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Office of the Coordinator-General  
PO Box 15517  
CITY EAST QLD 4002

Attn: Department of State Development, Infrastructure and Planning

Dear Felicity,

**RE: 25-10-22 - SMC SDA Inquiry – Upcoming Projects**

We refer to the above correspondence and note Sun Metals Co. Pty Ltd are seeking to undertake the following works at the Sun Metals Zinc Refinery in Stuart, Townsville:-

**1. Cu Cement Batching Plant**

- Approximately 318.8m<sup>2</sup> floor area total.
- 2 no. 60m<sup>3</sup> steel repulping tanks to northern side of Ferric Oxide (FO) area.
- Associated ancillary items such as pumps.
- Construction of concrete bunded area to capture plant extension.
- Structure for access and egress compliancy.
- Shed over repulping tanks for equipment shelter from weather.
- Concrete slab area for container and material placement and forklift manoeuvrability.
- Modification to unsealed access road.

**2. Zinc Oxide Feeding Plant**

- Approximately 973.4m<sup>2</sup> floor area total.
- 4 no. 60m<sup>3</sup> steel repulping tanks to the northern side of Ferric Oxide (FO). Construction will proceed with 4 foundations, 2 tank install, and 2 foundations dedicated for future use.
- 2 no. 30m<sup>3</sup> overflow tank, with 1 installation to proceed with construction and 1 foundation dedicated for future use.
- 6 no. Wetmills, with installation of 3 to proceed with construction and 3 foundations dedicated for future use.
- Associated ancillary items such as pumps.
- Extending of concrete bunded area to capture plant extension.
- Structure for access and egress compliancy.
- Shed structure for truck access and material unloading.
- Hopper pit structure and associated conveying equipment.

**3. FO Double Cake Washing**

- Approximately 58.6m<sup>2</sup> floor area total.
- 1 no. 30m<sup>3</sup> steel tank and concrete foundation to southern part of High-Pressure Filter Press (HPFP) area.
- Associated ancillary items such as pumps.
- Extending of concrete bunded area to capture plant extension.
- Structure for access and egress compliancy.

**4. Cake Storage Shed**

- 2405m<sup>2</sup> storage shed for holding Filter Press cakes and production materials.
- Connection tie-in to HPFP Drying Shed area.
- Associated ancillary items.
- Structure for access and egress compliancy.

**5. HPFP Filter Press Extension**

- Approximately 719.8m<sup>2</sup> floor area total.

- 2 no. filter press extension to the southern side of HPFP.
- 2 no. air receiver tanks to facilitate introduction of filter presses in plant areas.
- Associated ancillary items such as pumps.
- Extending of concrete bunded area to capture plant extension.
- Structure for access and egress compliancy.

#### 6. **Office Building**

- 2-Storey Office Building, with 864m<sup>2</sup> footprint proposed per floor. Bottom floor designated to relocate Electrical department, with their current donga office space reaching the end of its designed life. Top floor of building is proposed to accommodate multiple departments.
- Available redundancy of 3 spare rooms per floor for consideration of 21 future employee expansion. There is no expectation of expansion at this time, but this has considered future growth.
- Car park infrastructure for 20 vehicles.
- Associated ancillary items such service tie-in.

#### 7. **Oxygen Plant #3**

- Approximately 1474.2m<sup>2</sup> total footprint.
- Existing Oxygen Plant from our mother company in Korea proposed to be installed to the northern side of Oxygen Plants 1 and 2, which includes:
  - a. Air Receiver.
  - b. Dryer.
  - c. Air Blower.
  - d. Valve Skid.
  - e. Absorber Vessel.
  - f. Vacuum Blower and Motor.
  - g. Oxygen Compressor and Motor.
  - h. MCC Room.

The purpose of constructing these new plants and plant extensions varies as per the following:

#### 1. **Cu Cement Batching Plant**

Cu Cement Batching Plant and ancillary items are proposed to provide stabilisation for Leaching operation and will not increase plant production. Stabilisation of this process requires further removal of iron (Fe) from the solution, so by increasing the copper (Cu) concentration in the solution by dissolving Cu Cement product, this will enhance the removal rate efficiency of Fe. It is expected that this process will use an average of 559,872 kg/year of Cu Cement throughput, with the maximum being 933,120kg/year to achieve this stabilisation.

#### 2. **Zinc Oxide Feeding Plant**

Zinc Oxide Feeding Plant and ancillary items are designed to assist with the removal of Iron (Fe) from the Ferric Oxide process by introducing Zinc Oxide product into the Leaching process as a raw material feed. However, as this Zinc rich material is added into the process through Leaching and Ferric Oxide, there is an expected increase in zinc ingot production by approximately 10%. This, however, does not alter the existing Leaching process, but merely adds in the product to improve and stabilise the Zinc recovery percentage.

