ABN 33 118 549 910

20 Walters Dr, Osborne Park, WA 6017
Locked Bag 13, Osborne Park, WA 6017
P +61 8 9329 3600 **F** +61 8 9329 3601

Wednesday, May 15, 2024

Shire of Mingenew
21 Victoria Street,
Mingenew, Western Australia 6522

Attention: Matt Fanning

Dear Matt,

RE: PLANNING APPLICATION FOR THE RIG SITE CAMP ASSOCIATED WITH THE MINERAL RESOURCES LIMITED NORTH ERREGULLA-3 EXPLORATION DRILLING PROGRAM

Please find attached a planning application for the installation and operation of a rig camp site that will be utilized to support the upcoming North Erregulla-3 exploration drilling program for Mineral Resources Limited within Petroleum Licence EP368 and EP 426 managed under the *Petroleum and Geothermal Energy Resources Act 1967.* The drilling activities are expected to commence in July 2024 based on the current rig schedule.

Once drilling activities have commenced, they will be conducted continuously on a 24-hour basis with two crews working back-to-back on 12-hour shifts. The rig site camp is planned to accommodate up to six (6) persons that are required on-site at the drilling rig for the duration of the drilling activity. There will be up to 22 additional non-accommodated personnel on site during each 12-hour shift.

The drilling program is temporary in nature and planned to be completed within 60 days for this well, however there may be a requirement (over a period of up to 2 years) for various short-term maintenance or well testing activities to be completed. These activities may require accommodation on site but would also be temporary in nature.

The rig site location map is provided as Attachment 1 and will be accessed via Midlands Road and Mooriary Road. The rig site camp will be installed within the first five days of the drilling activity and will be conducted in conjunction with the installation of the drilling rig. The rig site equipment layout is provided as Attachment 2. The modular camp units will be transported to the site utilizing semi-trailers or winch trucks. There will be a total of eighty trailer loads (two of which will be the modular sleeper units) required to transport the drilling rig, rig camp units and associated equipment to the site. The $10,000 installation cost covers the transportation, loading/unloading of the units utilizing side-loaders or winch trucks. Minimal plumbing and cabling are required to commission the camp units as they are designed to be highly mobile, to be readily moved from site to site with the drilling rig.

The cost breakdown of the two three sleeper units are as follows:

Rig up:

- 4.5 hours x Unloading/spotting/rig up of sleeper units with side loader: $1,125 (based on a $250/hour side loader cost)
- 1 x Electrician and 2 x assisting personnel: $3,674.

Rig down:

- 4.5 hours x Rig down/spotting/rig up of sleeper units with side loader: $1.125 (based on a $250/hour side loader cost)
- 1 x Electrician and 2 x assisting personnel: $3,674.

The rig camp location is not within close proximity to any residential dwellings with the distance to the nearest residential dwelling being greater than 3 kms. At the rig site camp, there will be no food preparation facilities (this will be conducted off site at the main camp).

The following information has been provided as attachments to the completed Development Application Form:

- Attachment 1: Site location showing the exploration well location with regards to the lot boundaries and lot area.
- Attachment 2: A site layout schematic that provides an indication of where the accommodation units will be situated with regards to additional key drilling rig infrastructure and wellsite boundaries.
- Attachment 3: A compilation of information regarding the rig site camp with plan views, dimensions and images associated with the temporary building structures.
- Attachment 4: The information and manual associated with the ATU system. The ATU application form will be submitted to the Shire of Mingenew EHO together with its supporting documentation.

This information has been collated and submitted for and on behalf of Mineral Resources Limited.

Yours sincerely,

Darrell Girgenti
Project Manager

Mineral Resources Limited

335,400m 335,600m 335,800m 336,000m 336,200m 336,400m 336,600m 336,800m 337,000m 337,200m 337,400m 337,600m 337,800m 338,000m 338,200m 338,400m 338,600m 338,800m

6,765,200m 6,765,000m 6,764,800m 6,764,600m 6,764,400m 6,764,200m 6,764,000m 6,763,800m 6,763,600m 6,763,400m 6,763,200m 6,763,000m 6,762,800m

N

Lockyer-5

EP 368 R4

North Erregulla-3

LOC405

Mooriary Rd

North Erregulla-2

North Erregulla Deep-1

- North Erregulla 3
- Wells
- Minor, Unsealed
- Access Route
- Pad Locations
- Exploration Permit
- Exploration Camp LOC405

MINERAL RESOURCES

NORTH ERREGULLA-3 WELL SITE AND ACCESS TRACK

Scale @ A3: 1:10,000	0 125 250 500 750 1,000 Meters		
LDEP_D028_Rev1	GDA2020	Drawn By: clare.meyer@mrl.com.au	Reviewed By: Izzy Sulaiman
Figure 2	Map Date: 22/01/2024	Energy - Lockyer Gas Development	

Meyer

Path: L:\Empire Oil & Gas\01_GIS_Jobs\E01-E10\E06_LockyerDeep_Conceptual\Projects\Lockyer-4_CM\E06_Lockyer-4_CM.aprx

