

Advice

General

Plan of development

The development should be carried out generally in accordance with the following approved plans contained in Enclosure 1:

- Plant Overall Additions Site General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025 (amended in red)
- Zinc Oxide and Cu Concrete Project General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025
- FO Double Cake Washing Project General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025
- Cake Shed Project General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025
- High-Pressure Filter Press (HPFP) Extension Project General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025
- Office Building General Layout (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025 (amended in red)
- Oxygen Plant #3 (revision A), prepared by Sun Metals Co., Pty. Ltd., dated 08 December 2025 (amended in red)
- General Lay-Out Plan for SMC Expansion Pjt, drawing reference QZ-000P-SMP-9000 (revision 1), prepared by Sun Metals Corporation Pty Ltd, dated 15 January 2018
- Reactor & Thickener Area (HL, SHL, RED) Arrangement Plan, drawing reference QZ-LH07M-SMP-0320/00, (revision 2), prepared by Sun Metals Corporation Pty Ltd, dated 30 March 2021
- Reactor & Thickener Area (HL, SHL, RED) Arrangement View (“A” – “A” & “B” – “B” & “C” – “C”), drawing reference QZ-LH07M-SMP-0321/00, (revision B), prepared by Sun Metals Corporation Pty Ltd, dated 19 May 2018
- Ferric Oxide Plant General Arrangement, drawing reference QZ-F001M-SMP-0301/01, revision 0G, prepared by Sun Metals Corporation Pty Ltd, dated 05 November 2019
- Ferric Oxide Area General Arrangement Section View “A” – “A”, drawing reference – QZ-F001M-YPP-0301/01, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 15 January 2018

- Ferric Oxide Area General Arrangement Section View “A” – “B”, drawing reference QZ-F001M-YPP-0302/01, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 15 January 2018
- Ferric Oxide Area General Arrangement Section View “C” – “C”, drawing reference QZ-F001M-YPP-0303/01, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 15 January 2018
- Ferric Oxide Area General Arrangement Section View “D” – “D”, drawing reference – QZ-F001M-YPP-0304/01, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 15 January 2018
- SA02 Drying & Absorption Tower Area Detail Arrangement (Top View), drawing reference QZ-SA02M-SMP-0320/00, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 19 May 2018
- General Arrangement Plan, drawing reference QZ-E220M-YPP-0321/00, revision 0, prepared by Sun Metals Corporation Pty Ltd, dated 19 May 2018
- Arrangement of Section “A” – “A”, drawing reference – QZ-E220M-YPP-0351/00, revision A, prepared by Sun Metals Corporation Pty Ltd, dated 19 May 2018.

Zinc Avenue / Bruce Highway intersection

It is recommended the proponent actively engage with the Department of Transport and Main Roads during the detailed design phase to ensure that an acceptable, appropriate, effective and safe mitigation measure for the Zinc Avenue and Bruce Highway intersection is incorporated into the detailed design.

Other approvals

This SDA approval relates solely to the material change of use for high impact industry in the Townsville State Development Area. All other approvals and/or permits required under local, state and/or commonwealth legislation must be obtained prior to the commencement of the use.

Cultural heritage – duty of care

Where items of archaeological importance are identified during construction of the project, the proponent must comply with its duty of care under the *Aboriginal Cultural Heritage Act 2003* and the Department of Environment and Heritage Protection 2014 guideline: archaeological investigations. All work must cease and the relevant State agency must be notified. Work can resume only after State agency clearance is obtained.

Management plans and assessment reports

The proponent is requested to submit to the Coordinator-General the following plans and reports as soon as practicable:

- Ecological assessment
- Cultural Heritage Duty of Care assessment

- Construction environmental management plan
- Any other relevant plans or reports related to the development.

Department of Environment and Science

Environmental authority EPPR01325913

An application to amend environmental authority (EA) EPPR01325913 is required prior to operating the expansion. The amendment may be either a minor or major amendment.

Technical information relating to the amendment is to be provided with the amendment application for an EA.

The Department of Environment and Science requests the proponent submit an application for a pre-lodgement meeting prior to lodging the amendment application for the EA.

Office of Industrial Relations (Hazardous Industry and Chemicals Branch)

HICB notes that the material change of use being proposed in this application includes the recommissioning of plant not in use and the installation of new infrastructure. It is important to remind SMC that they have legislative obligations, as the operator of a licensed major hazard facility, if this project proceeds. These obligations include:

- Section 564 of the Work Health and Safety Regulation 2011: SMC is required to ensure that they have identified all major incidents that could occur in the course of the operation of the major hazard facility. SMC is required to document these identified major incidents (and major incident hazards).
- Section 569 of the Work Health and Safety Regulation 2011: SMC must review and revise the:
 - Safety assessment for the facility in order to ensure the adequacy of the control measures to be implemented by SMC;
 - Major hazard facility's emergency plan; and
 - Major hazard facility's safety management system
- SMC must conduct the review and revision once a modification to the major hazard facility is proposed.
- Section 570 of the Work Health and Safety Regulation 2011: SMC must review and as necessary revise their safety case once the review under Section 569 is complete.

Department of Transport and Main Roads

Impacts on state-controlled road

The increase in haulage to the Port of Townsville by 75,000 tonnes per annum will generate an estimated additional 19 heavy vehicles each day turning right from Zinc Avenue onto the Bruce Highway. The continued use of A-triple road trains to haul product from Sun Metals to the Port of Townsville along the Bruce Highway, the Zinc Avenue / Bruce Highway intersection requires signalisation to facilitate 24-hour operation.

A-triple road trains cannot be accommodated on a 24-hour basis by the existing configuration of the Zinc Avenue/ Bruce Highway intersection. Background traffic growth on the Bruce Highway will reduce the number of safe gaps available for an A-triple road train to undertake a right turn manoeuvre from Zinc Avenue. Given the continued reduction in safe gap availability and increased heavy vehicle numbers arising from the proposed expansion there is a greater likelihood of unsafe driver behaviour in carrying out the right turn manoeuvre.

The additional heavy vehicle traffic associated with the proposed expansion will result in a reduced ability to safely interact with through traffic. This safety risk is further exacerbated by the A-triple road train's slow acceleration and length of road required to achieve highway speed. The difference in speed and lack of available gaps may result in unsafe merging, forcing highway traffic to decelerate or accelerate rapidly to accommodate the merging A- triple road train and increase driver frustration.

