Government of Western Australia
Department of Water and Environmental Regulation

Amended Works Approval

Works approval number	W6381/2020/1
Works approval holder	Cockburn Cement Limited
ACN	008 673 470
Registered business address	Lot 45 Leath Road KWINANA BEACH WA 6167
DWER file number	DER2020/000139
Duration	01/04/2021 to 31/03/2026
Date of issue	01/04/2021
Date of amendment	19 November 2024
Premises details	Cockburn Cement Kwinana Plant Lot 45 Leath Road KWINANA BEACH WA 6167 Lot 45 on Plan 91600 Certificate of Title Volume 2091 Folio 497 Part of Lot 251 on Deposited Plan 415974 Lease Reference: 1901069 Part of Lot 252 on Deposited Plan 415974 Lease Reference: WAPC/14/0079

Prescribed premises category description **(Schedule 1, *Environmental Protection Regulations 1987*)**	**Assessed design capacity**
Category 43: Cement or lime manufacturing: premises on which - (a) clay, limes and or limestone material is used in a furnace or kiln in the production of cement clinker or lime; or (b) cement clinker, clay, limestone or similar material is ground.	1,530,000 tonnes per annum

This amended works approval is granted to the works approval holder, subject to the attached conditions, on 19 November 2024, by:

Amine Fisher

Digitally signed by Amine Fisher
Date: 2024.11.19 09:21:58 +08'00'

Manager, Process Industries

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary
1/04/2021	W6381/2020/1	Works Approval Issued.
28/02/2024	W6381/2020/1	Amendment to extend works approval duration by two years.
19/11/2024	W6381/2020/1	Amendment to increase the commissioning duration to 300 days and make alterations to some premises design details.

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:

Infrastructure and equipment

1. The works approval holder must:

(a) construct the infrastructure;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location

as set out in Table 11 in Schedule 2.

Compliance reporting

2. The works approval holder must within 30 calendar days of the infrastructure required by condition 1 being constructed:

(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 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

Commencement and duration

4. The works approval holder may only commence environmental commissioning of the infrastructure listed in condition 5 once the Environmental Compliance Report for that infrastructure has been submitted in accordance with condition 2 of this works approval.

5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 1 may only be carried out:

(a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration.

Table 1: Environmental commissioning requirements

Site infrastructure and equipment	Operational requirements	Authorised duration
Clinker storage shed	1. Must be maintained at negative pressure during times of material loading and material movements. 2. All doors and other openings must be closed during operation, except when personal are entering and exiting. 3. Must only be operated when the dust collectors are operational.	For a period not exceeding 300 days in aggregate.
Dust Collectors	1. All dust collectors must be monitored by a broken bag detection system. 2. Faulty or broken bag filters must be replaced to ensure dust collectors are operational and effective.	
Conveyors	1. All conveyors must only be operated when the dust collectors at their associated transfer points are operational.	
Grinding mill	1. Must be operated only when dust collectors are operational. 2. Must only be operated when all doors and openings on the grinding mill shed are closed.	
Finished Products Silos	1. Dust collectors must be inspected and tested weekly. 2. Dust collectors must be operational during cement loading and unloading. 3. All openings must be closed while cement loading or unloading is occurring. 4. Cement loading or unloading must cease if visible dust escapes the silo. 5. The final product must only be transported to the silos by a fully enclosed product transfer system.	
Finished product dispatch	1. Must not have more than two adjustable loading spouts per weighbridge operating at one time.	
Truck wash down area	1. All truck washing must occur only in the designated truck wash down area. 2. All run off from the truck wash down area must drain to the primary sedimentation sump. 3. Water discharged from the recycled water tank to stormwater basin 1 must be treated through the oil water separator and universal pollutant trap prior to being discharged. 4. Sediment levels in the primary and secondary sedimentation sumps must be monitored weekly. 5. Sediment in the primary and secondary sedimentation sumps must not be visible above the water's surface. 6. Sediment from the primary and secondary sedimentation sumps must be removed for disposal to an appropriately licensed facility. 7. Oily water separated by the oil water separator must be stored in a dedicated storage vessel. 8. Oily water separated by the oil-water separator must be removed for disposal to an appropriately licensed facility.	
Storm water basins	1. To be maintained with a minimum freeboard of 500mm. 2. Storm water basins 6, 7 and 8 must only receive uncontaminated surface water. 3. Storm water basin 1 must only receive uncontaminated surface water and recycled water from the truck wash down area recycled water tank.	
Aggregate and additive stockpiles	1. Aggregate and additive stockpiles are to be restricted to 10 metres or less in height. 2. When stockpiles have been disturbed, the working face is to be stabilised through the addition of water or another dust suppression treatment as soon as is practicable. 3. Aggregate and additive stockpiles are to only be established within the aggregate and additive stockpile area.	