Bushfire Prone Areas

Lot 433 on DP 2984
North Erregulla-3
MREX Mobile Gas Village

North Erregulla-3

MREX Mobile Gas Village

North Erregulla Deep

Moorlaw Rd

Moorlaw Rd

N

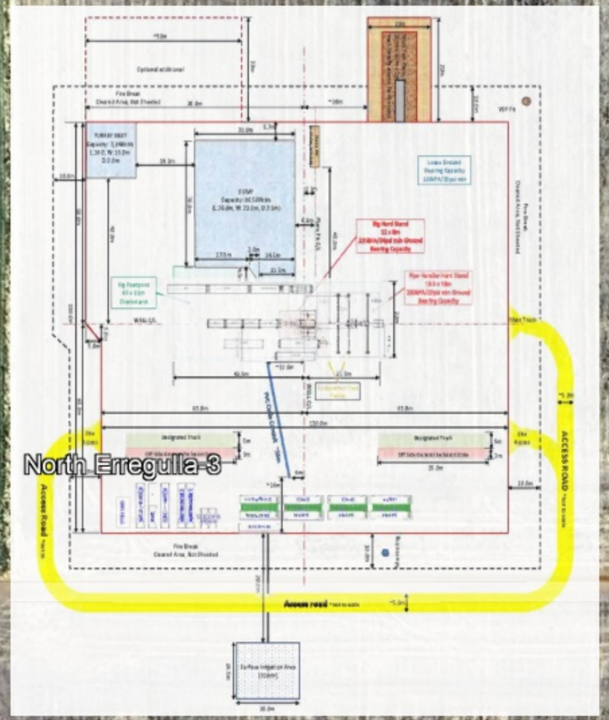
500 m

Google Earth

Image © 2024 Airbus

North Erregulla-3 Site Layout

Lot 433 on DP 2984



N

100 m

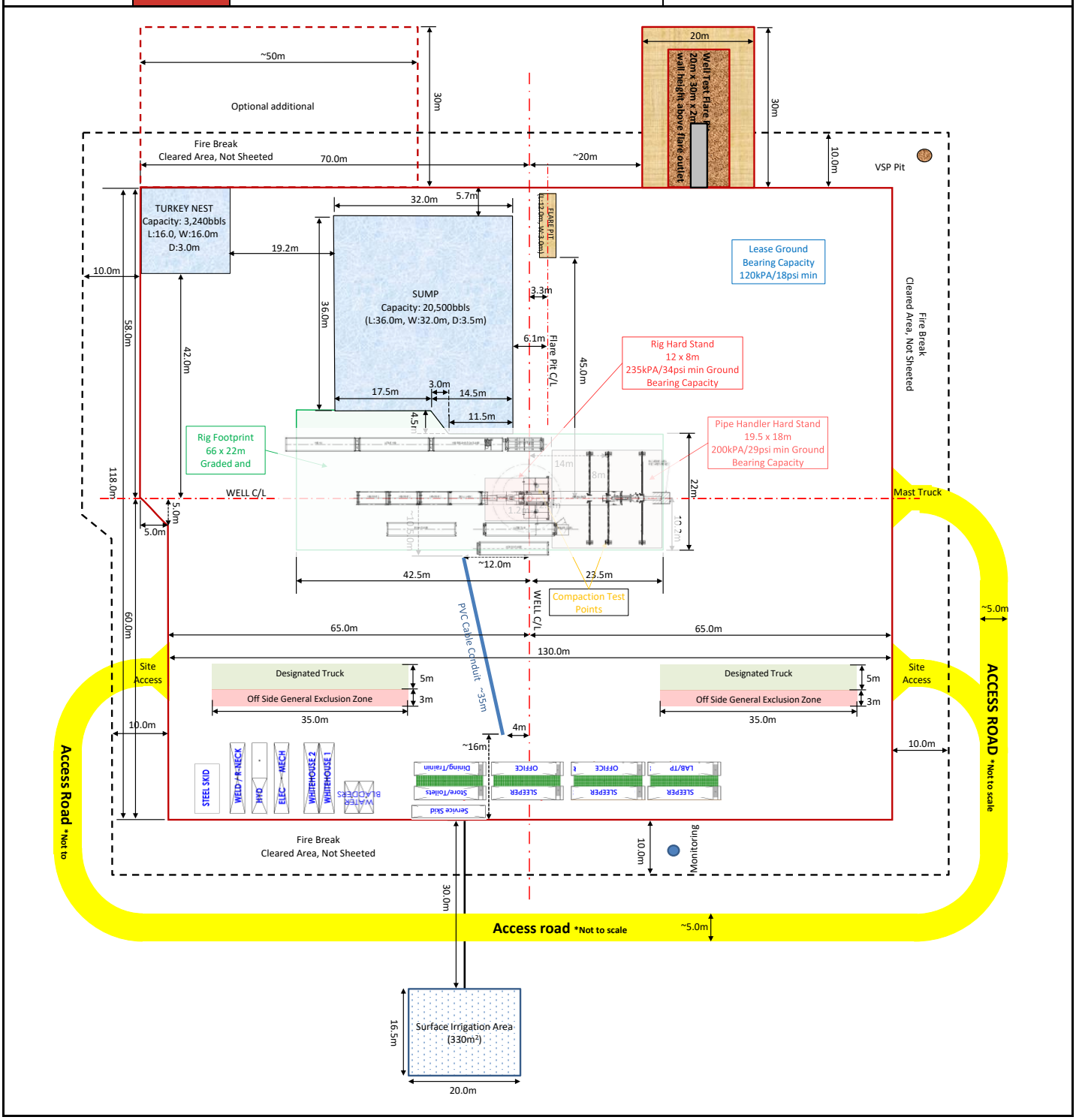
NORTH ERREGULLA-3 SITE LAYOUT

Operator	Energy Resources Ltd	Permit	EP368	Location	Onshore Perth Basin, WA
Surface Location				Water Bore	
Latitude	29° 14' 29.98" S	Longitude	115° 19' 00.47" E	Latitude	Longitude
Revision	Rev A			Date	26/04/2024
Drafted	Darrell Girgenti			Position	Project Manager
Signed					
Reviewed				Position	
Signed					

