



Works approval number	W6963/2024/1
Works approval holder	VRX Silica Ltd
ACN	142 014 873
Registered business address	Ground Floor, 52 Kings Park Road WEST PERTH WA 6005
DWER file number	APP-0026164
Duration	01/09/2025 to 31/08/2028
Date of issue	01/09/2025
Premises details	Arrowsmith North Silica Sand Project Brand Highway, Arrowsmith Western Australia Legal description Mining tenement M70/1389 As defined by the premises maps in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or nonmetallic ore	2,000,000 tonnes per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 1 September 2025, by:

Fiona Westcott
MANAGER, RESOURCE INDUSTRIES
STATEWIDE DELIVERY (REGULATORY SERVICES)
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
01 September 2025	W6963/2024/1	Works approval granted for the construction and operation of a Category 5 silica sand mine.

Interpretation

In this works approval:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct and/or install the infrastructure and/or equipment.
 - (b) in accordance with the corresponding design and construction / installation requirements.
 - (c) at the corresponding infrastructure location; andas set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Mine feed plant	<ul style="list-style-type: none">• Water cannons installed in the product load out area to wet down the product stockpile as needed.• Dedicated water truck/s will operate at the site for wetting down roads and open areas susceptible to wind erosion.• Conveyors fitted with covers.• The conveyor transfer points enclosed to contain dust.• Fine mist water sprays fitted at the transfer points, if required to mitigate dust emissions.	Labeled as 'Feeder station' in Schedule 1, Figure 3.
2.	Processing plant	<ul style="list-style-type: none">• Conveyors fitted with covers.• The conveyor transfer points enclosed to contain dust.• Thickener (flocculant) tank fitted with pressure sensor underflow pump.• Processing plant installed on concrete pad and bunded such that it will prevent loss of containment and divert stormwater away from stockpiles.	As seen in Schedule 1, Figure 3.
3.	Sand slurry pipeline	<ul style="list-style-type: none">• Pipeline manufactured from 280 mm polyethylene capable of transfer approximately 8 m³ of sand slurry (30% solids) per minute.• Pipeline fitted with sensors and an alarm system with automatic shutdown.• The pipeline to be housed in a 'V' trench approximately 300 mm deep that will have	As seen in Schedule 1, Figure 4

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		the capacity to hold a complete rupture of the pipeline.	
4.	Process water pond	<ul style="list-style-type: none"> Sized to contain 15,000 m³. Lined with a HDPE liner of nominal thickness of 1.5 mm. Bunded with material excavated during construction. Fitted with water level sensors connected by telemetry to the water supply pump. Associated supporting infrastructure installed including process circuit pump, plumbing and, water level monitoring and management equipment. 	Labeled as 'Process Water Dam' in Schedule 1, Figure 3.
5.	Hydrocarbon / chemical / flocculant storage area(s)	<ul style="list-style-type: none"> Chemicals and hydrocarbons storage areas designed in accordance with AS 1940:2017. Bunds must have a net capacity of at least 110% of the capacity of the largest vessel, and 25% of the total capacity of all vessels stored within the bund. All permanent chemical and hydrocarbon storage locations must be sufficiently impervious to retain spillage and be made of suitable construction materials (for example, HDPE, geosynthetic clay liners, and/or concrete). Bunds designed and constructed to allow practical recovery of any spillage and/or any collected and potentially contaminated rainfall; and Earthen bunds lined and sealed with an appropriate material to ensure containment of any chemical or hydrocarbon spills. 	Labeled as 'Fuel Storage' in Schedule 1, Figure 3.
6.	Stormwater management infrastructure	<ul style="list-style-type: none"> Sediment drainage pond constructed near the western edge of the prescribed premises boundary. The stockpile area graded towards the drainage pond. 	Labeled as 'Drainage Pond' in Schedule 1, Figure 3.

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
 - (a) undertake an audit of their compliance with the requirements of condition 1; and

- (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
- (a) certification by a suitably qualified professional 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.

Environmental commissioning phase

Environmental commissioning requirements

4. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in condition 1 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 2 of this works approval.
5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:
- (a) in accordance with the corresponding commissioning requirements; and
 - (b) for the corresponding authorised commissioning duration.