Emission limits

6. During environmental commissioning, the works approval holder must ensure that the emissions specified in Table 2 are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.

Table 2: Authorised discharge points during commissioning

Emission	Discharge point		Discharge point location		Stack Height (m agl)
	Identity	Orientation	Easting	Northing	
PM	N29 – Cement Mill 4 Stack	Vertical	384,319	6,435,416	42
	N30 -Cement Mill 3 Stack		384,319	6,435,402	

7. During environmental commissioning, the works approval holder must ensure that the emissions from the discharge points listed in Table 3 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 8.

Table 3: Emission limits during environmental commissioning

Discharge point	Parameter	Limit
N29 and N30	PM	50 mg/m^3

Monitoring during environmental commissioning

8. The works approval holder must monitor emissions during environmental commissioning in accordance with Table 4.

Table 4: Emissions monitoring during environmental commissioning

Discharge point	Parameter	Frequency	Averaging Period	Reporting Unit[2]	Sampling and Analysis Method[1, 3, 4]
N29-and N30	PM	At least twice within the environmental commissioning period. Sampling must be undertaken on separate days	60 minutes	mg/m^3	US EPA Method 5 or US EPA Method 17

Note 1: Duplicate sample runs are to be conducted consecutively on the same sampling day.
Note 2: all units are to be reported as STP dry.
Note 3: Monitoring shall be undertaken to reflect normal operating conditions.
Note 4: Where any US EPA method refers to US EPA Method 1 for the sampling plane, this must be read as a referral to AS4323.1:1995.

9. The works approval holder shall ensure that all sampling and analysis undertaken pursuant to condition 8 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

10. The works approval holder must record the results of all monitoring activity required by condition 8.

Noise emission verification

11. Prior to the completion of the environmental commissioning period provided for by conditions 4 and 5, the works approval holder must retain the services of a person qualified and experienced in the area of environmental noise assessment and who by their qualifications and experience is eligible to hold membership of the Australian Acoustical Society or the Australian Association of Acoustical Consultants to:

(a) investigate the nature and extent of noise emissions from the premises, with the focus on night time noise emissions;

(b) assess in accordance with the methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the Premises, against the relevant assigned levels specified in those Regulations; and

(c) compile and submit to the works approval holder within 60 days, a report in accordance with condition 12.

12. The report prepared pursuant to condition11(c) is to include:

(a) a description of the methods used for monitoring and/or modelling of noise emissions from the premises;

(b) details and the results of the investigation undertaken pursuant to condition 11(a);

(c) details and results of the assessment of the noise emissions from the premises, against the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997* undertaken pursuant to condition 11(b); and

(d) an assessment of noise levels against the most recent previous noise assessment for the premises.

13. The noise emission verification report prepared pursuant to condition11(c) is to be submitted to the CEO within 30 calendar days of being received by the works approval holder.

14. Where an assessment pursuant to condition 11(b) indicates that noise emissions do not comply with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997*, the works approval holder must prepare a report to ensure the operation of the premises will no longer lead to any contravention of the *Environmental Protection (Noise) Regulations 1997*.

Environmental Commissioning Report

15. The works approval holder must submit to the CEO an Environmental Commissioning Report within 30 calendar days of the completion date of environmental commissioning for all items of infrastructure specified in Table 1.

16. The works approval holder must ensure the Environmental Commissioning Report required by condition 15 of this works approval includes the following:

(a) a summary of the environmental commissioning activities undertaken, including timeframes and the amount of clinker, slag, limestone and other additives processed;

(b) the point-source emissions monitoring results recorded in accordance with condition 10;

(c) a summary of the environmental performance of all items of infrastructure as constructed or installed, as applicable;

(d) a review of the works approval holder's performance and compliance against the conditions of this works approval; and

(e) 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

Commencement and duration

17. The works approval holder may only commence time limited operations of the infrastructure identified in condition 1 where the Environmental Commissioning Report as required by condition 15 has been submitted by the works approval holder.