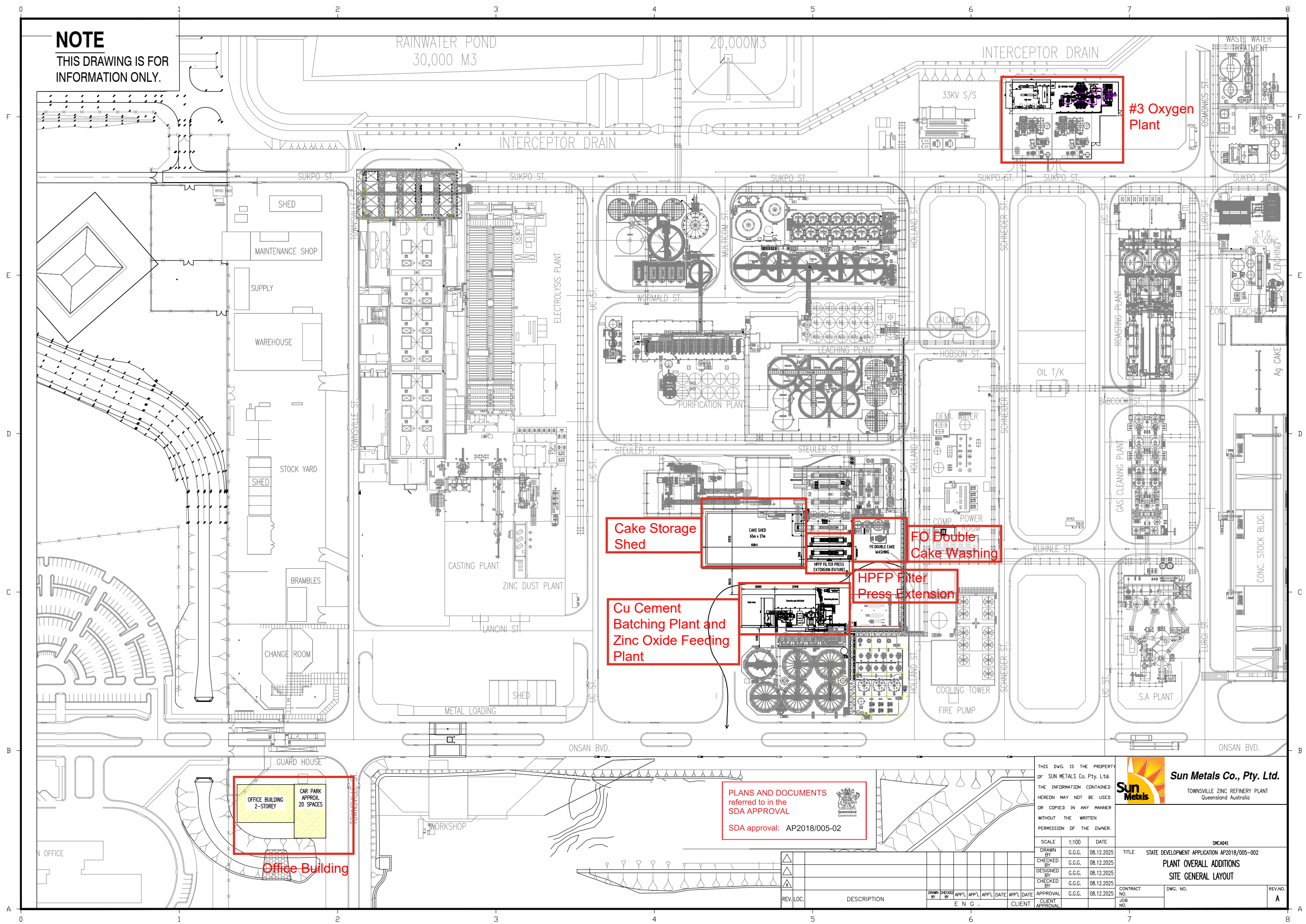
The ongoing renewal of the current permit held by Sun Metals to use A-triple road trains on the Bruce Highway is not guaranteed by the Department of Transport and Main Roads. The Bruce Highway is a B-double route for heavy vehicles up to 25m. Should Sun Metals return to using B-doubles to transport product to the Port of Townsville, the signalisation of the Zinc Avenue / Bruce Highway intersection will also be triggered.

As the sole generator of road trains and generator of heavy vehicles turning right onto the Bruce Highway from Zinc Avenue, Sun Metals is responsible for triggering the design and construction of the Zinc Avenue/ Bruce Highway signalised intersection.

Enclosure 1

Plans of development

THIS DRAWING IS FOR
INFORMATION ONLY.



Cake Storage Shed

FO Double
Cake Washing

Cu Cement
Batching Plant and
Zinc Oxide Feeding
Plant



HPFP Filter Press Extension

OFFICE BUILDING 2-STORY	CAR PARK APPROX. 20 SPACES
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Office Building

PLANS AND DOCUMENTS referred to in the SDA APPROVAL

SDA approval: AP2018/005-02



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Sun Metals Co., Pty. Ltd.

TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

SMCA041

TITLE STATE DEVELOPMENT APPLICATION AP2018/005-002

PLANT OVERALL ADDITIONS
SITE GENERAL LAYOUT

SCALE	1:100	DATE
DRAWN BY	G.G.G.	08.12.2025
CHECKED BY	G.G.G.	08.12.2025
DESIGNED BY	G.G.G.	08.12.2025
CHECKED BY	G.G.G.	08.12.2025
APPROVAL	G.G.G.	08.12.2025
CLIENT APPROVAL		

CONTRACT NO.	DWG. NO.	REV.NO
JOB NO.		A

REV.	LOC.	DESCRIPTION	DRAWN BY	CHECKED BY	APP'L	APP'L	APP'L	DATE	CLIENT
			E	N	G	.			

NOTE
THIS DRAWING IS FOR
INFORMATION ONLY.

Shed Area

Concrete pad with Bund

Concrete pad area

24ft Shipping Container
(6060 x 2440)

conveyor platform (TBD)

Hopper

Vertimill
Vertimill
Vertimill

Bund + acid brick

PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL



SDA approval: AP2018/005-02

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Sun Metals Co., Pty. Ltd.

TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

SMCA041

TITLE STATE DEVELOPMENT APPLICATION AP2018/005-002

**ZINC OXIDE & Cu CEMENT
PROJECT GENERAL LAYOUT**

CONTRACT
NO.
JOB
NO.

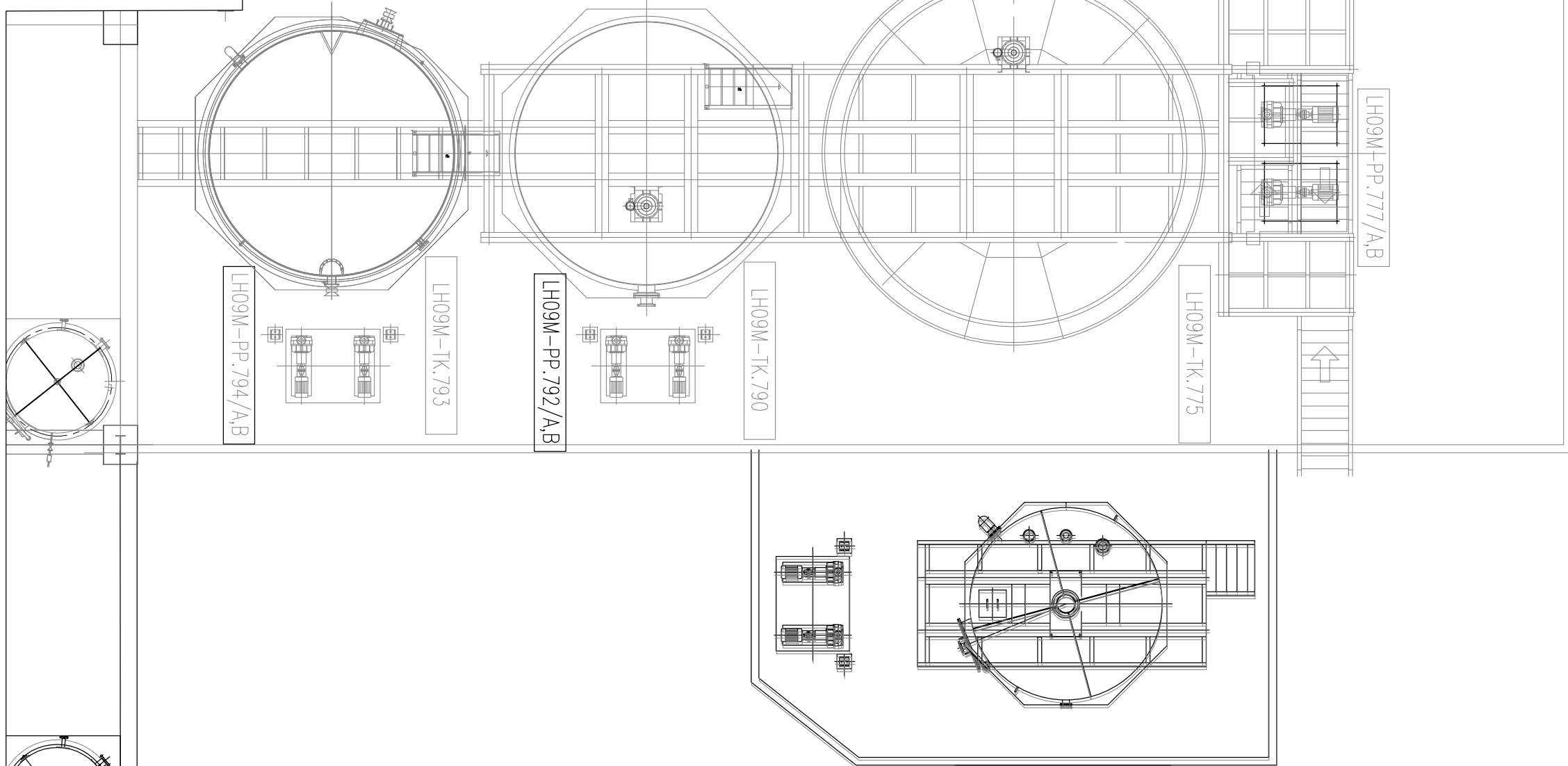
DWG. NO.

