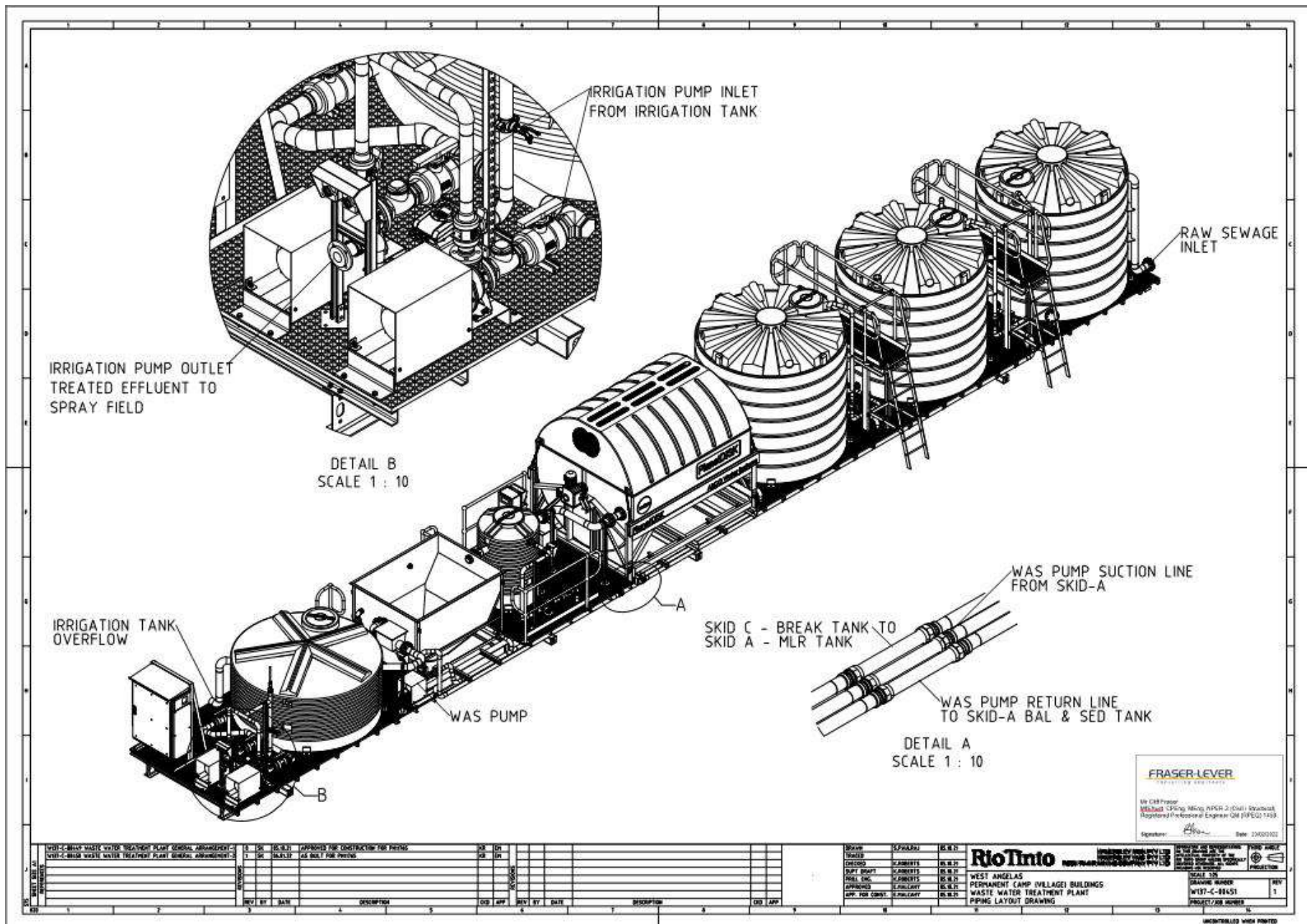
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