18. The works approval holder may conduct time limited operations of the infrastructure specified in condition 19:

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 15 for that item of infrastructure; or

(b) until such time as a licence for the infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*

whichever occurs first.

Time limited operations requirements and emission limits

19. During the time limited operations period, the works approval holder must ensure that the infrastructure and equipment listed in Table 5 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out in Table 5.

Table 5: Infrastructure and equipment operational requirements

Site infrastructure and equipment	Operational requirements	Infrastructure location
Clinker storage shed	1. Must be maintained at negative pressure during times of material loading and material movements. 2. All doors and other openings must be closed during operation, except when personal are entering and exiting. 3. Must only be operated when the dust collectors are operational.	As depicted in Figure 2 in Schedule 2
Dust Collectors	1. All dust collectors must be monitored by a broken bag detection system. 2. Faulty or broken bag filters must be replaced to ensure dust collectors are operational and effective.	
Conveyors	1. All conveyors must only be operated when the dust collectors at their associated transfer points are operational.	
Grinding mill	1. Must be operated only when dust collectors are operational. 2. Must only be operated when all doors and openings on the grinding mill shed are closed.	
Finished Products Silos	1. Dust collectors must be inspected and tested weekly. 2. Dust collectors must be operational during cement loading and unloading. 3. All openings must be closed while cement loading or unloading is occurring. 4. Cement loading or unloading must cease if visible dust escapes the silo. 5. The final product must only be transported to the silos by a fully enclosed product transfer system.	
Finished product dispatch	1. Must not have more than two adjustable loading spouts per weighbridge operating at one time.	
Truck wash down area	1. All truck washing must occur only in the designated truck wash down area. 2. All run off from the truck wash down area must drain to the primary sedimentation sump. 3. Water discharged from the recycled water tank to stormwater basin 1	

Site infrastructure and equipment	Operational requirements	Infrastructure location
	must be treated through the oil water separator and universal pollutant trap prior to being discharged. 4. Sediment levels in the primary and secondary sedimentation sumps must be inspected weekly. 5. Sediment in the primary and secondary sedimentation sumps must not be visible above the water's surface. 6. Sediment from the primary and secondary sedimentation sumps must be removed for disposal to an appropriately licensed facility. 7. Oily water separated by the oil water separator must be stored in a dedicated storage vessel. **8.** Oily water separated by the oil-water separator must be removed for disposal to an appropriately licensed facility.	
Storm water basins	1. To be maintained with a minimum freeboard of 500mm. 2. Storm water basins 6, 7 and 8 must only receive uncontaminated surface water. 3. Storm water basin 1 must only receive uncontaminated surface water and wastewater from the truck wash down area recycled water tank, which has been treated via the oily water separator and universal pollutant trap.	
Aggregate and additive stockpiles	1. Aggregate and additive stockpiles are to be restricted to 10 metres or less in height. 2. When stockpiles have been disturbed, the working face is to be stabilised through the addition of water or another dust suppression treatment as soon as is practicable. 3. Aggregate and additive stockpiles are to only be established within the aggregate and additive stockpile area.	

20. During time limited operations, the works approval holder must ensure that the emissions specified in Table 6 are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.

Table 6: Authorised discharge points during time limited operations

Emission	Discharge point		Discharge point location		Stack Height (m)
	Identity	Orientation	Easting	Northing	
PM	N29 – Cement mill 4 stack	Vertical	384,319	6,435,416	42
	N30 - Cement mill 3 stack		384,319	6,435,402	
Wastewater from the truck wash down area recycled water tank.	Stormwater Basin 1		As depicted in Figure 2.		N/A

21. During time limited operations, the works approval holder must ensure that the emissions from the discharge points listed in Table 7 for the corresponding parameter do not exceed the corresponding limits when monitored in accordance with conditions 22 and 25.