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CLIENT APPROVAL			

REV.	LOC.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	APPL.	DATE	APPL.	DATE	APPL.	DATE	APPL.	DATE	APPL.	DATE

NOTE
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FO DOUBLE CAKE WASHING

PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL

SDA approval: AP2018/005-02



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Sun Metals

Sun Metals Co., Pty. Ltd.
TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

SCALE	1:50	DATE	08.12.2025
DRAWN BY	G.G.G.	CHECKED BY	G.G.G.
DESIGNED BY	G.G.G.	CHECKED BY	G.G.G.
APPROVAL	G.G.G.	DATE	08.12.2025

SMCA041

TITLE STATE DEVELOPMENT APPLICATION AP2018/005-002

FO DOUBLE CAKE WASHING
PROJECT GENERAL LAYOUT

CONTRACT NO. _____

DWG. NO. _____

REV. NO. **A**

REV.	LOC.	DESCRIPTION	DRAWN BY	CHECKED BY	DATE	APPROVAL
1			E N G			

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INFORMATION ONLY.**

The diagram shows a cross-section of the MCC room. On the left, a 'TRANSFORMER ENCLOSURE' is connected via a cable to a large 'MCC ROOM' containing a long row of MCC panels. The panels are labeled with numbers 1 through 5. To the right of the panels is a control panel with a large 'X' symbol. The room has a hatched floor and a ceiling with 'B.P.' (Break Point) markers.

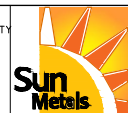
HPFP R

EXTENS



Queensland
Government

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TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

SMCA041

5	TITLE	STATE DEVELOPMENT APPLICATION AP2018/005-002
---	-------	--

CAKE SHED

PROJECT GENERAL LAYOUT

5	
5	CONTRACT NO.
	JOB NO.

DWG. NO.

EV.NO.	
A	

REV.	LOC.	DESCRIPTION	DRAWN BY	CHECKED BY	APPL' E N G .	APPL' DATE	APPL' CLIENT	DATE	

THIS DRAWING IS FOR
INFORMATION ONLY.

CAKE SHED
65m x 37m

HPFP FILTER PRESS EXTENSION (FUTURE)

PLANS AND DOCUMENTS referred to in the SDA APPROVAL



SDA approval: AP2018/005-02

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TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

CA041

5	TITLE	STATE DEVELOPMENT APPLICATION AP2018/005-002
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5 HIGH-PRESSURE FILTER PRESS (HPFP) EXTENSION
5 PROJECT GENERAL LAYOUT

5	CONTRACT	
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5	NO.
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JOB NO.	
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7

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NOTE
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INFORMATION ONLY.

OFFICE BUILDING
2-STOREY

CAR PARK
APPROX.
20 SPACES

PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL



SDA approval: AP2018/005-02

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APPROVAL	G.G.G.	08.12.2025
CLIENT APPROVAL		