MINERAL RESOURCES

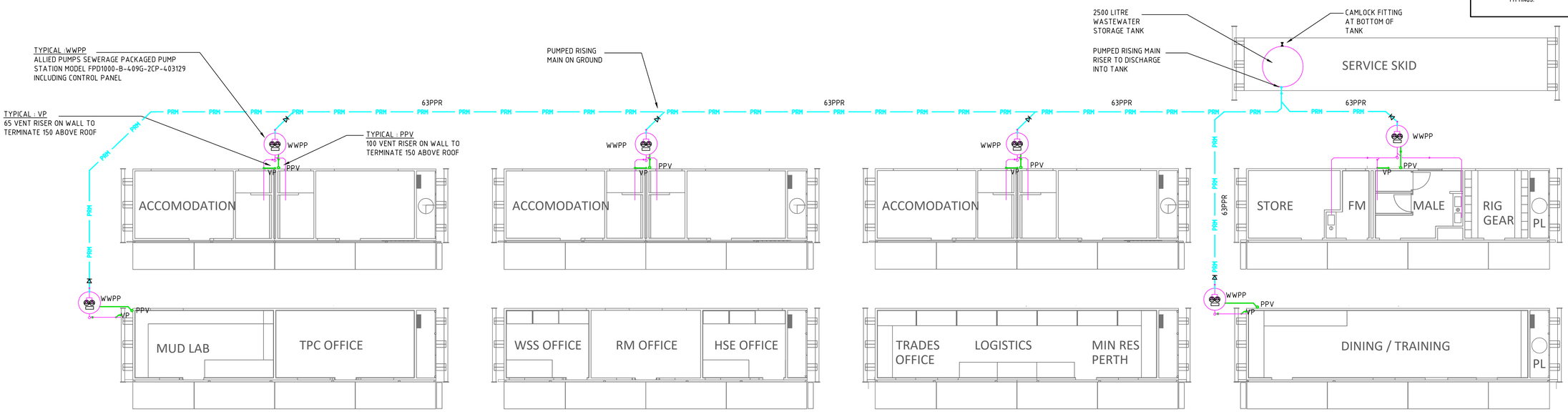
Required Soil Bearing Minimum Capacity (Graded and Compacted Area)

- HIGH LOAD BEARING GRADED AND COMPACTED AREA (MIN 235kPA/32psi)
- LOAD BEARING GRADED AND COMPACTED AREA (MIN 200kPA/29psi)
- SHEETED, GRADED AND COMPACTED AREA W/ 2% FALL (MIN 120kPA/18psi)



PROJECT NOTES:

- REFER TO DRAWING DWG-001 FOR LEGEND OF SYMBOLS AND GENERAL NOTES.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS IN THE SET.
- REFER TO ARCHITECTURAL LAYOUTS FOR ALL SET-OUTS.
- COORDINATE ON SITE WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF FITTINGS.

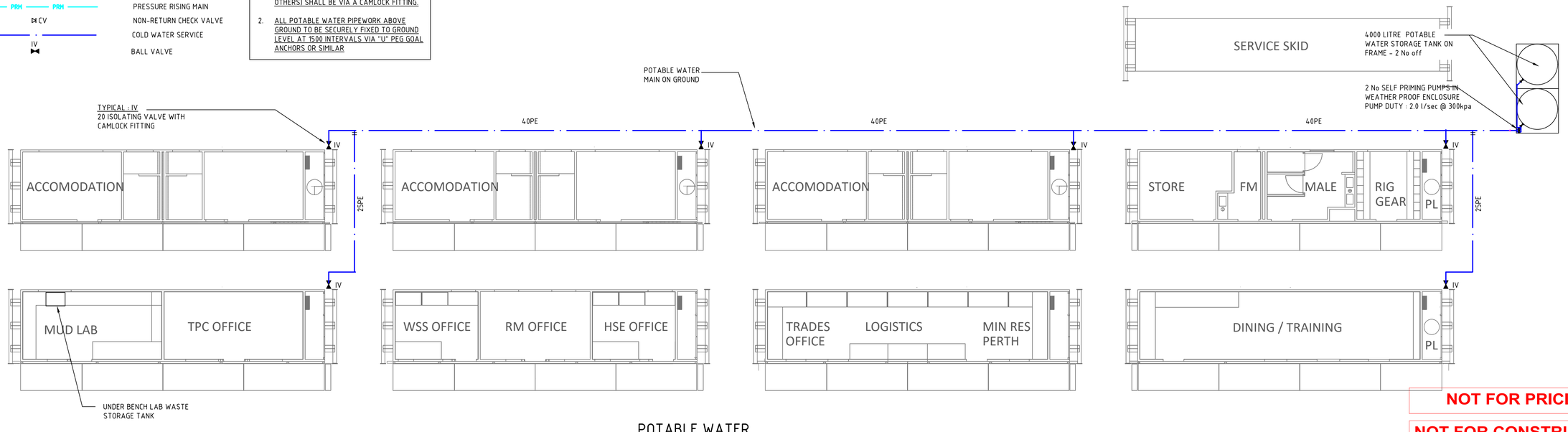


WASTEWATER DRAINAGE

TYPICAL LINETYPES

- SEWER DRAINAGE
- VP — VP — VENT PIPE
- PRM — PRM — PRESSURE RISING MAIN
- CV — NON-RETURN CHECK VALVE
- IV — COLD WATER SERVICE
- BALL VALVE

GENERAL NOTE:1.
1. ALL POTABLE WATER SUPPLY CONNECTIONS TO MODULES AND EQUIPMENT (SUPPLIED BY OTHERS) SHALL BE VIA A CAMLOCK FITTING.
2. ALL POTABLE WATER PIPEWORK ABOVE GROUND TO BE SECURELY FIXED TO GROUND LEVEL AT 1500 INTERVALS VIA "U" PEG GOAL ANCHORS OR SIMILAR



POTABLE WATER

NOT FOR PRICING

NOT FOR CONSTRUCTION

CONSULTANT:
Decobu
Level 4, 507 Murray St
Perth, WA, 6000
T: 1300 083 238
ABN: 43 608 399 971
www.decobu.com.au

CLIENT:
COMPLETE GROUP
82 Power Avenue,
Wattleup, WA 6166
T: (08) 9410 7100
www.thecomplete.group

REV	DATE	REVISION	DRN	CKD
C	17.04.24	ISSUED FOR CLIENT REVIEW	AC	AC
B	11.04.24	ISSUED FOR CLIENT REVIEW	AC	AC
A	22.03.24	ISSUED FOR CLIENT REVIEW	AC	AC