#### 3. **FO Cake Double Washing**

Leaching process in HPFP area produces cake as a by-product. The filter presses are designed to separate liquids and solids, leaving cakes remaining. There is a requirement to wash the cakes and assist with recovery of process materials in the cake, however, there is limited storage of this water to recycle in the washing process. Thus, the FO Cake Double Washing plant and ancillary equipment are designed to recirculate the cake washing water.

#### 4. **Cake Storage Shed**

Through the increase of production with Zinc Oxide Feeding Plant, there will be an increase in process discharge cakes that will require storage. The Cake Storage Shed facility will provide temporary storage of cake products before recirculation back into the process. The shed is designed to join into the HPFP Drying Shed and will have larger vehicular movement internally.

#### 5. **HPFP Filter Press Extension**

HPFP area is part of Leaching process, which houses Filter Press systems that are designed to remove solid particles, discharged as cakes, from the Leaching process solution. Existing filter press system in HPFP area is limited, and there is minimal ability to prevent build up of solids in the presses

through regular maintenance and cleaning. The proposal to extend the building and add two new filter presses will alleviate the restriction seen with maintenance and cleaning to help stabilise the process.

#### **6. Office Building**

Currently, staff from electrical maintenance, engineering, safety, management, and other site departments sit in separate buildings. There is no longer enough office space within the plant to accommodate existing teams. Hence the need to construct an office building to accommodate both current staff and future expansion.

Electrical maintenance team, in particular, sit in a building that has been used since the initial build of SMC in 1997. Over time, this has deteriorated and corroded to become inhabitable for future use. This building will accommodate the Electrical maintenance department on the ground floor level and house other departments on the first floor.

Safety and Management teams proposed for inclusion in this building floor plan space are currently seated in temporary dongas due to unavailable office space within the plant, hence the need for inclusion in this building.

#### **7. Oxygen Plant #3**

The plant proposed to be installed in this project is existing plant from our mother company in Korea, which is being refurbished for relocation and reuse at our refinery in Townsville. The purpose of this plant is to provide redundancy within our existing Oxygen plant and alleviate the maintenance stresses involved in managing the existing Oxygen plants. Due to these being from original construction, regular maintenance and upkeep is necessary, and with this can come production downtime. Thus, the inclusion of Oxygen Plant #3 will allow Sun Metals maintenance teams to complete maintenance tasks on equipment without impacting plant production.

This application is set to be completed in stages, with Cu Cement, Zinc Oxide, Office Building and Oxygen Plant to be completed in 2025 and 2026. It is unclear at this time on the construction of the other proposed projects; however, they will be considered following this first stage.

All plant expansion projects considered in this proposal have been reviewed internally by Sun Metals departments. Following internal review from our Environment team, there is no trigger for additional approvals under the Environmental Protection Act 1994. Cu Cement material, in particular, is imported for use and not manufactured on site, thus there is no trigger of ERA 07(4) (inorganic chemical manufacturing). Sun Metals already holds high-level approvals under ERA 08 (chemical storage) and the tanks will be managed under this existing ERA. Safety department have also confirmed that there is no concern with the Major Hazard Facility license Sun Metals Corporation currently hold.

Construction proposed in either stage is not expected to have major site traffic implications. It is expected that temporary road closures will be necessary to complete this work, but these will be managed through traffic management plans developed internally with our Safety department and distributed site-wide. Following construction, there is expected to be a minimal increase in traffic movement, with Cu Cement material delivery introducing periodical container unloading of product to the area. This will introduce a brief road closure for the time spent unloading, but it is not expected to impact site vehicular movement.

Construction will be managed through SMC permit to work system. Permits are developed by contractors online which outline the hazards expected with the work carried out, followed by mitigation methods, similar to a SWMS. All workers in the area must be signed onto a permit to complete the work, and the contractor must nominate a 'Person in Charge of Work' to sign on as the permit leader. These persons must complete additional site induction training from all other contractors.

HPFP and FO areas were previously expanded under SDA Approval (AP2018/005), a material of change completed for a refinery expansion and assessed under the now superseded Townsville Development Scheme 2013. This application was approved without conditions. Following this expansion, there have been correspondence with the Office of Coordinator General on three occasions in 2025 regarding expansion works. To understand the scale of these projects with the aforementioned AP2018/005 approval and site original build, the Gross Floor Areas (GFAs) can be compared.

- Original Build – 155,357m<sup>2</sup>.
- AP2018/005 Approval – 25,579.37m<sup>2</sup>.
- Approval 2025 #1 (LH07 & FO Thickener Expansion) – 4,488m<sup>2</sup>.
- Approval 2025 #2 (Oxygen Plant #3 Expansion) – 1474.2m<sup>2</sup>.
- Approval 2025 #3 (This Approval) – 6203.7m<sup>2</sup>.

Based on the GFAs, this application is approximately 4% of the Original Build of the plant area, and approximately 24% of the Expansion Project Approval (AP2018/005).

