



## Application for Licence Amendment

### Part V Division 3 of the *Environmental Protection Act 1986*

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<b>Licence Number</b>	L8121/2003/2
<b>Licence Holder</b>	BGC (Australia) Pty Ltd
<b>ACN</b>	005 736 005
<b>File Number</b>	2012/004657-1
<b>Premises</b>	BGC Naval Base Cement Mill 24 Beard Street  NAVAL BASE WA 6165  Legal description  Lot 32 on Diagram 44929, Lot 33 on Diagram 55120, Lot 144 on Plan 3638 and Lot 145 on Plan 3638
<b>Date of Report</b>	28/07/2021
<b>Decision</b>	Revised licence granted

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

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## 1. Decision summary

Licence L8121 is held by BGC (Australia) Pty Ltd (Licence Holder) for BCG Cement, located at Beard Street, Naval Base WA (the Premises).

This report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. The Delegated Officer has assessed the environmental risk of the amendment, as summarised in section 2.2 of this report and has not re-assessed the environmental risk of the existing infrastructure and activities within the Premises. As a result of this assessment, revised licence L8121/2003/2 has been granted.

The revised licence supersedes the existing licence previously granted in relation to the Premises.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this report, the delegated officer has considered and given due regard to the department's regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Application summary

The Licence Holder applied for an amendment to Licence L8121/2003/2 on 24 April 2021. The following amendments are being sought:

- construction and operation of a bulk bagging plant with four 100 tonne silos and four 20 tonne silos, each with a bag house filter with exhaust inside the shed; and
- construction and operation of three new silos and a divider wall in the clinker shed to accommodate white cement processing.

#### 2.2.1 Bulk Bagging Plant

The bulk bagging plant will be located in the workshop wing, which runs North-South on the left side of the Premises. The plant will be used to blend special mixes that are loaded into bulk bags (approx. 1.5 tonnes).

The plant will have four lines and consists of four 100 tonne silos (hydrated lime, slag, white cement and GP cement). The GP and slag are blown to the silo pneumatically from the existing 10,000 tonne silos using dense phase blowers, while the hydrated lime and white cement will be blown to the silo from a tanker. Once the white cement phase is complete, the white cement will also be pneumatically blown directly from one of the new 750 tonne white cement silos.

From these silos, the material is fed via weigh screws into one of three mixers. One mixer has a capacity of 50 tonnes per hour and two mixers have a 30 tonnes per hour capacity.

One 30 t/h mixer is dedicated to white cement products, while the other two can produce various blends of grey cement, slag and hydrated lime. These mixers feed into one of four 20 tonne silos that feed four flasks which are used to fill 1.5 tonne bulk bags.

### 2.2.2 White Cement

The Licence Holder requests to add transport and storage equipment at Naval Base to enable white cement to be produced at Naval Base.

The process is as follows:

- mill 4 will be used for slag, general purpose cement (GP) and white cement;
- white clinker will be received by road via clinker receiving grids;
- then the white clinker is transported to shed 2 which will be divided with a dividing barrier/wall to allow for the storage of both slag and white cement;
- white clinker is then transported via CV22 to mill 4;
- milled and transferred via a new bucket elevator into the new 100 tonne changeover silo (a refurbished existing silo) until the required specification is met. The silo will be installed alongside silo 1. The material accumulated in the changeover silo (estimated approx. 50 tonne) will be dribble fed back into the white cement product elevator, pending approval by quality control;
- once specification is met, the white cement will be transferred (using the existing mill 4 product elevator) to two new 750 tonne white cement silos that will be installed at the back of silo 2 (similar to the HE silos behind silo 1), straddling the weigh bridge. An additional transport system (new diverter valves and an airslide) will be required to divert the white cement to the 750 tonne silos. These two 750 tonne silos will be serviced by one bag house filter at the top.

### 2.2.3 Category 43 assessed design capacity

Through the validation of the application, the Delegated Officer identified that the assessed production/design capacity on the licence erroneously only accounted for the assessed production or design capacity of Mill 4 constructed under Works Approval W5249/2012/1, rather than the holistic production or design capacity for the premises. This will be corrected as part of any licence amendments to the actual assessed production or design capacity of 1,401,600 tonnes per annum and is considered an administrative correction that doesn't require detailed risk assessment.

## 3. Risk assessment

The Delegated Officer assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

### 3.1 Source-pathways and receptors

#### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during the construction and operation of the proposed changes to the Premises which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dust	Bulk bagging plant	Air/windborne pathway	All equipment to be placed inside the shed with no discharge points to atmosphere.
Dust	White cement silos	Air/windborne pathway	Constructed within the Premises, with minimal groundwork needed. Not much dust generated from this with water cart available if dust lift off occurs. Baghouse filters with broken bag detection system on the silos.
Noise	Bulk bagging plant and white cement silos	Air/windborne pathway	Construction mainly to occur during daytime. Noise levels for construction not expected to be much higher than generic noise of the operation.  Bulk bagging plant is located within a shed, which reduces noise emissions. The white cement silos have some equipment that produces noise but in general this low enough to ensure no unreasonable noise outside the boundary of the Premises.

### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DER 2016)).