PROJECT:
MOBILE GAS RIG VILLAGE
DONGARA, WA

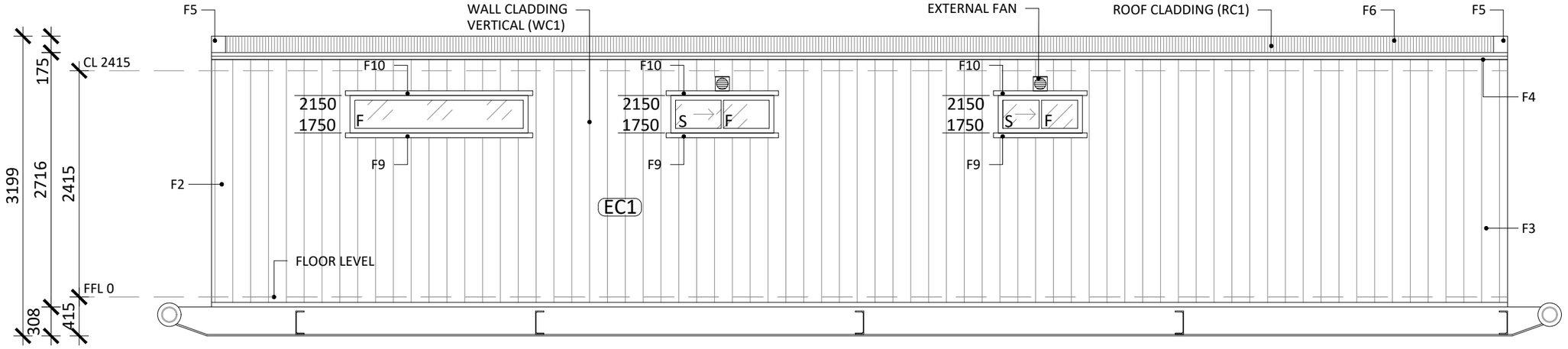
DRAWING TITLE:
HYDRAULIC SERVICES
WASTEWATER & POTABLE WATER LAYOUT
MINOR CAMP SITE

ISSUED FOR CLIENT REVIEW

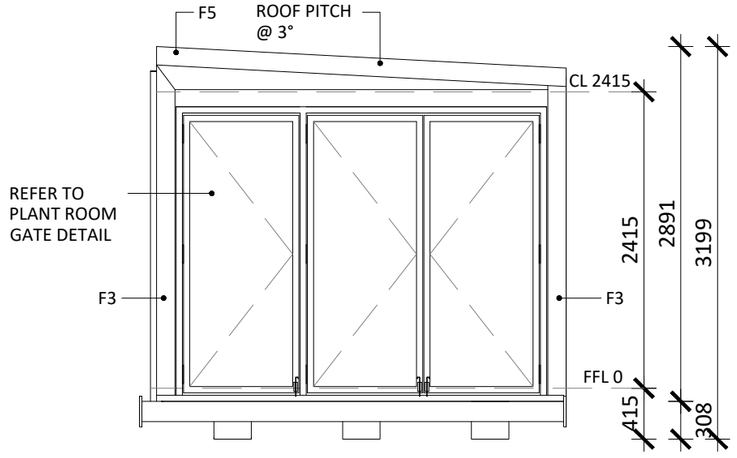
DRAWN:	AC	DATE:	Mar 2024
DESIGN:	AC	SCALE:	1:100
APPROVED:	KR	SHT. SIZE:	A1

DRAWING NO. 24-127-HY-DWG-103
REV. C

575
820



C ELEVATION
1:50



D ELEVATION
1:50

PB 4264

CLIENT APPROVAL :
CLIENT SIGNATURE :
DATE :
NOTE: THESE DRAWINGS HAVE BEEN APPROVED FOR MANUFACTURING. SHOULD ANY CHANGES BE MADE AFTER THE APPROVED DATE THE CONTRACT WILL NEED TO BE REVIEWED.

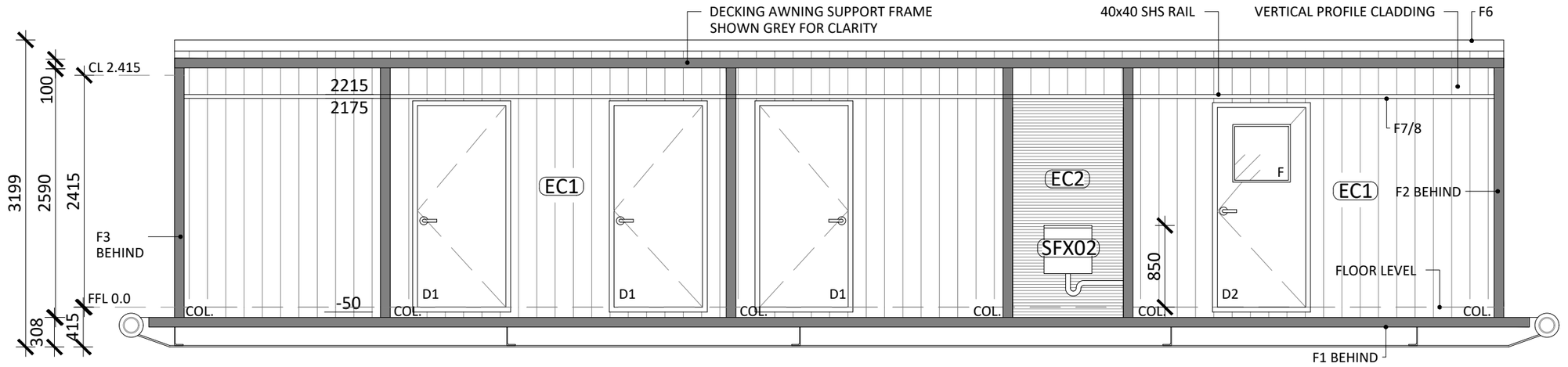
REV	DESCRIPTION	INIT	DATE
A	ISSUED FOR REVIEW	MS	02.05.24

