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Memorandum

DR 194 of 2021 – Lot 60 (394) Robertson Road, Cardup: WA Premix Concrete Batching Plant Dust Management Plan Review

Shire of Serpentine-Jarrahdale

To:	Ashwin Nair	Manager Statutory Planning & Compliance – Shire of Serpentine-Jarrahdale
CC:		
From:	Andrew Mack	Talis Consultants
Date:	17 November 2021	

The Shire of Serpentine-Jarrahdale (the Shire) has received a development application for a mobile concrete batching plant (the proposal) to be located at Lot 60, 394 Robertson Road in Cardup (the site).

The proposal was originally considered by the Shire at a Council Meeting in July 2021 and was deferred at this time. The proposal was then reconsidered through the Council's August meeting at which the proposal was approved subject to a number of conditions.

The proposal involves the construction and operation of a concrete batching facility at the site. The site itself is part of a wider property comprising three land-uses including a treated pine supplier in the northern portion of the site (Permapole), a Bush Forever site to the south (including remnant vegetation) and the central use which is utilised by Permacast which is a concrete distribution business. The proposal will be located on the eastern portion of this central area immediately to the east of the existing Permacast shed.

The proposal's supporting information included a Dust Management Plan (DMP) prepared by Accendo Australia Pty Ltd (Accendo).

The proponent for the facility has appealed a number of the conditions imposed by the Shire on this proposal to the State Administrative Tribunal (SAT), specifically the following:

- 1c. The operator shall undertake continuous air quality and dust monitoring between the period of 30 September 2021 until 31 May 2023. Live daily reporting of this monitoring is to be made publicly available through the operator's website, which is to also include a 24 / 7 /

365 mobile contact number for residents to call should adverse amenity impacts be experienced by any resident surrounding the development.

1d. By 30 June 2023, the operator shall submit the results of the air quality and dust monitoring undertaken in accordance with Condition b, together with an independent expert review of such results, for Council's consideration. The independent expert reviewer shall be chosen by the Shire of Serpentine Jarrahdale, and will be engaged by the Shire at the cost of the operator. The independent expert review is to specifically assess, based on the monitoring results, whether the operation is or is not having an adverse amenity impact on residents to the west of the subject land.

1e. Production shall not exceed 150,000 tonnes of concrete per annum, unless otherwise approved by the Shire of Serpentine Jarrahdale.

The matter has progressed through mediation in the State Administrative Tribunal and the proponent has engaged a third-party (Environmental Alliances (EA)) to undertake an independent review of the DMP as part of this process.

The Shire has requested that Talis Consultants Pty Ltd (Talis) undertake a review of the revised DMP "advising of its robustness or shortfalls with recommendations in addressing possible amenity impacts resulting from the development".

This memorandum presents the findings of our review and as part of this process, a range of documents/data were reviewed, including the following:

- Accendo Australia - Dust Management Plan, Lot 60 Robertson Road, Cardup (September 2021);
- Department of Water and Environmental Regulation – Draft Guideline Dust Emissions (July 2021);
- Environmental Alliances - Without Prejudice, For the Purposes of Mediation Only – DR 194 of 2021 – Lot 60 (No. 394) Robertson Road, Cardup | WA Premix Mobile Batching Plant (26/10/2021);
- Environmental Protection Authority - Separation Distances between Industrial and Sensitive Land Uses, Guidance Statement No. 3 (June 2005);
- Government of Western Australia - *Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998*;
- Nearmaps locality mapping - <https://www.nearmap.com/au/en>; and
- Shire of Serpentine-Jarrahdale - Ordinary Council Meeting Confirmed Minutes, Monday 16 August 2021;



Overview

Based on a review of the latest aerial imagery, the site does not have a hardstand of any description and is primarily compacted earth (or similar). Whilst it is recognised that the proposal itself will incorporate a concrete hardstand and is intended to provide concrete for the broader site (excluding the Bush Forever site), the current site has the potential to generate particulate emissions from its surface. These emissions will obviously be exacerbated during windier conditions and/or through vehicular movements across the site.

We also note that much of the surrounding locality has been cleared of vegetation, consistent with the rural/agricultural nature of the area and that this may result in the generation of particulate emissions during elevated wind conditions and/or when it is disturbed.

The road infrastructure surrounding the site is rural in nature and is therefore prone to potential dust generation through its use and we note that the railway corridor which traverses in a north-south direction immediately to the west of Robertson Road has an associated easement either side of it which has been cleared of vegetation and also has the potential to generate particulate emissions from its surface. These emissions will also be exacerbated during windier conditions and/or through vehicular movements.

The site is located just over 500m to the nearest sensitive receptors, which are houses located to the west and across Robertson Road, the rail corridor (and associated easements) and Soldiers Road. The proposal involves the production of approximately 146,640 tonnes of concrete per annum using a wet-mix process. According to the Council's minutes, the site would operate between 5am and 2pm, with deliveries of materials until 6pm each day. These materials (sands and aggregates) are stored in 3-sided storage bins and are loaded into a hopper which then transports these materials by conveyor (assumed to be covered) to a storage area prior to being combined with the base concrete material in the plant itself.

The batching plant is fitted with reverse pulse air filters across both silos with the filtered air discharged via vents located at a height of less than 1m from ground level.

Based on the work completed to support the proposal as well as our knowledge of the locality, the prevailing winds will be easterly in the morning and south-westerly in the afternoons. The area will also be subject to katabatic or "foothills" winds which can occur from early evening to mid-morning, predominantly during summer months and result from particular meteorological conditions and the presence of the scarp. These winds are typically easterly in nature and not generally considered through data sourced from the Jandakot Airport.