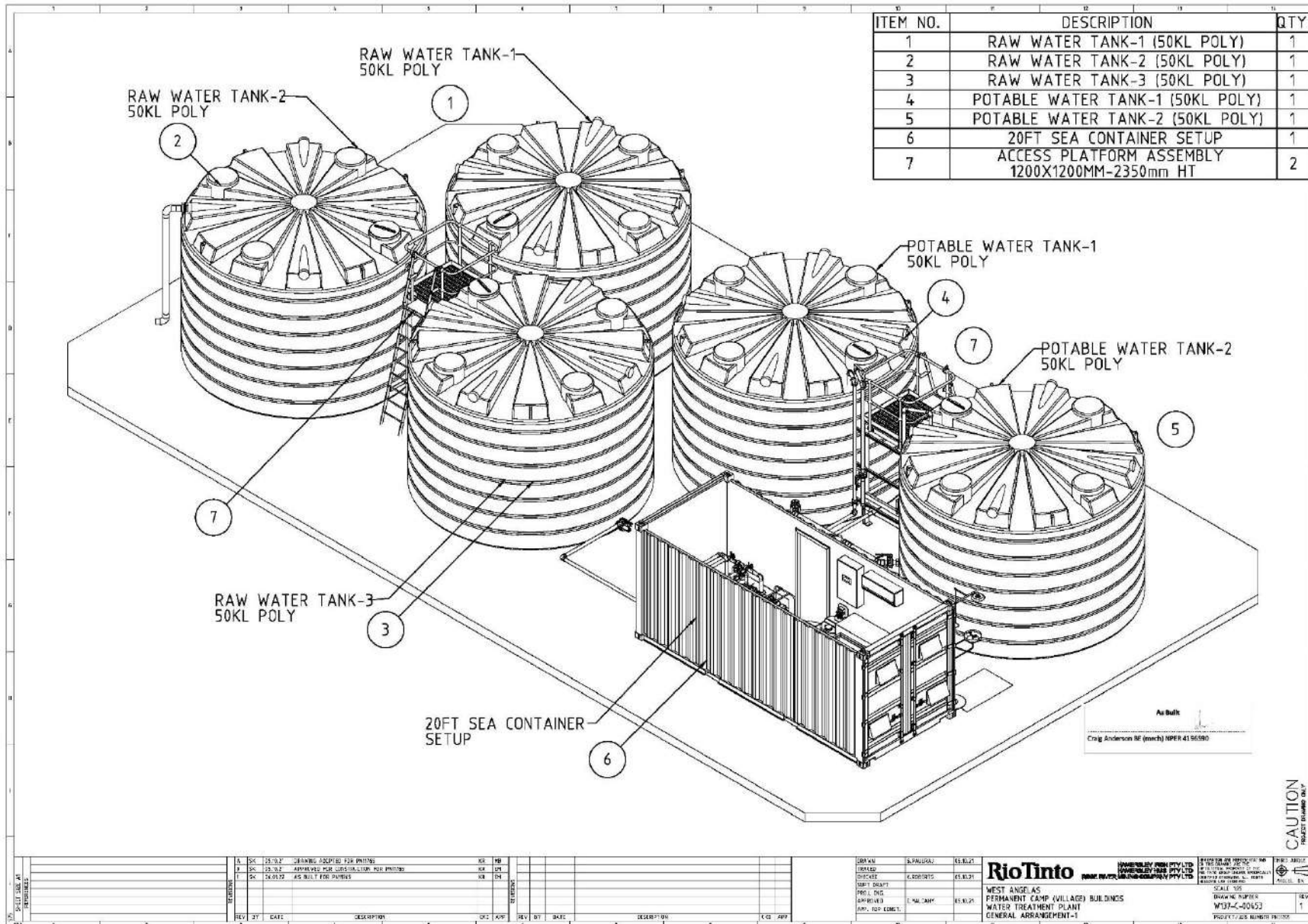