Table 7: Emission limits during time limited operations

Discharge point	Parameter	Limit
N29 and N30	PM	50 mg/m^3
Storm water basin 1.	pH	5.5 to 8.5
	Electrical conductivity	1,800 EC
	Surfactants (detergents)	5 mg/L
	Total recoverable hydrocarbons	15 mg/L
	BTEX	10 µg/L (cumulative)

Monitoring during time limited operations

22. The works approval holder must monitor emissions to air during time limited operations in accordance with Table 8.

Table 8: Emission to air monitoring during time limited operations

Discharge point	Parameter	Frequency	Averaging Period	Unit[2]	Sampling and Analysis Method[1,3,4]
N29 and N30	PM	Once each quarter during the time limited operations period.	60 minutes	mg/m^3	USEPA Method 5 or US EPA Method 17

Note 1: Duplicate sample runs are to be conducted consecutively on the same sampling day.
Note 2: All units are to be reported as STP dry.
Note 3: Monitoring shall be undertaken to reflect normal operating conditions.
Note 4: Where any US EPA method refers to US EPA Method 1 for the sampling plane, this must be read as a referral to AS4323.1:1995.

23. The works approval holder must ensure that monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters.

24. The works approval holder shall ensure that all sampling and analysis undertaken pursuant to condition 22 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

25. The works approval holder must monitor emissions to land during time limited operations in accordance with Table 9.

Table 9: Emission to land monitoring during time limited operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit	Sampling Method
Storm water basin 1.	Truck wash down area junction pit (area 12 in Figure 2 in Schedule 1)	pH[1]	Monthly	Spot sample	-	AS/NZS 5667.1; and AS/NZS 5667.10.
		Salinity			EC	
		Surfactants			mg/L	
		TPH				
		BTEX			µg/L	

Note 1: In-field non-NATA accredited analysis permitted.

26. The works approval holder shall ensure that all analysis undertaken pursuant to condition 25 is undertaken by a holder of NATA accreditation for the relevant parameter.

27. The works approval holder must record the results of all monitoring activity required by conditions 22 and 25.

Time limited operations report

28. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is sooner.

29. The works approval holder must ensure the report required by condition 28 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of clinker, slag, limestone and other additives processed;

(b) a summary of monitoring results as recorded in accordance with condition 27.

(c) a summary of the environmental performance of all infrastructure as constructed or installed, as applicable, including the weekly inspections of the truck wash down area sedimentation sumps;

(d) a review of performance and compliance against the conditions of the works approval; and

(e) 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

30. 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.

31. 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 conditions 5 and 19;

(c) monitoring programmes undertaken in accordance with conditions 8, 22 and 25; and

(d) complaints received under condition 30.

32. The books specified under condition 31 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 10 have the meanings defined.

Table 10: Definitions

Term	Definition
agl	means above ground level
AS4323.1: 1995	Refers to *Australian Standard 4323.1: 1995: Stationary source emissions Method 1: Selection of sampling positions* (as amended from time to time).
AS/NZS 5667.1-1998	Refers to *Australian / New Zealand Standard 5667.1-1998: Water quality sampling - Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples* (as amended from time to time).
AS/NZS 5667.10-1998	Refers to *Australian / New Zealand Standard 5667.10 – 1998: Water quality - Sampling Guidance on sampling of waste waters* (as amended from time to time).
books	has the same meaning given to that term under the EP Act.
BTEX	refers to benzene, toluene, ethylbenzene and xylene.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the *Public Sector Management Act 1994* 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.
EC	electrical conductivity
emission	has the same meaning given to that term under the EP Act.
environmental commmissioning	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	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
m^2	square meter
m^3	cubic meter
mg/L	milligrams per Litre
mg/m^3	milligrams per cubic metre
min	minute
NATA	means the (Australian) National Association of Testing Authorities.
normal operating conditions	means any operation of a particular process (including abatement equipment) excluding startup, shutdown and upset conditions.

Term	Definition
PM	means particulate matter
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
Prescribed premises	has the same meaning given to that term under the EP Act.
Qualified professional engineer	means a person who holds a tertiary academic qualification in engineering and has a minimum of three years of experience working in the area of civil / construction engineering.
STP dry	means standard temperature and pressure (0˚Celsius and 101.325 kilopascals respectively), dry.
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.
tph	tonnes per hour
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.
US EPA Method 5	refers to United States Environmental Protection Authority *Method 5 – Determination of particulate matter emissions from stationary sources* (as amended from time to time).
US EPA Method 17	refers to United States Environmental Protection Authority *Method 17 – Determination of Particulate Matter Emissions from Stationary Sources* (as amended from time to time).
µg/L	micrograms per litre

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in Figure 1.