**Table 2: Sensitive human and environmental receptors and distance from the Premises**

Human receptors	Distance from the Premises
Residents on Lussy Road, Hope Valley	± 2.3 km to the north east
Residents on Abercrombie Road, Postans	± 2.9 km to the south east
Workers at other industrial premises	Immediately adjacent
Environmental receptors	Distance from the Premises
Cockburn Sound	± 500 m to the west

The Delegated Officer notes that the proposed changes to the Premises are unlikely to negatively impact on residents or Cockburn Sound as there is no realistic emission or pathway for this to occur. As such the Delegated Officer will only assess the potential negative impacts on neighbouring industries.

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L8121/2003/2 will include conditions that authorises the construction and operation of the new bulk bagging plant and the white cement silos.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 3. Risk assessment of potential emissions and discharges from the Premises as a result of the proposed construction and operation of the bulk bagging plant and the white cement silos.**

Risk Event					Risk rating <sup>1</sup>	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
<b>Construction</b>								
Construction of the bulk bagging plant and white cement silos	Dust	Air/windborne pathway causing impacts to health and amenity	Neighboring industries	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	N	Conditions 1 and <b><u>7-8</u></b>	Any waste gases from the baghouse filters on the silos will be required to discharge to an outlet which is within one metre of the ground, which is the requirement in Regulation 7 of the <i>Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998</i> .
	Noise			Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	-	N/A
<b>Operation</b>								
Operation of the bulk bagging plant and white cement silos	Dust	Air/windborne pathway causing impacts to health and amenity	Neighboring industries	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1	A regulatory control will be included so that the baghouse filters on the silos discharge to an outlet within one metre of the ground. On this basis, the Delegated Officer determined no further operation controls were required beyond licence holder controls.
	Noise			Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	-	N/A

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

## 4. Consultation

Table 4 provides a summary of the consultation undertaken by the Delegated Officer.

**Table 4: Consultation**

Consultation method	Comments received	Delegated Officer's response
The Delegated Officer invited the City of Kwinana for comment on 13 May 2021	No comments received	N/A
Licence Holder was provided with draft amendment on (06/07/21)	Licence Holder commented on the draft on 14 July 2021. The comments related to the infrastructure table 1, to remove HE from Blender, remove the four loading spouts as emission points in Table 2 and they noted that references to A and B from the table were not on the map in Schedule 1.	The Delegated Officer accepted the corrections of the infrastructure and added A and B to Schedule 1.

## 5. Decision

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Authorisation will be provided in the Revised Licence for the construction of the bulk bagging plant and the white cement silos. Upon completion of construction and submission of and Environmental Compliance Report to DWER, the licence allows the licence holder to operate the new infrastructure a condition authorising emissions to air.

As noted under paragraph 2.2.3 the Delegated Officer corrected the erroneous assessed production or design capacity to 1,401,600 tonnes per annum.

The Delegated Officer notes that the *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998* applies to the Premises. As such concrete batching operations require to be compliant with these regulations (includes storage of cement products in silos) and the Delegated Officer has therefore included the requirement for the baghouse filters on the silos to have an exhaust within 1 meter of the ground, as per Regulation 7 of these regulations.

The Delegated Officer noted that the expiry date of the Licence is on 30 November 2022. As the Licence previously has been converted to the new template and the Premises is not deemed a high priority premises for a full review, the Delegated Officer has decided to extend the duration of the Licence to 30 November 2032.

### 5.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.



**Table 5: Summary of licence amendments**

Condition no.	Proposed amendments
Licence front page: Assessed design capacity	Refer to section 2.2.3, assessed production or design capacity corrected to 1,401,600 tonnes per annum, based upon 24hr per day production.
Licence front page: Prescribed premises category	Within the Premises the licence holder also operates a concrete batching plant. This has now been reflected in the list of categories for which this licence has been granted. The existing registration (R1928) for this concrete batching plant has been incorporated in this licence as per the Department's Guideline: Industry Regulation Guide to Licensing and as such the Premises is no longer deemed a registered premises and will be removed from the Department's register. The Licence Holder provided per email of 7 April 2021 the maximum design capacity of the concrete batching facility.
1	<p>The additional discharge points have been added to Table 1 in condition 1. Also some minor corrections regarding the emission points have been included and an updated figure to reflect these changes.</p> <p>As the concrete batching plant within the Premises uses water to rinse off trucks and this water is then fed to the sedimentation traps after which is discharged into a channel type soak well (run from the discharge point to the west then north along the boundary of the Premises) the Delegated Officer has included this wastewater discharge point to the Authorised discharge points. No additional conditions are required for this as it is subject to the <i>Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998</i>.</p>
6 - 9	<p>Consistent with the risk assessment outcome, the licence includes design and construction specifications for the bulk bagging plant and white cement silos. Requirements reflect licence holder controls with the addition of a regulatory control. for the silos to have a discharge point to an outlet that is within 1m of the ground. This requirement applies to all new works as the previous works were not yet completed.</p> <p>The licence holder will be required to submit an Environmental Compliance Report to DWER at the completion of works and prior to operating the infrastructure.</p>

## References

1. Department of Environment Regulation (DER) 2016, *Guideline: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guideline: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.