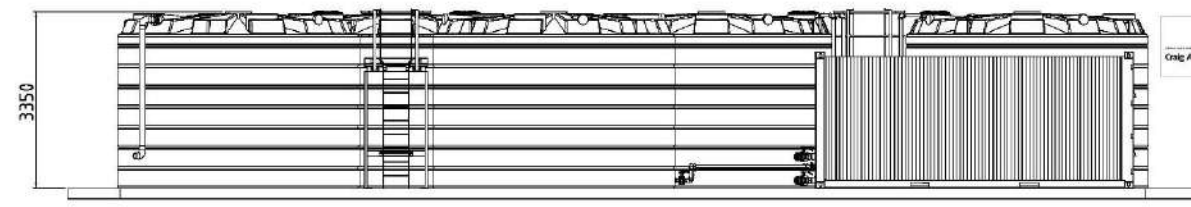
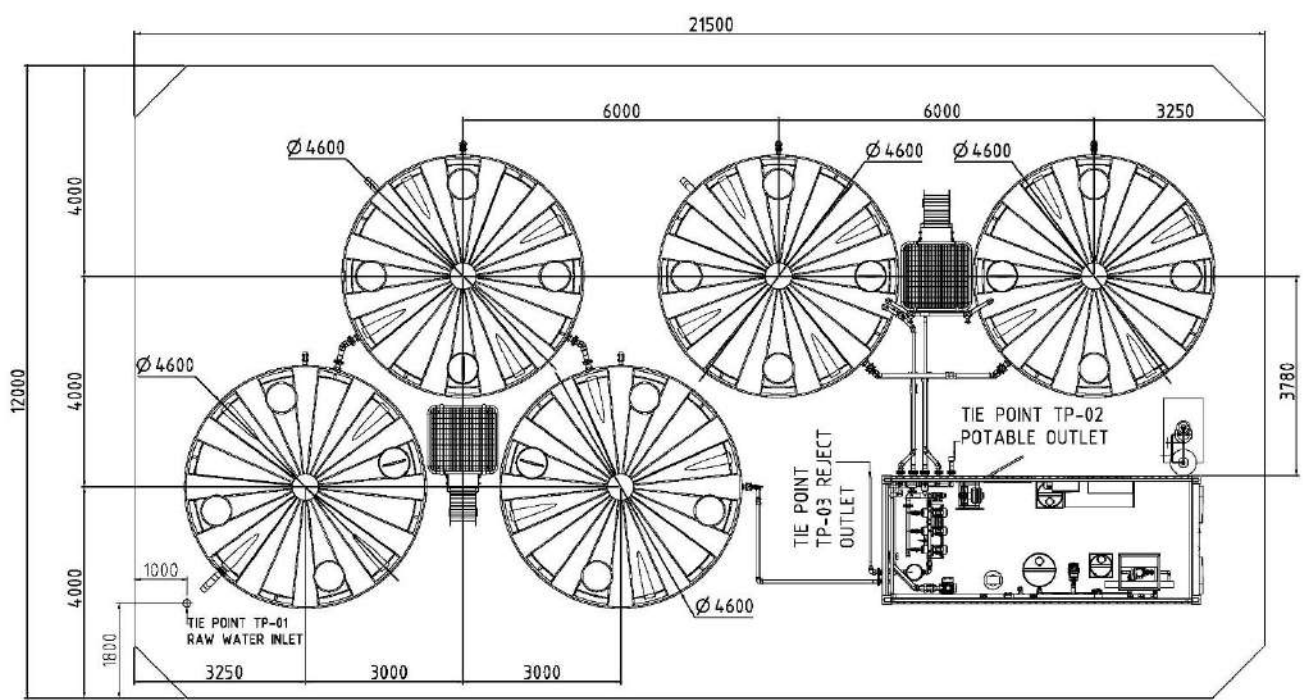
WEST ANGELAS
PERMANENT CAMP (VILLAGE) BUILDINGS
WASTE WATER TREATMENT PLANT
GENERAL ARRANGEMENT-2