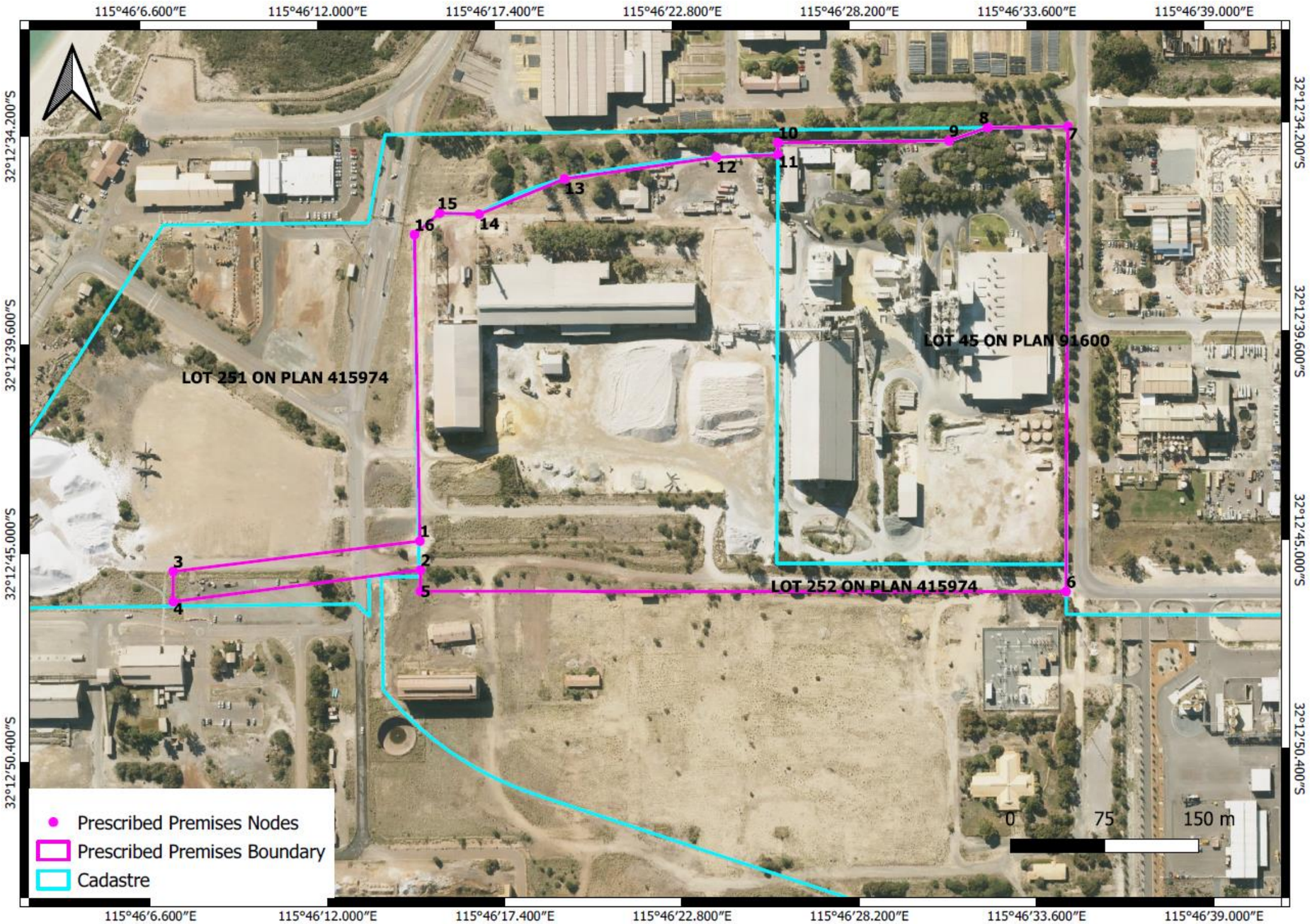

Figure 1: Map of the boundary of the prescribed premises. The coordinates of the nodes depicted in this map are contained in Table 12.