PAGE SIZE :	A3
SCALE :	1:50
DRAWN :	MS
DATE :	02.05.24
PAGE :	
CHECKED :	MG

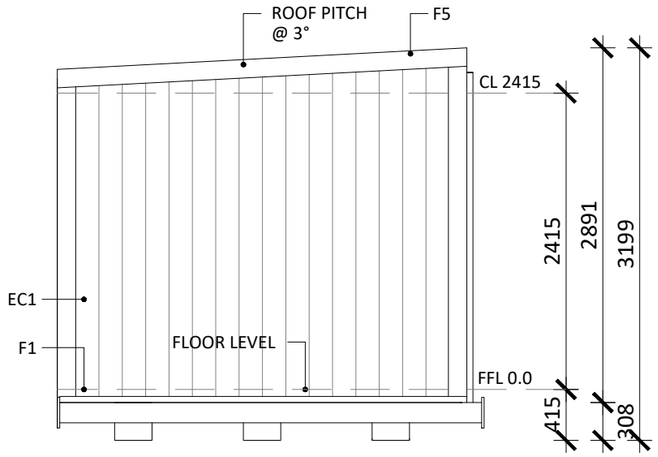
CLIENT :	CSI MINING SERVICES		
LOCATION :	MOBILE GAS RIG VILLAGE		
TITLE :	ABLUTION - RIGHT HAND - ELEVATION - 02		
CLIENT DWG NO :	- - - - -	REV :	A
CSS DWG NO :	12-0282-PB4264-AR-3010	REV :	A.2
CSS JOB NO :	12-0282		

COMPLETE SITE SERVICES
82 POWER AVENUE,
WATTLEUP, WA
(PHONE) 9410 7100

COMPLETE SITE SERVICES



A ELEVATION
1:50



B ELEVATION
1:50

PB 4264

CLIENT APPROVAL :

CLIENT SIGNATURE :

DATE :

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REV	DESCRIPTION	INIT	DATE
A	ISSUED FOR REVIEW	MS	02.05.24

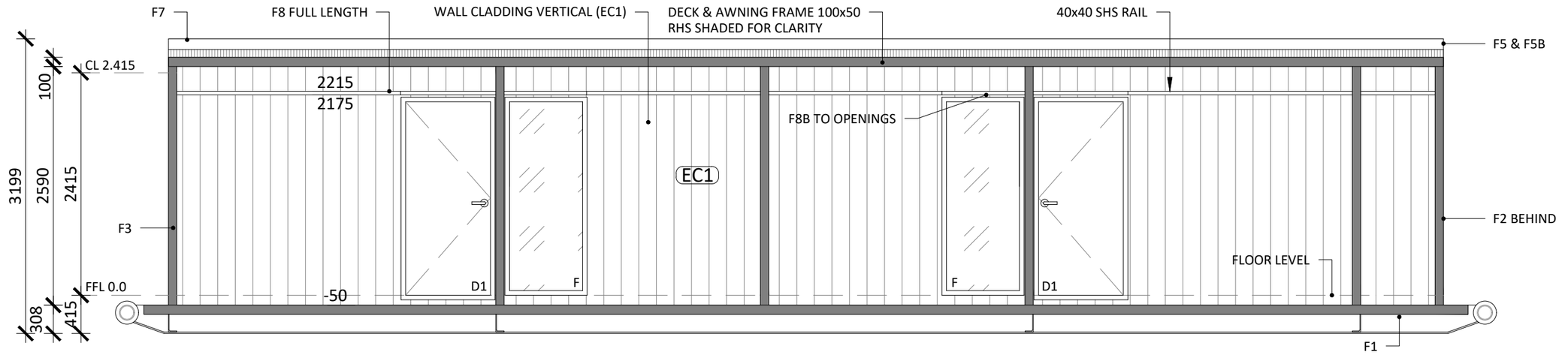
PAGE SIZE :	A3
SCALE :	1:50
DRAWN :	MS
DATE :	02.05.24
PAGE :	
CHECKED :	MG

CLIENT :	CSI MINING SERVICES		
LOCATION :	MOBILE GAS RIG VILLAGE		
TITLE :	ABLUTION - RIGHT HAND - ELEVATIONS - 01		
CLIENT DWG NO :	- - - - -	REV :	A
CSS DWG NO :	12-0282-PB4264-AR-3000	REV :	A.2
CSS JOB NO :	12-0282		

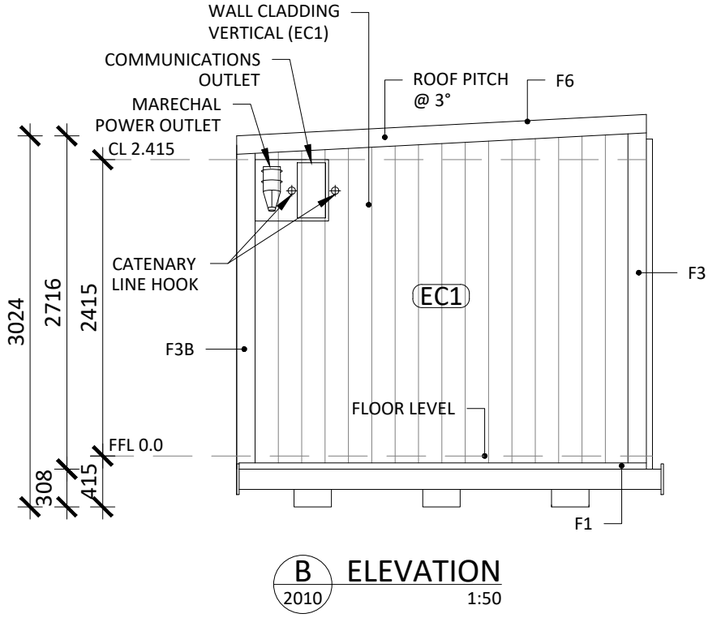
COMPLETE SITE SERVICES
82 POWER AVENUE,
WATTLEUP, WA
(PHONE) 9410 7100

NOTE

- REFER TO GENERIC FLASHING DETAILS
- 40x40 SHS RAIL IS WELDED STUD WALL FRAME & DECK/AWNING FRAME



A 2010 ELEVATION
1:50



B 2010 ELEVATION
1:50

PB 4230 TO PB 4241 AND PB 4261, 4262 TO 4263 (15OF)

CLIENT APPROVAL :

CLIENT SIGNATURE :

DATE :

NOTE: THESE DRAWINGS HAVE BEEN APPROVED FOR MANUFACTURING. SHOULD ANY CHANGES BE MADE AFTER THE APPROVED DATE THE CONTRACT WILL NEED TO BE REVIEWED.