CONTRACT NO.	DWG. NO.	REV. NO.
		A

Sun Metals Co., Pty. Ltd.
TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

**Office Building General
Layout(Revision A),
prepared by Sun MetalsCo
Pty Ltd. Dated 08 Dec 2025**

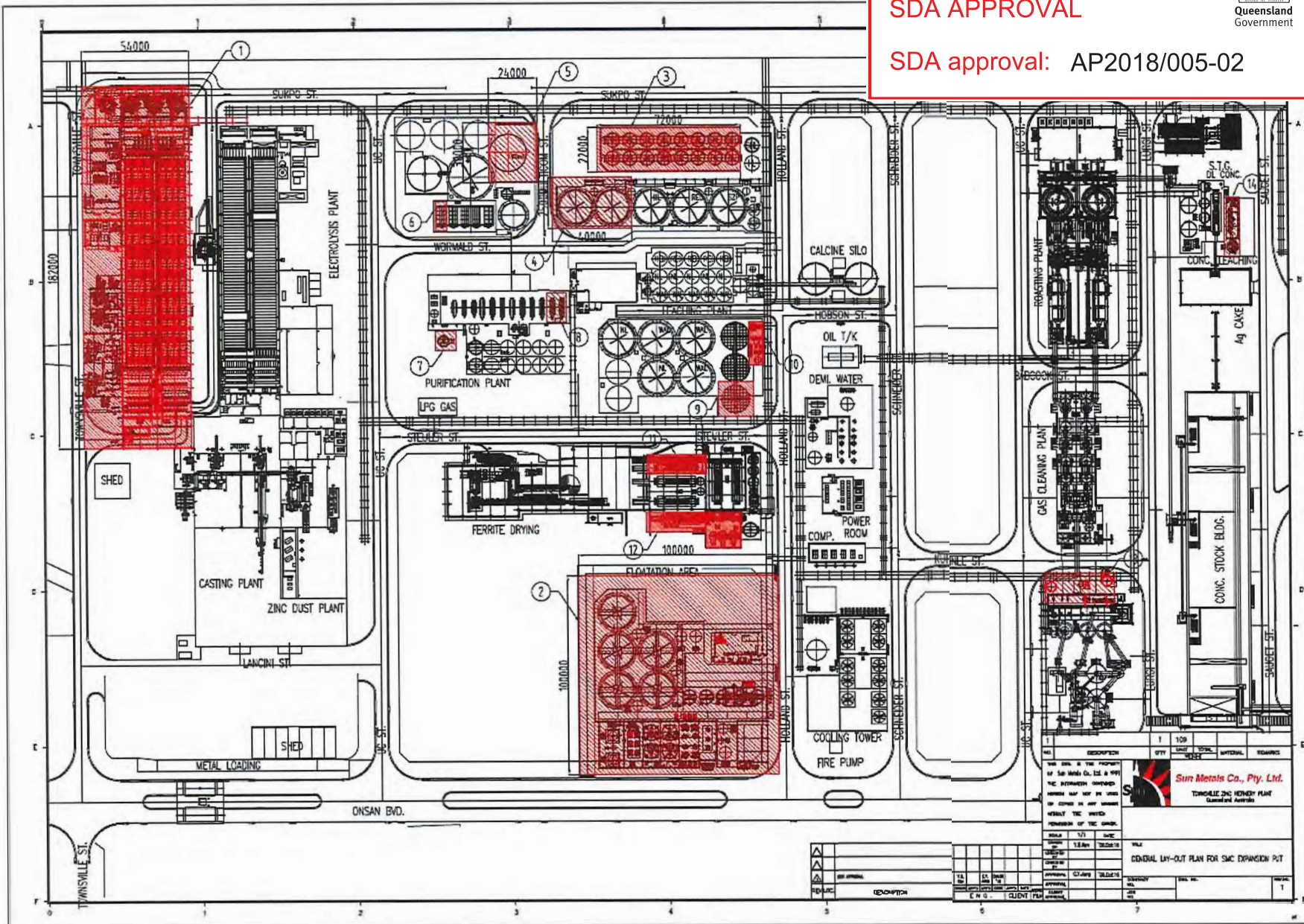
TOWNSVILLE ST

Figure 2. SMC Expansion Project General Layout Plan

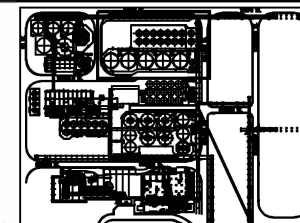
PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL



SDA approval: AP2018/005-02



Key to Figure 2	
1	New Electrolysis Cell House
2	Leaching Plant – Copper Removal Process and Ferric Oxide Process
3	Leaching Plant – HL & SHAL Reactors
4	Leaching Plant – HL & SHAL Thickeners
5	Purification Plant – Purified Solution storage tank.
6	Purification Plant – Cooling Tower
7	Purification Plant – tank 665 relocation
8	Purification Plant – Low Pressure Filter Press
9	Leaching Plant – Spent Acid Tank
10	Leaching Plant – Spent Acid Heat Exchanger
11	Leaching Plant – High Pressure Filter Press for Ferric Oxide cake
12	Leaching Plant – High Pressure Filter Press for Copper Removal Cake
13	Roasting Plant – Heat Recovery
14	Leaching Plant – Flotation Plant



THIS DRAWING

KEY-PLAN

PLANT EXTENSION

EXISTING PLANT UNDER SDA AP2018/005

4
"E

7%

40

PLANS AND DOCUMENTS referred to in the SDA APPROVAL

SDA approval: AP2018/005-02



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Sun Metals Corp. Pty. Ltd.
TOWNSVILLE ZINC REFINERY PLANT
Queensland Australia

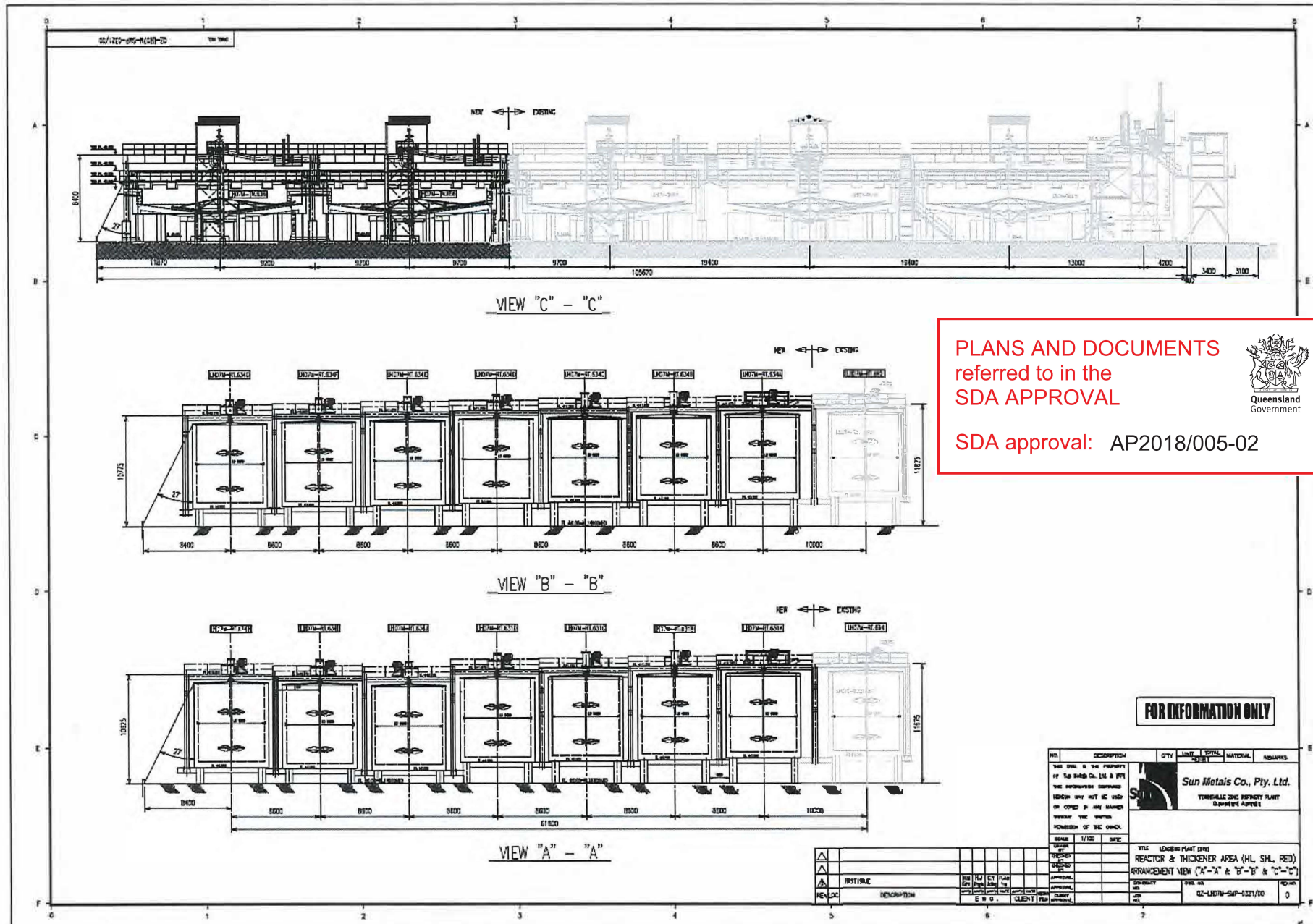
TITLE LEACHING PLANT (PIM)
REACTOR & THICKENER AREA (HL, SHL, RED)
ARRANGEMENT PLAN