Infrastructure and discharge point map

The infrastructure to be established at the premises and authorised discharge points are ~~is~~ shown in Figure 2.

Figure 2: Premises layout map depicting the location of the proposed infrastructure and authorised discharge point locations.

Schedule 2: Proposed works

The works proposed to be undertaken at the premises are detailed in Table 11.

Table 11: Design and construction requirements

Infrastructure		Design and construction requirements	Infrastructure location
1.	Conveyor connecting the Fremantle Ports Authority transfer point to the new clinker storage shed.	1. Must have a maximum capacity of 1,500 tph. 2. The conveyor must be covered on three sides. 3. The transfer stations situated along the conveyor network must be enclosed with dust collectors.	As depicted in Figure 2 in Schedule 1.
2.	Other conveyors and transfer points.	1. All conveyors must be covered on three sides. 2. The transfer stations situated along the conveyor network must be enclosed with dust collectors.	
3.	New clinker storage shed	1. The shed must comprise a completely enclosed structure. 2. The shed must have a maximum storage capacity of 110,000 tonnes. 3. Heavy equipment access doors must be provided at the eastern and western end of the shed. 4. The shed must be capable of being maintained at negative pressure. 5. Dust collectors must be installed on the shed. 6. The clinker truck unloading and receival facility must have a maximum capacity of 400 tph. 7. The unloaders used to receive clinker bought to site by truck must include dust collectors.	
4.	Clinker reclaiming circuit.	1. The clinker reclaiming circuit must be contained in a fully enclosed structure. 2. The clinker reclaiming circuit must be fitted with dust collectors.	
5.	Additive feed hopper and day bins	1. One additive feed hopper with a maximum capacity of 300 tph. 2. One fully enclosed clinker day bin with a maximum capacity of 100 tph each. 3. One fully enclosed slag day bins with a maximum capacity of 540 m^3 each. 4. Two fully enclosed gypsum day bins with a maximum capacity of 100m^3 each. 5. Two fully enclosed shell sand / limestone day bins with a maximum capacity of 170m^3 each. 6. All day bins must be fitted with dust collectors.	
6.	Grinding mill	1. The ball mills must be situated within a completely enclosed structure (grinding mill building). 2. Up to two enclosed ball mills must be established, with a design capacity of 100 tph each of cement, at a design fineness of 400 m^2/ kg. 3. Each ball mill circuit must have an independent dust collection system separate from the mill ventilation system. 4. Discharge from the ball mill dust collectors must be ducted to an independent induced draft fan for each ball mill circuit which leads to an independent exhaust stack for each circuit. 5. A common stack linked to both the grinding mill process filter and mill vent filter for each ball mill circuit is to be constructed in accordance with the requirements of AS 4323.1: 1995. **6.** The two stacks are to be built to a minimum height of 42 metres above ground level. 7. Dust collectors which meet a design criteria of less than or equal to 10mg/m^3 will be fitted on the two independent stacks linked to each ball mill circuit 8. All dust collectors must be fitted with bag filters, which must not exceed an air to cloth ratio of 2m^3/min/m^2. 9. Broken bag detectors must be fitted to all dust collector units and must notify the plant control system in the event of a dust collector malfunction through alarms. 10. Instrumentation to sense differential pressure and automatically clean the ball mill dust collectors must be installed across the dust collectors.	