Table 2: Environmental commissioning requirements

	Infrastructure	Commissioning requirements	Authorised commissioning duration
1.	Mine feed plant	<ul style="list-style-type: none"> • 5,480 tonnes per day. • No more than 328,800 tonnes of silica sand processed over 60 calendar days. • Dust suppression equipment to be regularly maintained. • Stormwater drainage controls to be regularly maintained; and • Daily visual inspections to ensure dust controls, stormwater controls and hydrocarbons / chemicals controls are working effectively. • Hydrocarbons and chemicals to be stored within bunds of appropriate capacity. • Any leakage and spills from hydrocarbon and chemical storage facilities must be contained to prevent contamination of surrounding soil, watercourses, and drainage systems. 	For a period not exceeding 60 calendar days in aggregate.
2	Processing plant		
3	Sand slurry pipeline		

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		<ul style="list-style-type: none"> • Suitable spill response equipment shall be available and maintained near the chemical and hydrocarbon storage location. • All chemicals and hydrocarbons are to be appropriately segregated from potential ignition sources. • Contained spills and/or potentially contaminated rainfall should be recovered when needed to ensure optimal availability of bund capacity; and • Discharge of any spillage and/or potentially contaminated rainfall from within a bund is not permitted 	

6. The works approval holder must submit to the CEO an Environmental Commissioning Report within 60 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Table 2.
7. The works approval holder must ensure the Environmental Commissioning Report required by condition 6 of this works approval includes the following:
 - (a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of silica sand processed.
 - (b) a summary of environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at minimum includes records detailing the:
 - (i) environmental commissioning of the infrastructure.
 - (ii) testing of the infrastructure; and
 - (iii) commissioning of the process control systems; and
 - (c) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
 - (d) where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

8. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1:
 - (a) where the item of infrastructure is not authorized to undertake environmental commissioning, the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure; and

- (b) where the item of infrastructure is authorized to undertake environmental commissioning under condition 5, the Environmental Commissioning Report for that item of infrastructure as required by condition 6 has been submitted by the works approval holder.
9. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 10 (as applicable):
- (a) For a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 8 for that item of infrastructure; and
- (b) Until such time as a licence for that item of infrastructure is granted in accordance with Part V of the Environmental Protection Act 1986, if one is granted before the end of the period specified in condition 9(a).
10. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operations requirement set out in Table 3.

Table 3: Infrastructure and equipment requirements during time limited operations

	Infrastructure	Operational requirements	Infrastructure location
1.	Mine feed plant	<ul style="list-style-type: none"> 5,480 tonnes per day. No more than 986,400 tonnes of silica sand processed over 180 calendar days. 	Labeled as 'Feeder station' in Schedule 1, Figure 2.
2.	Processing plant	<ul style="list-style-type: none"> Dust suppression equipment to be regularly maintained. 	As seen in Schedule 1, Figure 3.
3.	Sand slurry pipeline	<ul style="list-style-type: none"> Stormwater drainage controls to be regularly maintained; and Daily visual inspections to ensure dust controls, stormwater controls and hydrocarbons / chemicals controls are working effectively. Hydrocarbons and chemicals to be stored within bunds of appropriate capacity. Any leakage and spills from hydrocarbon and chemical storage facilities must be contained to prevent contamination of surrounding soil, watercourses, and drainage systems. Suitable spill response equipment shall be available and maintained near the chemical and hydrocarbon storage location. All chemicals and hydrocarbons are to be appropriately segregated from potential ignition sources. Contained spills and/or potentially contaminated rainfall should be recovered when needed to ensure optimal availability of bund capacity; and Discharge of any spillage and/or potentially contaminated rainfall from 	As seen in Schedule 1, Figure 4.

	Infrastructure	Operational requirements	Infrastructure location
		within a bund is not permitted	

Compliance reporting

11. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations or 60 calendar days before the expiration date of the works approval, whichever is the sooner.
12. The works approval holder must ensure the report required by condition 11 includes the following:
 - (a) a summary of the time limited operations, including timeframes and amount of silica sand processed.
 - (b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the:
 - (i) efficiency of dust controls.
 - (ii) efficiency of stormwater controls; and
 - (iii) efficiency of hydrocarbons / chemicals controls; and
 - (c) a review of operational performance and compliance against the conditions of the works approval and the environmental commissioning report; and
 - (d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

13. The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
 - (a) the name and contact details of the complainant, (if provided);
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.
14. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
 - (a) the works conducted in accordance with condition 1;
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 10;
 - (c) complaints received under condition 13.
15. The books specified under condition 14 must:
 - (a) be legible;

- (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
- (c) be retained by the works approval holder for the duration of the works approval; and
- (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 4 have the meanings defined.