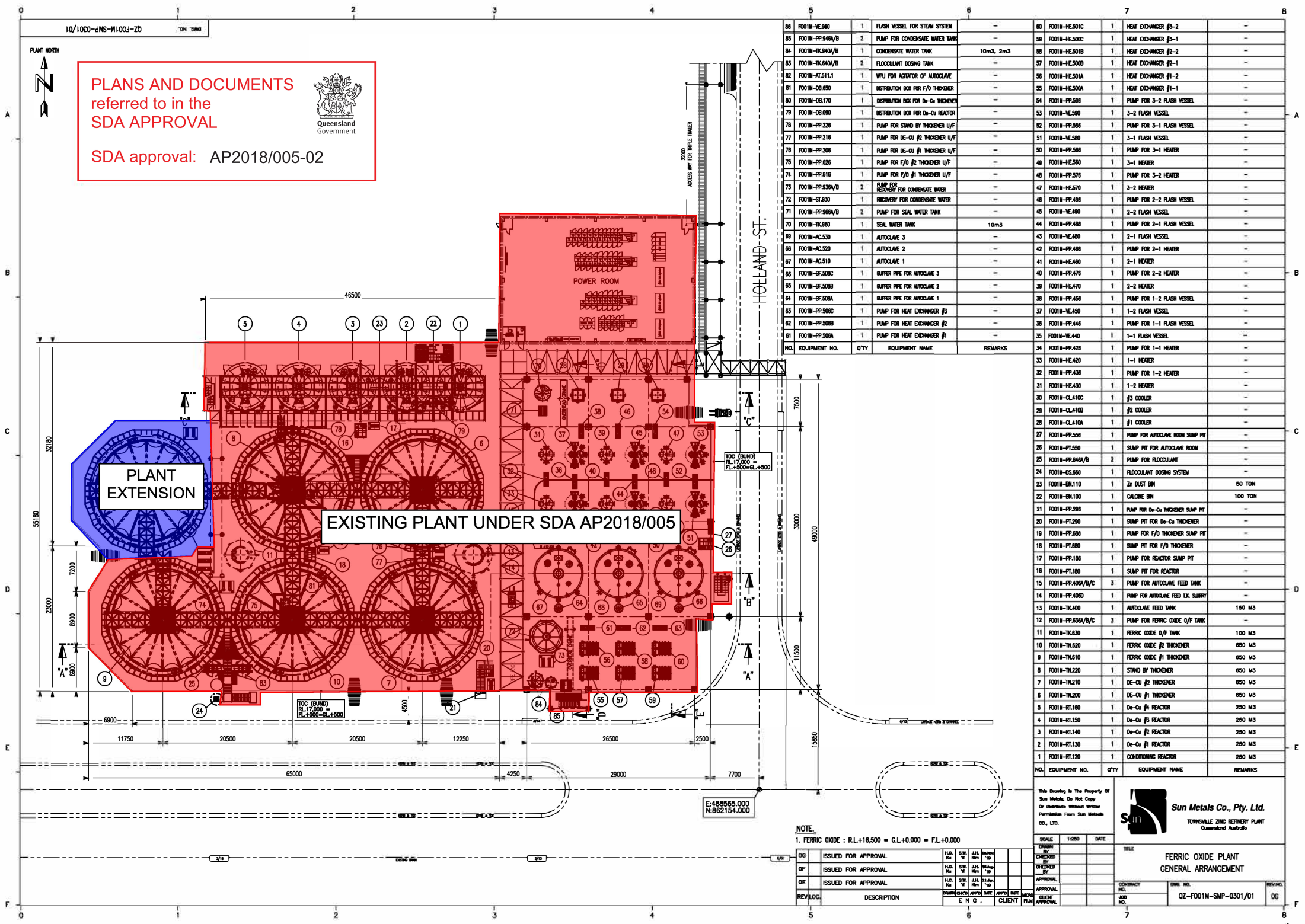
CONTRACT NO.	ORNL NO.
	07-1107M-SMP-0320/00

REV. J.	2
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										DRAWN BY
										CHECKED BY
	ASBUILT		B.M.	H.I.	J.H.					APPROVED BY
			Km	Park	Park					
								SUBMIT TO		
REV. LOC.	DESCRIPTION		DRAWN DATE	BY	APPL. DATE	APPL. DATE	APPL. DATE	APPL. DATE	APPL. DATE	APPL. DATE
			F. M. G.							CLIENT

Figure 3B. Hot Acid Leaching and Super-Hot Acid Leaching Sectional Views



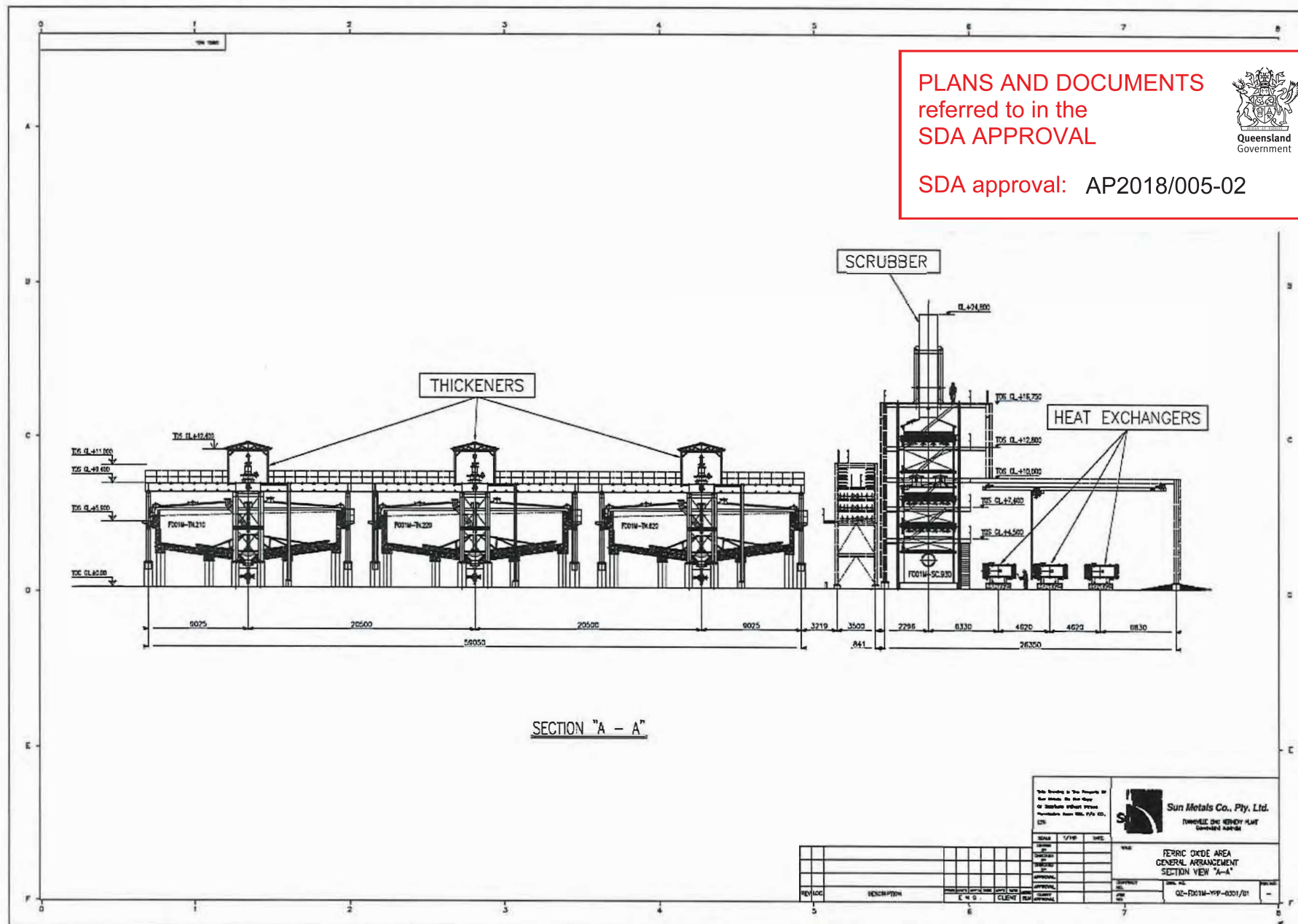


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TITLE		FERRIC OXIDE PLANT GENERAL ARRANGEMENT	
CONTRACT NO.	DATE	REV. NO.	REV. DATE
02-F001M-SMP-0301/01	06		