Infrastructure		Design and construction requirements	Infrastructure location
		11. Noise levels will not exceed 80 dB at 1 metre from the perimeter of the grinding mill building.	As depicted in Figure 2 in Schedule 1.
7.	Off-spec bins	1. Two fully enclosed silos, each with a maximum capacity of 400m^3. 2. Each of the silos must be fitted with a dust collector.	
8.	Product transfer system.	1. The product transfer systems must be fully enclosed. 2. The product transfer system must connect the grinding mill to the finished product silos. 3. An product transfer system must connect the finished product silos to the existing bulk product silos.	
9.	Finished product silos	1. Up to eight fully enclosed silo's, each with a storage capacity of no more than 3,200 m^3, must be installed. 2. The silos must be installed with over pressure / vacuum pressure safety release valves with outlets directed onto the silo roof. 3. A high-level warning indicator and linked to an interlock must be installed at each silo. 4. Each of the silos must be fitted with a dust collector.	
10.	Finished product dispatch	1. The finished product dispatch system must comprise up to three adjustable loading socks per weighbridge at each finished product silo bank. 2. The loading spouts will have a maximum capacity of 250 tph each. 3. The finished product dispatch system must be capable of discharging from any silo within a bank to either spout into a truck. 4. Dust collectors must be installed on the finished product dispatch system.	
11.	Truck loading bays	1. The truck loading bays must be constructed under the finished product silo's. 2. The truck loading bays must be enclosed.	
12.	Truck wash down area :	1. Must comprise a bunded compound constructed out of concrete. 2. Must be designed and constructed to prevent the ingress of storm water runoff from the premises. 3. The truck wash area must be constructed such that it features a 1:100 fall to the sedimentation sumps. ~~4.~~ Must contain primary and secondary sedimentation sumps constructed from concrete, with a minimum total combined capacity of 48,000 litres. ~~5.~~ The bunded compound and sedimentation sumps must be treated with either epoxy or water-stop. 6. An oil water separator and universal pollutant trap connected in series and capable of treating wash water to meet the criteria contained in Table 7, as a minimum, must be installed. 7. The oily water separator must include a recovered hydrocarbon storage vessel with a capacity of at least 1 cubic metre. **8.** Must include a recycled water storage tank with a minimum capacity of 8,000 litres which is connected to the oily water separator.	
13.	Storm water disposal basins 1, 6, 7 and 8.	1. Must be sized as a minimum to accommodate a storm having an average recurrence interval of 20 years over 24 hours.	
14.	Site drainage	1. The premises must be designed and constructed to direct non-contaminated surface water to diversion bunds / catch drains or directly into the storm water disposal basins. 2. The aggregate and additive storage area must be contoured to provide a basin to retain sediment within the storage area. The basin must be sized to capture the first 30 minutes of a 20 year 24-hour storm event. 3. The aggregate and additive storage area must be surrounded by an earthen swale to divert uncontaminated storm water into storm water disposal basin 7. 4. The road linking the enclosed silo loading area to the truck wash area must be designed to direct storm water into a first flush concrete sediment trap. 5. A first flush concrete sediment trap must be installed up gradient of storm water disposal basin 1 and basin 8. 6. The first flush concrete sediment traps must be sized to collect the first 30 minutes of a 20-year, 24-hour storm event.	

Infrastructure		Design and construction requirements	Infrastructure location
15.	Dust collectors (except those connected to discharge points N29, and N30)	1. All dust collectors must be fitted with bag filters, which must not exceed an air to cloth ratio of $2m^3/min/m^2$. 2. The dust collectors must meet an emissions output less than or equal to $10mg/m^3$. 3. Broken bag detectors must be fitted to all dust collector units and must notify the plant control system in the event of a dust collector malfunction through alarms. 4. All dust collectors must discharge into a hopper, vessel, enclosed conveyor, the next stage of a transport process, a building, a transfer tower, or to an outlet which is within one metre of the ground.	As depicted in Figure 2 in Schedule 1.
16.	Bucket elevators	1. All bucket elevators must be fully enclosed and connected to dust collectors.	
17.	Grinding aid storage	1. Four self-bunded grinding aid tanks, each with a maximum capacity of 10,000 litres, are to be installed within the grinding mill area. 2. A bunded, contoured and sealed concrete loading bay will be situated adjacent the grinding aid tanks.	

Schedule 3: Premises boundary

The premises boundary is defined by the coordinates in Table 12.

Table 12: Premises boundary coordinates

Node	Easting	Northing
1	384161.69	6435354.3
2	384162.09	6435331.2
3	383965	6435330
4	383965	6435306
5	384162.14	6435314.23
6	384677	6435314
7	384678.41	6435684.43
8	384614.55	6435683.68
9	384583.61	6435673.12
10	384447.24	6435671.63
11	384447.24	6435662.01
12	384398.01	6435659.98
13	384277.07	6435642.86
14	384208.99	6435614.66
15	384177.55	6435615.54
16	384157.31	6435598.4