DRAWING NUMBER
W137-C-88450
PROJECT/JOB NUMBER

REV
1







As Built
 Craig Anderson BE (mech) NPIR 4106390

CAUTION
 PROJECT EQUIPMENT ONLY

SHEET SIZE: A1 DATE: 15/07/2014	A 15/07/2014 DRAWING ACCEPTED FOR PRINTING	N/A N/A	DRAWN: S. PALIYAL CHECKED: S. GOSWAMI DATE: 15/07/2014 PROJECT: WEST ANGELAS PERMANENT CAMP (VILLAGE) BUILDINGS WATER TREATMENT PLANT GENERAL ARRANGEMENT-2		WEST ANGELAS PERMANENT CAMP (VILLAGE) BUILDINGS WATER TREATMENT PLANT GENERAL ARRANGEMENT-2	PROJECT NUMBER: W137-C-00454 PROJECT ZONE NUMBER: 11110
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C 18/07/2014 AS BUILT FOR PRINTING	N/A N/A	REV BY DATE DESCRIPTION DWG APP'D REV BY DATE DESCRIPTION DWG APP'D	PROJECT ZONE NUMBER: 11110			

Appendix 3: Evidence of compliance – field verification



Figure 3: Evidence of Compliance – balance tank, sedimentation tank, Mixed Liquor recycle tank, RBC tank, Break tank, clarifier and treated effluent tank



Figure 4: Evidence of Compliance – spray-field fencing

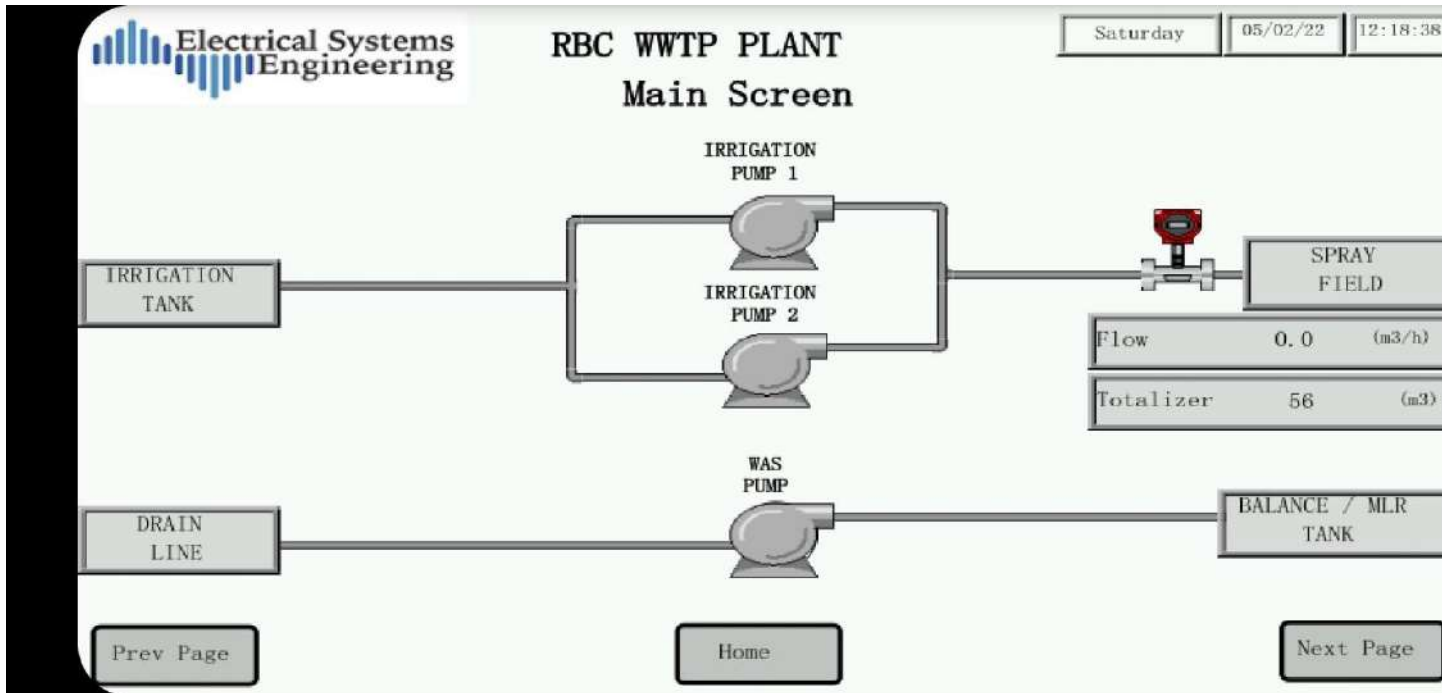


Figure 5: Evidence of compliance – flow meter



Figure 6: Evidence of Compliance – alarm system