REV	DESCRIPTION	INIT	DATE
A	ISSUED FOR REVIEW	MS	29.04.24

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DRAWN :	MS
DATE :	29.04.24
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CHECKED :	MG

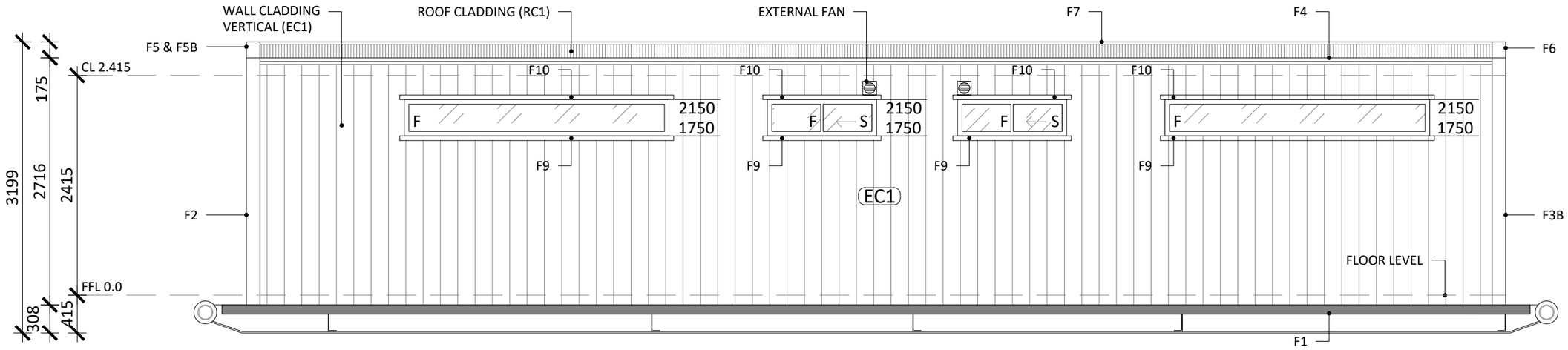
CLIENT :	CSI MINING SERVICES		
LOCATION :	MOBILE GAS RIG VILLAGE		
TITLE :	ACCOMMODATION - RIGHT HAND - ELEVATIONS - 01		
CLIENT DWG NO :	- - - - -	REV :	A
CSS DWG NO :	12-0282-PB4230-AR-3000	REV :	A.2
CSS JOB NO :	12-0282		

COMPLETE SITE SERVICES
82 POWER AVENUE,
WATTLEUP, WA
(PHONE) 9410 7100

COMPLETE SITE SERVICES

NOTE

- REFER TO GENERIC FLASHING DETAILS
- 40x40 SHS RAIL IS WELDED STUD WALL FRAME & DECK/AWNING FRAME



C 2010 ELEVATION
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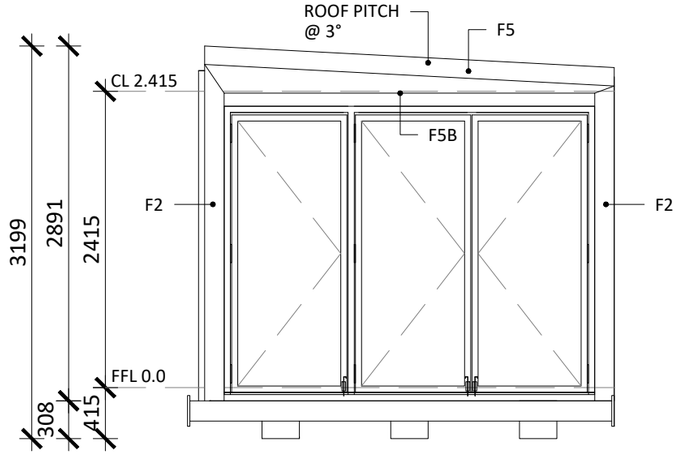

D 2010 ELEVATION
1:50

PB 4230 TO PB 4241 AND PB 4261, 4262 TO 4263 (15OF)

CLIENT APPROVAL :

CLIENT SIGNATURE :

DATE :

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REV	DESCRIPTION	INIT	DATE
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PAGE SIZE :	A3
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DATE :	29.04.24
PAGE :	
CHECKED :	MG

CLIENT :	CSI MINING SERVICES		
LOCATION :	MOBILE GAS RIG VILLAGE		
TITLE :	ACCOMMODATION - RIGHT HAND - ELEVATIONS - 02		
CLIENT DWG NO :	- - - - -	REV :	A
CSS DWG NO :	12-0282-PB4230-AR-3010	REV :	A.2
CSS JOB NO :	12-0282		

COMPLETE SITE SERVICES
82 POWER AVENUE,
WATTLEUP, WA
(PHONE) 9410 7100

3. Design Requirements

3.1. Site Details

Details	Information
Project Name	Lockyer Mobile Gas Rig Village - PWTP and WWTP
Project Location	Near Dongara, Western Australia
Wind Region	Region D

3.2. Village PWTP Specifications

Details		Units	Parameter
Raw Water Quality	Water source	-	Bore water
	Temperature[2]	°C	15-35
	TDS[1]	mg/L	<5,000
	TSS[2]	mg/L	<30
	Particle size[2]	µm	95% >10, 5% >1
	pH	pH units	6.0-6.7
	Free chlorine[2]	mg/L	<0.1
	Iron[2]	mg/L	<0.1
	Manganese[2]	mg/L	<0.1
	Silica[2]	mg/L	<10
	TOC (as C)[2]	mg/L	<1
Treated Water Quality	Use	-	Potable water, compliant to ADWG
	TDS	mg/L	<600
	TSS	mg/L	<1
	pH	-	6.5-8.5
	Free chlorine	mg/L	0.2-2.0
Treated Water Volume		m^3/day	15
Raw Water Tank Volume		kL	14
Potable Water Tank Volume		kL	3 x 14
Potable Water Distribution Pump Duty		m^3/h @ kPa	11.4 @ 500 kPa (2 x 100% pumps)
Plant Type	Reverse Osmosis - Brackish Water (RO-BW)		
Assembly	Equipment installed on a suitable client designed and supplied skid		
Notes	[1]As per water analysis received from client: 20231114 NED1 Baseline SGA Report, Nov22-Feb23. Noting that we have assumed errors in adequately flushing and sampling of bores and the presence of historical drilling fluid, hence we have assumed normal levels of TOC, iron and manganese and included standard pre-treatment of media and cartridge filtration		