Table 4: Definitions

Term	Definition
AS 1940:2017	Australian Standard for the storage and handling of flammable and combustible liquids
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
HDPE	High density polyethylene
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1)

Term	Definition
	in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1)

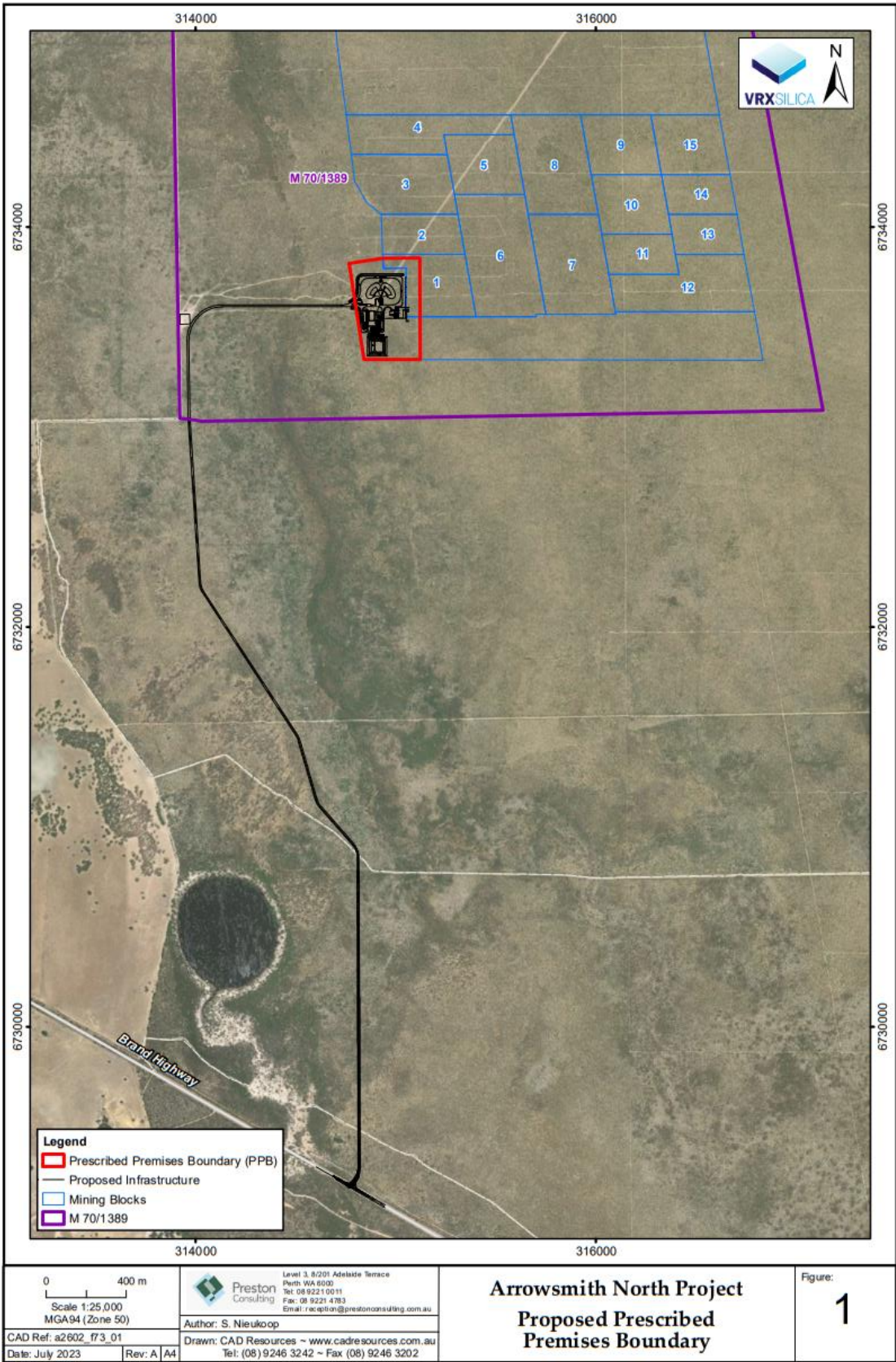


Figure 1: Map of the boundary of the prescribed premises