NOTE		1. FERRIC OXIDE : RL+16,500 = GL+0.000 = FL+0.000	
ISSUED FOR APPROVAL	DATE	APPROVED BY	DATE
ISSUED FOR APPROVAL	DATE	APPROVED BY	DATE
ISSUED FOR APPROVAL	DATE	APPROVED BY	DATE
REV. NO.	DESCRIPTION	DATE	CLIENT
1			

NO.	EQUIPMENT NO.	QTY	EQUIPMENT NAME	REMARKS
85	F001M-VE.960	1	FLASH VESSEL FOR STEAM SYSTEM	
86	F001M-PP.940A/B	2	PUMP FOR CONDENSATE WATER TANK	
84	F001M-TK.940A/B	1	CONDENSATE WATER TANK	10m3, 2m3
83	F001M-TK.940A/B	2	FLOCCULANT DOSING TANK	
82	F001M-AZ.511.1	1	WPU FOR AGITATOR OF AUTOCLAVE	
81	F001M-DE.650	1	DISTRIBUTION BOX FOR F/D THICKENER	
80	F001M-DE.170	1	DISTRIBUTION BOX FOR De-Cu THICKENER	
79	F001M-DE.080	1	DISTRIBUTION BOX FOR De-Cu REACTOR	
78	F001M-PP.226	1	PUMP FOR STAND BY THICKENER U/F	
77	F001M-PP.216	1	PUMP FOR DE-CU #2 THICKENER U/F	
76	F001M-PP.208	1	PUMP FOR DE-CU #1 THICKENER U/F	
75	F001M-PP.628	1	PUMP FOR F/D #2 THICKENER U/F	
74	F001M-PP.616	1	PUMP FOR F/D #1 THICKENER U/F	
73	F001M-PP.630A/B	2	PUMP FOR RECOVERY FOR CONDENSATE WATER	
72	F001M-ST.630	1	RECOVERY FOR CONDENSATE WATER	
71	F001M-PP.960A/B	2	PUMP FOR SEAL WATER TANK	
70	F001M-TK.980	1	SEAL WATER TANK	10m3
69	F001M-AC.530	1	AUTOCLAVE 3	
68	F001M-AC.520	1	AUTOCLAVE 2	
67	F001M-AC.510	1	AUTOCLAVE 1	
66	F001M-BF.508C	1	BUFFER PIPE FOR AUTOCLAVE 3	
65	F001M-BF.508B	1	BUFFER PIPE FOR AUTOCLAVE 2	
64	F001M-BF.508A	1	BUFFER PIPE FOR AUTOCLAVE 1	
63	F001M-PP.508C	1	PUMP FOR HEAT EXCHANGER #3	
62	F001M-PP.508B	1	PUMP FOR HEAT EXCHANGER #2	
61	F001M-PP.508A	1	PUMP FOR HEAT EXCHANGER #1	
60	F001M-PP.508A	1	PUMP FOR HEAT EXCHANGER #1	
59	F001M-PP.428	1	PUMP FOR 1-1 HEATER	
58	F001M-HE.420	1	1-1 HEATER	
57	F001M-PP.436	1	PUMP FOR 1-2 HEATER	
56	F001M-HE.430	1	1-2 HEATER	
55	F001M-CL.410C	1	#3 COOLER	
54	F001M-CL.410B	1	#2 COOLER	
53	F001M-CL.410A	1	#1 COOLER	
52	F001M-PP.558	1	PUMP FOR AUTOCLAVE ROOM SUMP PIT	
51	F001M-PP.550	1	SUMP PIT FOR AUTOCLAVE ROOM	
50	F001M-PP.640A/B	2	PUMP FOR FLOCCULANT	
49	F001M-DE.680	1	FLOCCULANT DOSING SYSTEM	
48	F001M-BN.110	1	2x DUST BIN	50 TON
47	F001M-BN.100	1	CALCONE BIN	100 TON
46	F001M-PP.298	1	PUMP FOR De-Cu THICKENER SUMP PIT	
45	F001M-PP.290	1	SUMP PIT FOR De-Cu THICKENER	
44	F001M-PP.688	1	PUMP FOR F/D THICKENER SUMP PIT	
43	F001M-PP.680	1	SUMP PIT FOR F/D THICKENER	
42	F001M-PP.188	1	PUMP FOR REACTOR SUMP PIT	
41	F001M-PP.180	1	SUMP PIT FOR REACTOR	
40	F001M-PP.408A/B/C	3	PUMP FOR AUTOCLAVE FEED TANK	
39	F001M-PP.408B	1	PUMP FOR AUTOCLAVE FEED TANK	
38	F001M-TK.400	1	AUTOCLAVE FEED TANK	150 M3
37	F001M-PP.630A/B/C	3	PUMP FOR FERRIC OXIDE O/F TANK	
36	F001M-TK.630	1	FERRIC OXIDE O/F TANK	100 M3
35	F001M-TN.620	1	FERRIC OXIDE #2 THICKENER	850 M3
34	F001M-TN.610	1	FERRIC OXIDE #1 THICKENER	850 M3
33	F001M-TN.220	1	STAND BY THICKENER	850 M3
32	F001M-TN.210	1	DE-CU #2 THICKENER	850 M3
31	F001M-TN.200	1	DE-CU #1 THICKENER	850 M3
30	F001M-RT.160	1	De-Cu #4 REACTOR	250 M3
29	F001M-RT.150	1	De-Cu #3 REACTOR	250 M3
28	F001M-RT.140	1	De-Cu #2 REACTOR	250 M3
27	F001M-RT.130	1	De-Cu #1 REACTOR	250 M3
26	F001M-RT.120	1	CONDITIONING REACTOR	250 M3

Figure 3D. Ferric Oxide Process and Copper Removal Process Sectional View Drawing A - A



[illegible]

Figure 3F. Ferric Oxide Process and Copper Removal Process Sectional View Drawing C - C