	[2]Assumed values, a complete, accurate and current raw water analysis is required to confirm design and final equipment selection

ABCO 24 m³/day containerised RO plant

3.3. Village WWTP Specifications

Details		Units	Parameter
Influent Quality[1]	Water Source	-	Macerated raw domestic strength sewage
	Peak Flow	m^3/ hr	2.5
	Temperature	°C	15-32
	BOD	mg/L	<300
	TSS	mg/L	<300
	pH	pH units	6.5-8.5
	TN	mg/L	<80
	TP	mg/L	<15
	FOG[3]	mg/L	<20
Treated Effluent Quality	Exposure Risk Level	-	Low (Class C)
	BOD	mg/L	<20
	TSS	mg/L	<30
	pH	pH units	6.5-8.5
	TN	mg/L	N/A
	TP	mg/L	N/A
	E Coli	cfu/100mL	<1,000
	Free chlorine	mg/L	0.5-2.0
Design Influent Flow		m^3/day	12
Peak Influent Flow[2]		m^3/ hr	10.4
Balance Tank Volume		kL	10.5
Irrigation Tank Volume		kL	4.5
Irrigation Pump Duty		m^3/hr @ kPa	6 @ 300
Plant Type	Rotating Biological Contactor (RBC)		
Assembly	Equipment installed on a suitable client designed and supplied skid		
Notes	[1]Assumed values. [2]Maximum peak flow based on 5 x average flow for 2 hours in morning/evening. By accepting this quotation, client confirms acceptance of these parameters as the basis for design.		

ABCO 15 m^3/day skid mounted RBC plant

4. Plant and Equipment Details

The scope of supply is outlined below subject to detailed design upon contract award.

4.1. Village PWTP

Item	Qty	Equipment
1.	1	14kL Raw water tank in PE construction with appropriate fittings
2.	3	14kL Potable water tanks in PE construction with appropriate fittings
3.	1	As new 10' container complete with: • Standard spray enamel painting inside and out • Non-slip chemically resistant flooring coating • Window mounted aircon (TECO) • Internal ceiling mounted LED light (with battery backup) • 1 x 10A GPO for maintenance • Roof mounted alarm beacon
4.	1	Low pressure feed pump
5.	1	High pressure RO pump
6.	1	Potable water tank recirculation pump
7.	1 set	Variable speed potable water distribution pumps configured in duty/standby (2 x 100%): • 2 x vertical multistage pumps, 304SS construction • Pumps fitted with motor mounted variable speed drives • 1 x 40L pressure vessel, manifold mounted • 304SS suction and discharge manifolds • 2 x isolating ball valves and 1 x wafer check valve per pump • All mounted to a pressed stainless steel skid base
8.	1	Anti-scalant dosing pump with low-level switch and bunded dosing tank
9.	1	Hypochlorite dosing pump with low-level switch and bunded dosing tank
10.	1	Auto-backwashing multi-media filter
11.	1 lot	Cartridge filters (5 and 1 micron)
12.	1 lot	Brackish water RO vessels and membranes
13.	1	Calcite filter
14.	1	CIP tank with manual valves
15.	1 lot	Pressure gauges
16.	2	Pressure switches
17.	3	Float level switches
18.	3	Flow gauges (rotameter)
19.	1	Flow switch
20.	1	Conductivity transmitter
21.	2	pH transmitters

22.	1	Free chlorine analyser
23.	1	Power distribution board to AS 3000, IP65 plastic enclosure
24.	1	Combined motor starter and PLC control panel to AS 3000
25.	1 lot	uPVC piping and valves
26.	1 lot	Interconnecting piping and cabling within the battery limits

Note: full equipment list subject to engineering design and approval

ABCO 480 m³/day containerised RO plant

4.2. Village WWTP

Item	Qty	Equipment
1.	1	10.5kL Balance tank in PE construction with appropriate fittings
2.	1	10.5kL Sedimentation tank in PE construction with appropriate fittings
3.	1	4.5kL Irrigation tank in PE construction with appropriate fittings
4.	1	Rotating biological contractor (RBC) in FRP construction, PP disks
5.	1	Lamella clarifier (LC) in FRP construction
6.	1	Feed pump
7.	1	RAS pump
8.	1	Irrigation tank recirculation pump
9.	1	Irrigation pump
10.	1	Hypochlorite dosing pump with low-level switch and bunded dosing tank
11.	1	Coagulant dosing pump with low-level switch and bunded dosing tank
12.	1 lot	Pressure gauges
13.	1 lot	Level switches
14.	2	Flow switches
15.	2	Flow transmitters
16.	1	ORP sensor
17.	1	Power distribution board to AS 3000, IP65 plastic enclosure
18.	1	Combined motor starter and PLC control panel with HMI to AS 3000
19.	1 lot	uPVC piping and valves
20.	1 lot	Interconnecting piping and cabling within the battery limits
21.	1	Tank access platform

Note: full equipment list subject to engineering design and approval

ABCO PWTP and WWTP installed onsite

5. Project Deliverables

5.1. Engineering Standards & Specifications

ABCO's Water and Wastewater Treatment plants are designed to ABCO's process design specifications in accordance with Australian Standards, including AS3000 for the electrical component.

ABCO's is committed to continuous improvement in the quality of our management systems, occupational health and safety performance, and environmental practices.

We hold internationally recognised certification in the following areas which ensures our plants are manufactured to the highest standards.

Optional pricing can be provided for compliance with company specific engineering standards and specifications.