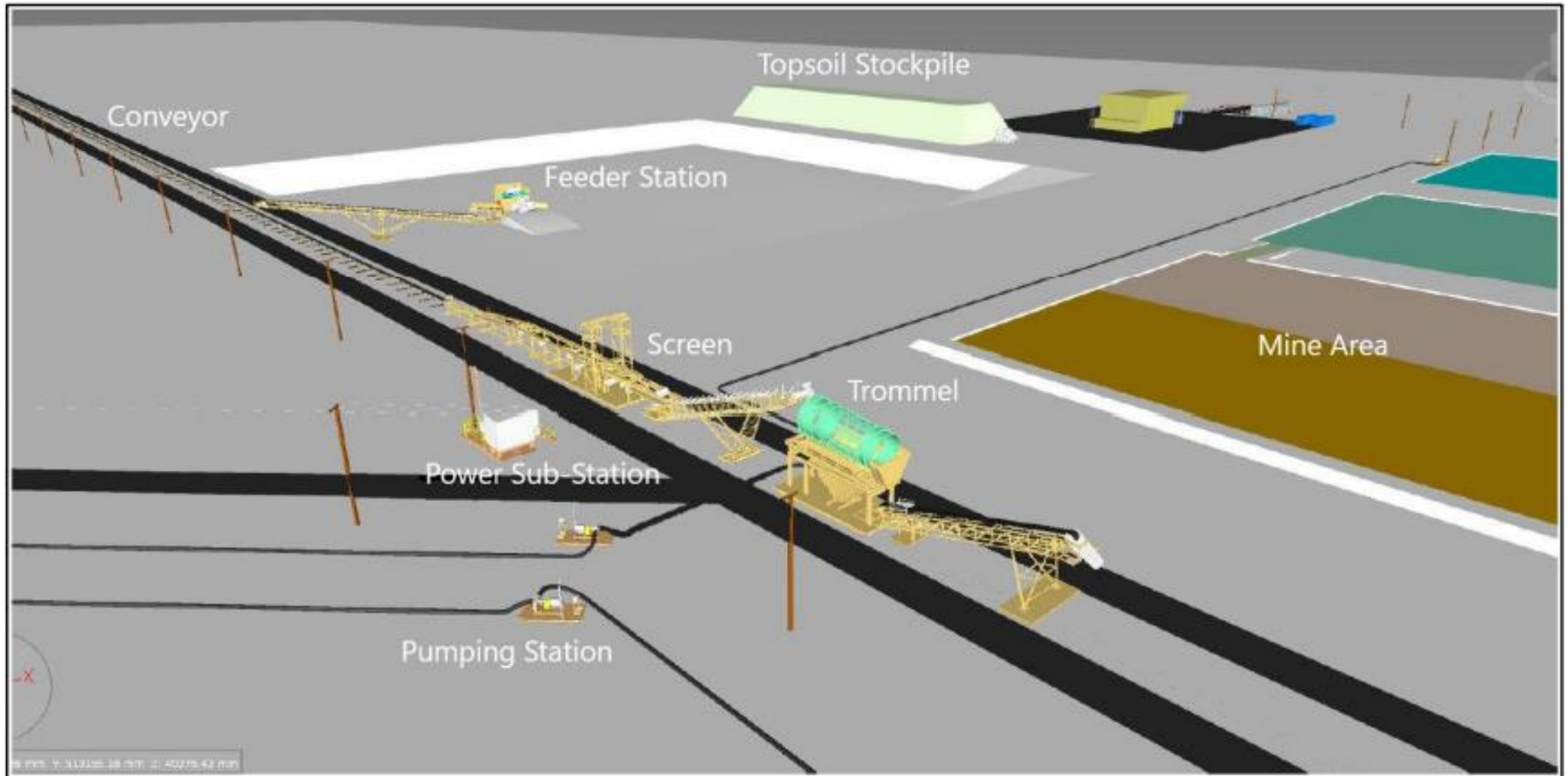


Figure 2: Mine feed plant layout

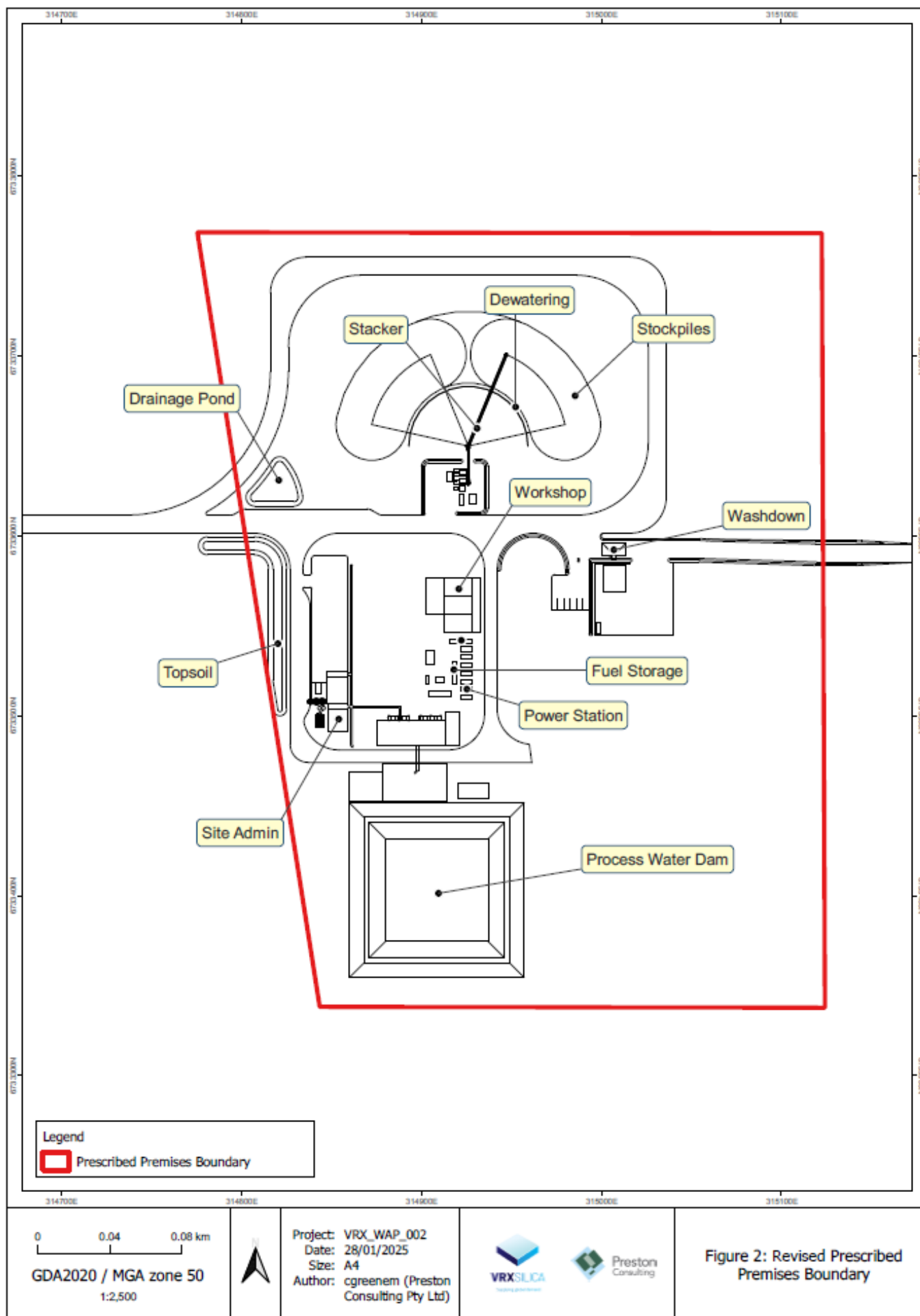


Figure 3: Proposed layout of Arrowsmith silica sand processing plant