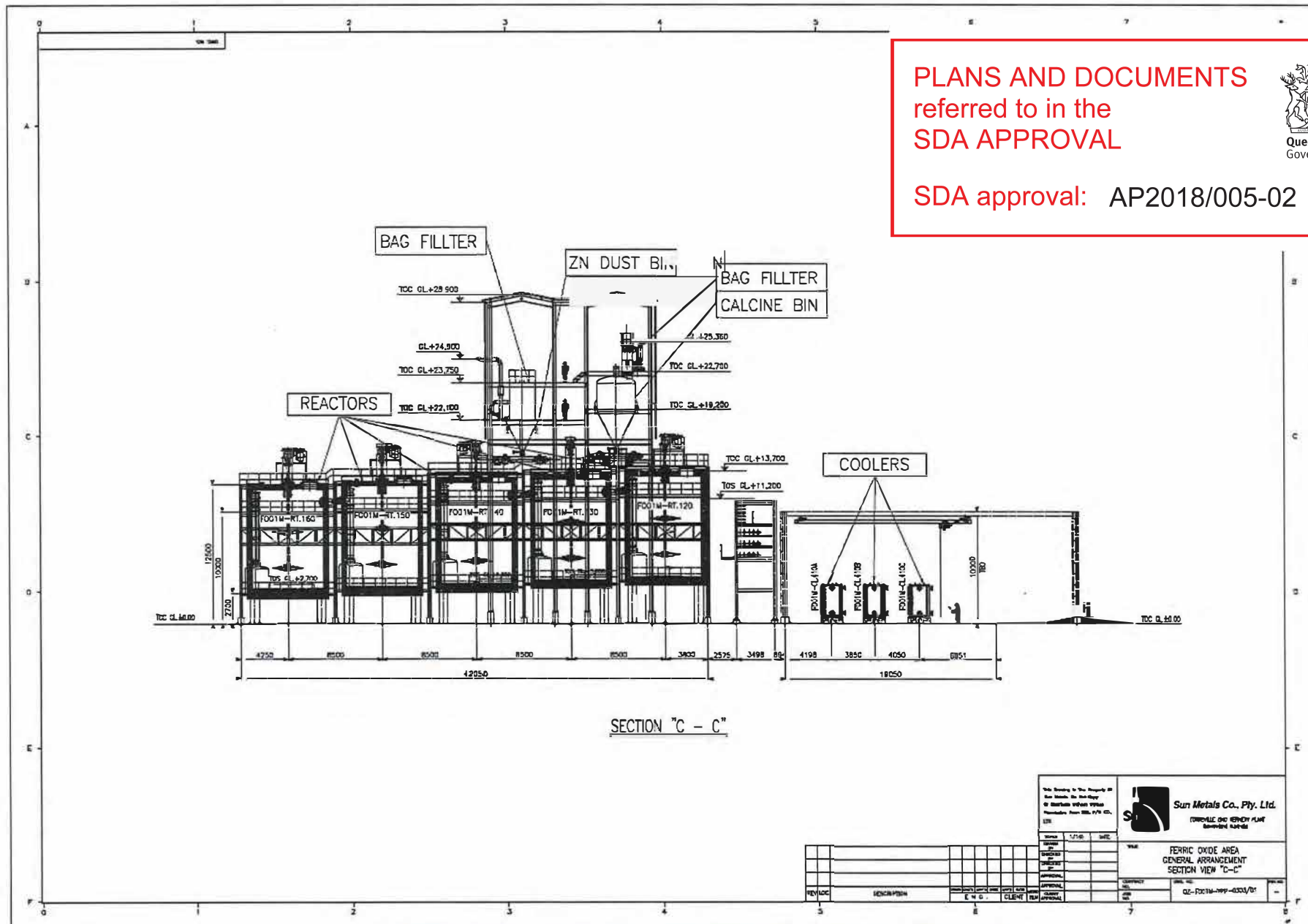


Figure 3G. Ferric Oxide Process and Copper Removal Process Sectional View Drawing D - D