Townsville Development Scheme 2019, the latest edition, states that a minor change can be made to an existing approval if the project does not substantially alter the original SDA Approval by introducing processes substantially different to those assessed at the time of the original approval, or results in impact changes not reviewed with the original approval. The projects are proposed to assist stabilisation of existing processes, and those that are not proposed to stabilise, introduce a minor change that does not substantially differ from the assessed processes.

Although the above projects expand on the layout of these areas at the time of AP2018/005, the projects proposed overall will not substantially alter the original application at the time of this approval. Thus, this project appropriately aligns with the characteristics of a minor change outlined in the Townsville Development Scheme 2019.

We therefore request that a new SDA Approval is not required for this project but make a minor change to existing SDA Approval (AP2018/005).

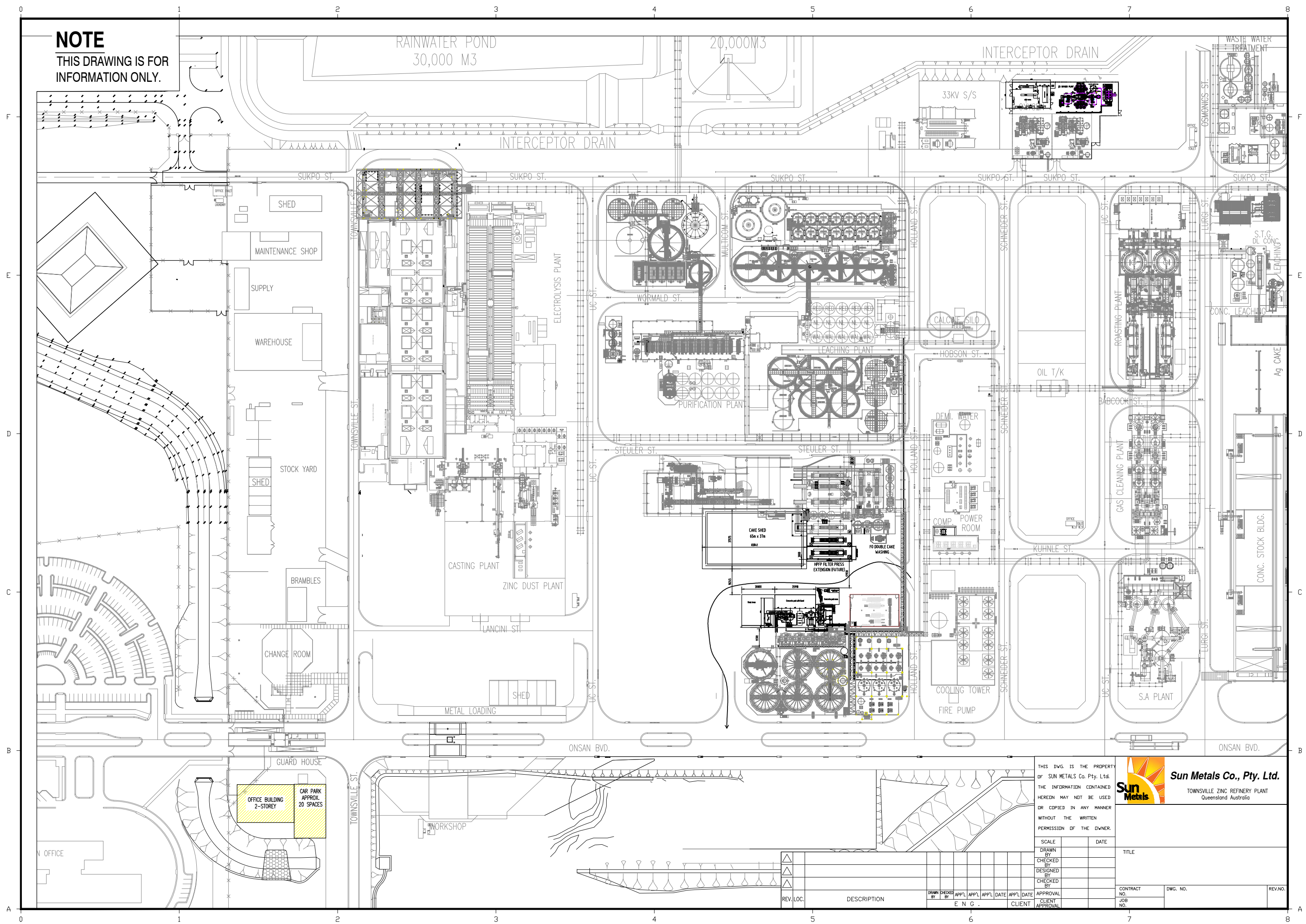
Regards,



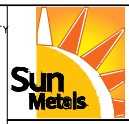
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Sun Metals Corporation

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**Sun Metals Co., Pty. Ltd.**

TOWNSVILLE ZINC REFINERY PLANT  
Queensland Australia

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