5.2. Drawings and Documentation

The following documents will be provided as part of this proposal

- ☑ Process Drawings (P&IDs)
- ☑ General Arrangement Drawings
- ☑ Civil Outline Drawings (showing weights and dimensions)
- ☑ Electrical Drawings (SLD, schematics)
- ☑ Electrical Load List
- ☑ Equipment List
- ☑ Installation, Operation and Maintenance Manual
- ☑ Factory Acceptance Test Report
- ☑ Site Acceptance Test Report

Optional pricing can be provided for company specific vendor data requirements.

5.3. Equipment Suppliers

This proposal is based on using ABCO Water's preferred equipment suppliers/brands, which are selected based on suitability for this project, proven performance, local availability of spares and after sales support:

Equipment	Brands
Pumps	Ebara
	Lowara
	Grundfos
Submersible pumps	Tsurumi
	Xylem
	Domo
Dosing pumps	Etatron
	Grundfos
Instruments	WIKA
	Stubbe
	GTS Gauges
	IFM
	Etatron
	George Fischer
	E&H
Filters	Wave Cyber
	Southland Filtration
	Brother Filtration
	WaterCo
RO vessels	Pentair
	Wavecyber
	BEL
RO membranes	Hydranautics
	Toray
RBCs and lamella clarifiers	PlanetTEK
Electric valve actuators	Valpes
Manual valves	FIP
	Stubbe
	George Fischer
PLC/HMI	Allen Bradley
	Siemens

Note: list is not exhaustive; ABCO Water may deviate from the above at its discretion

Optional pricing can be provided for company preferred equipment suppliers/brands.

5.4. Battery Limits

The following battery limits have been allowed for within the pricing of this offer.

5.4.1. Village PWTP

Battery Limits	
Mechanical	Raw water inlet connection of raw water tank
	Potable water outlet connection of container
	Drain and overflow outlets of each tank
	Brine and waste outlet connections of container
	Analyser sample waste and floor drain outlet(s) of container
Electrical	Power supply connection terminals of the distribution board
	Alarm signal output connection terminals of the control panel
Civil/Structural	Underside/base of skid

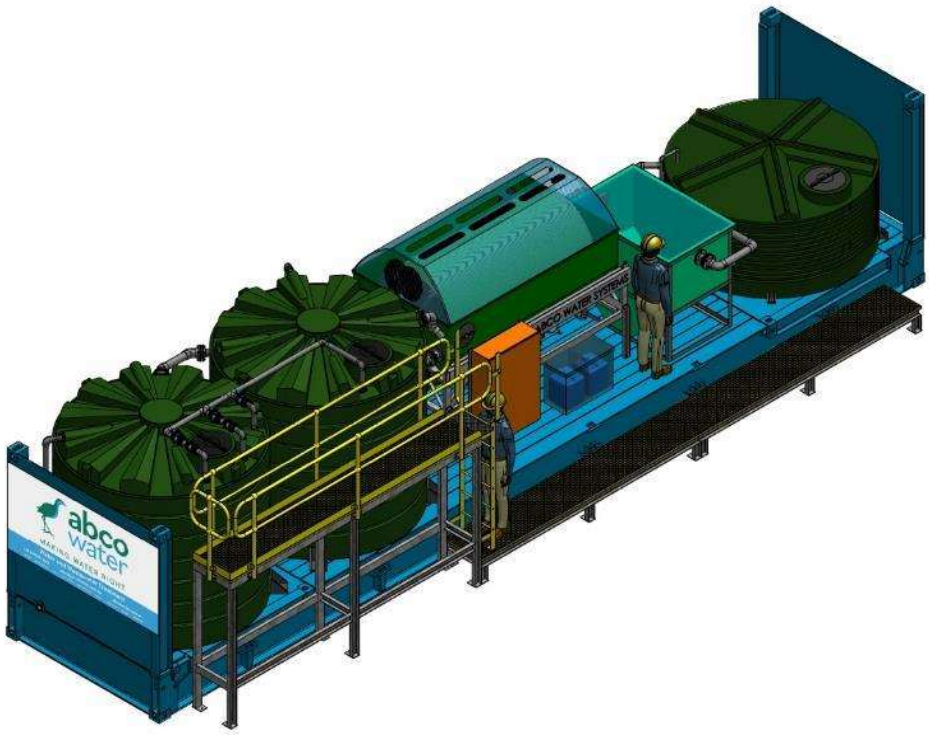
ABCO Water will supply and install all equipment and interconnecting piping and cabling within the above specified battery limits, on a client designed and supplied skid suitable for installation of equipment.

ABCO containerised RO plant

5.4.2. Village WWTP

Battery Limits	
Mechanical	Macerated sewage inlet connection of balance tank
	Treated effluent outlet connection of irrigation pump
	Sludge pump-out connection of sedimentation tank
	Drain and overflow outlets of each tank
	Potable water connection (if applicable)
Electrical	Power supply connection terminals of the distribution board
	Alarm signal output connection terminals of the control panel
Civil	Underside/base of skid

ABCO Water will supply and install all equipment and interconnecting piping and cabling within the above specified battery limits, on a client designed and supplied skid suitable for installation of equipment.



ABCO skid mounted RBC plant

5.5. Commissioning and Training

5.5.1. Site Acceptance Test

Once the plant has been installed onsite and all mechanical, hydraulic and electrical works have been completed the ABCO commissioning team will attend site to carry out a Site Acceptance Test on the plant.

5.5.2. Training/ Familiarisation

Whilst onsite the commissioning team will provide familiarisation training on the plant to the operators. This training generally covers:

- ☑ Safety protocols
- ☑ System overview
- ☑ System Start Up, Adjustments, Shut Down
- ☑ Trouble shooting
- ☑ Daily Operational Tasks
- ☑ Log Sheets Review

If additional training is required, please contact your local ABCO office for prices of this service.

6. Service and Maintenance

ABCO operates a service office, and can provide technical services, incorporating:

- ☑ Monthly routine site visits
- ☑ Immediate response to emergency breakdowns
- ☑ 24/7 technical support via mobile phone
- ☑ Weekly review of operating logs/Remote monitoring (optional)
- ☑ Operation and maintenance services
- ☑ Ongoing supply of chemicals, filters, and all consumables
- ☑ Priority access to spare parts

Note that scheduled servicing is required for ABCO Water rental plants.