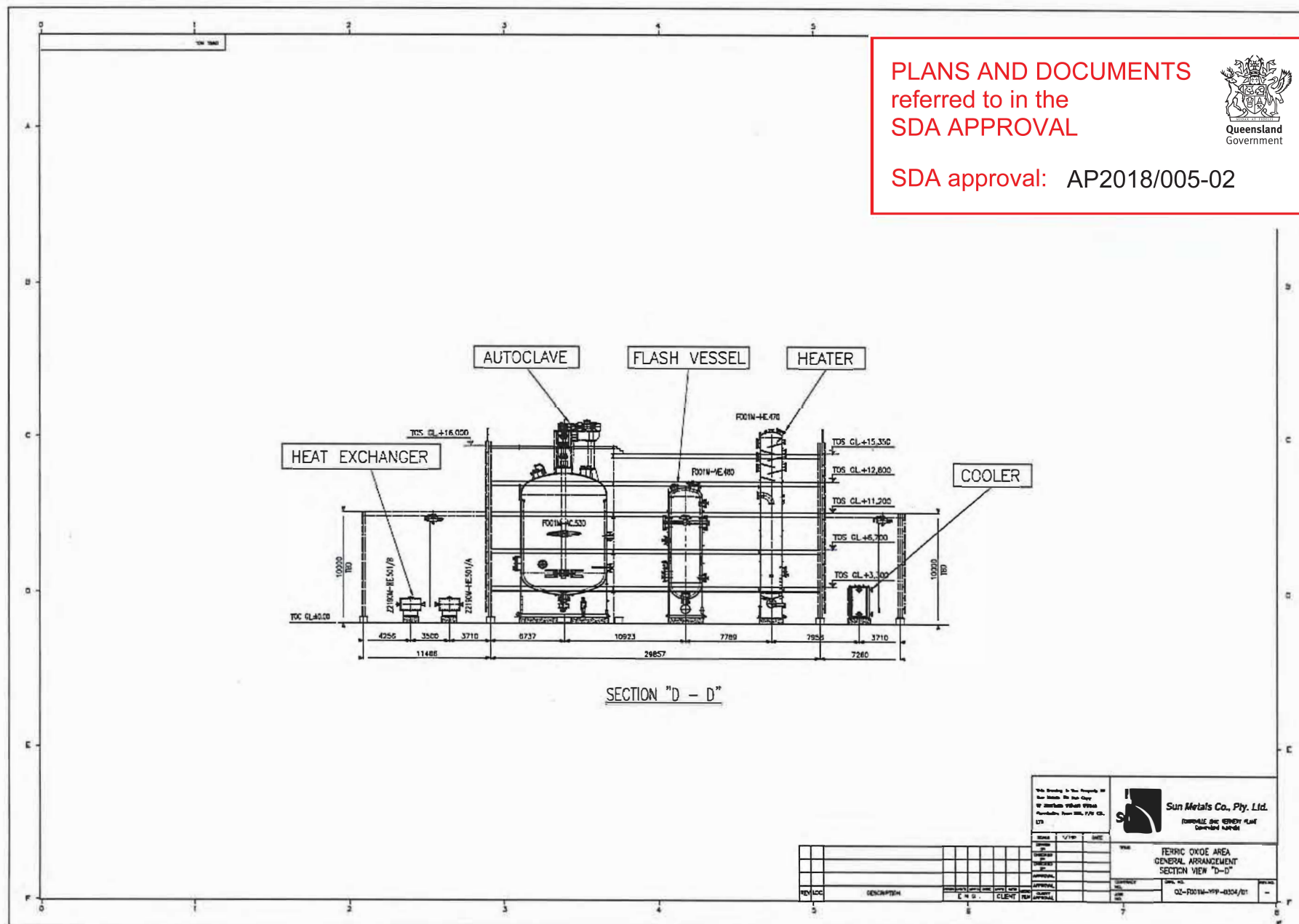


Figure 3H. Additional Heat Recovery Area General Arrangement Drawing

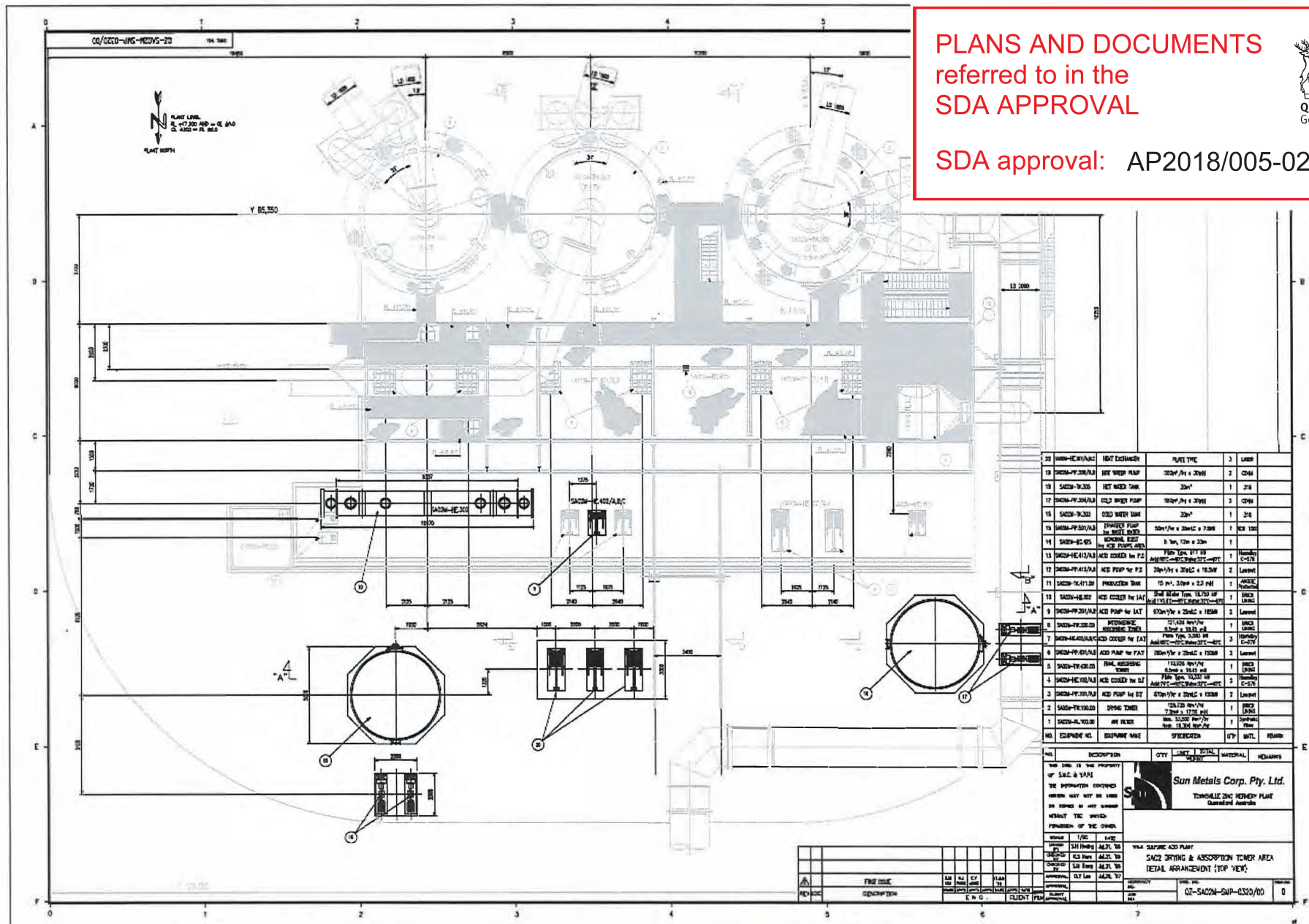
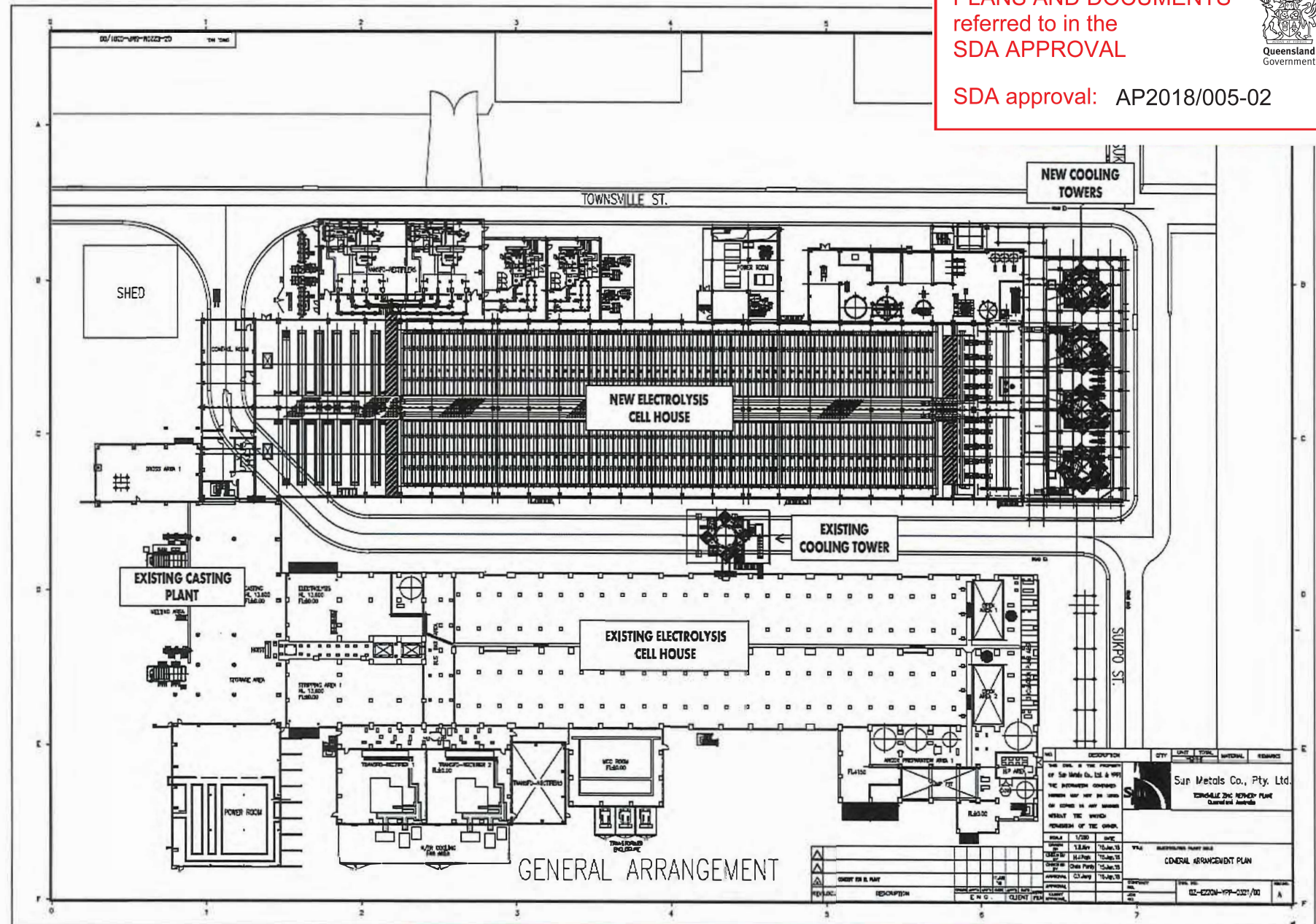


Figure 31. New Electrolysis Cell House General Arrangement Drawing.



PLANS AND DOCUMENTS
referred to in the
SDA APPROVAL



SDA approval: AP2018/005-02

Figure 3J. New Electrolysis Cell House Sectional View A - A