As noted previously, the proposal is subject to a number of conditions within the planning approval issued by the Shire as well as requirements issued through Part V of the *Environmental Protection Act 1986* and the requirements of the *Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998* and a DMP was provided to support the proposal.

Site Assessment

Based on a review of the locality in question, it is Talis' opinion that there is the potential for dust generation to occur from a variety of land-uses in close vicinity to the nearest receptors to the proposal (the residents just over 500m to the west of the site). These land-uses include the existing Permacast facility and the Permapole operations immediately to the north (which do not appear to

have a concrete hardstand and are likely to generate some level of dust emission due to vehicular movements or during high wind conditions).

Similarly, the surrounding land-uses include areas that have been cleared for agricultural purposes and without vegetation to stabilise their surfaces, there is again the potential for dust generation to occur from these areas.

The transport network located immediately to the west of the site (including roads and rail corridor) also has the potential to generate dust (given the nature of the roads themselves and the clearing associated with the rail corridor).

In short, the broader environment is not one without the potential to generate dust and it is our view that the proposal and its siting (immediately adjacent to the Permacast shed) will not present an unacceptable additional impact to the levels of dust already likely to be present in the environment as long as appropriate management measures are implemented.

We draw this conclusion notwithstanding concerns in relation to the potential for the downslope/scarp/katabatic winds to be present in the area. Whilst these will no doubt exacerbate dust generation in the locality, we are of the view that the proposal is unlikely to present an unacceptable risk in this regard and that dust generation from the surrounding environment/activities is more likely to present as a concern.

DMP Review

Given the above, a review of the DMP needs to be made in the context of the proposal, rather than the broader environment. The DMP is designed to address potential dust generation from the concrete batching plant and, whilst it is lacking in detail in some respect, in our view is appropriate and commensurate to the nature of the proposed activities onsite despite the fact that it does not reference the downslope/scarp/katabatic winds present in the area. Whilst this might be considered to be an oversight, we suggest that this does not affect the conclusions drawn within the report or the measures that are proposed to be implemented.

Whilst we note that the measures proposed within the DMP are typical of an operation of this nature and appear appropriate (particularly given other statutory requirements under Part V of the EP Act and through the Concrete Batching Regulations), we note that there are some aspects within the DMP which could potentially be tightened to further minimise the risk of offsite impact.

There is considerable reliance on the Site Manager across all responsibilities identified in the DMP. For example, the Site Manager is responsible for “Visual monitoring of dust” throughout the day on a continuous basis and that visible dust crossing the premises boundary will be used as the monitoring criteria for compliance. This presents concerns in terms of the ability for the operations to comply, particularly when the Site Manager has a range of other tasks they are responsible for. There are also concerns in relation to the subjectivity of such measures (how is the criteria assessed/measured when the Site Manager may not be present or where the dust may not be resultant from the prescribed activities?).

We also note that there are requirements to utilise sprinklers onsite if visible dust is observed. We assume these sprinklers have been installed in appropriate locations to ensure that they can immediately be utilised in such circumstances. We also note again that the Site Manager has responsibility in this regard, but it is not clear how this will be assessed, particularly when there is the potential for visible dust to be generated from offsite activities.



The DMP notes that “Moisture levels will be checked prior to unloading materials” and that additional water will be applied where necessary to the aggregates/sand that is delivered to site. There does not appear to be a mechanism for checking this or what the criteria for assessment is (noting again that sprinklers will be utilised where visible dust is observed).

Further clarity/definition around these matters would provide greater certainty in relation to the DMP’s intended outcomes.

Further suggestions for the DMP include:

- additional landscaping, particularly on the boundary of the property;
- the use of a street sweeper at the premises entrance/exit on to Robertson Road on a regular basis;
- sealing of the ingress/egress for the site; and
- the inclusion of roofs on the storage bins (access permitting).

We do not suggest that these are required at this time, but such measures would further minimise the potential for dust generation to occur and could be implemented where potential impacts or amenity concerns are identified.

Shire Approval

A review of the Shire’s approval suggests that the relevant conditions of concern which are before the SAT suggest that, in our view, they are overly onerous and potentially fail to address other considerations in the locality.

The conditions require continuous air quality and dust monitoring for over 18 months with live results to be published online and the publications of these results within a report at the end of the reporting timeframe. We suggest that these requirements are unusual for an operation of this nature, particularly given the locality (as noted above, it is likely to be a dusty environment anyway) and will potentially lead to a number of concerns/issues raised in terms of potential environmental impacts that will be unlikely to have anything to do with the concrete batching activities.

We note that the DWER’s draft guidelines for dust emissions have recently been released. These provide details around assessing applications with fugitive dust emissions and note that they have developed a screening analysis to assist applicants to identify low-level dust emissions. Talis has reviewed the criteria required for this screening analysis and suggests that there is no trigger for a detailed analysis under these guidelines.

A far better test of impact would be through visual observation of dust and complaints management for the locality. We question whether there is a history of complaints in the region. If there is, then clearly there is already dust within the environment and the proponent should be managing their activities with this in mind. If there are no complaints, then any complaints received after the proposal is operating are likely to be attributed to their activities.

We note that in the event that complaints are received or when dust generation occurs, the onus will be on the proponent to investigate the source of this dust and adjust their activities accordingly. This may involve some level of monitoring (dust monitoring or potentially visual monitoring using surveillance cameras or similar). An active community engagement and complaints process will be critical in this regard.



Despite the above, we remain of the view that the requirements within the Shire's approval which have been appealed are not appropriate for a facility of this nature (aside from the requirement for a contact number to be available for any complaints in relation to adverse amenity impacts). A combination of proactive onsite management and rapid reactive measures in response to complaints are likely to provide a better outcome for both the proponent and the community.

Finally, in relation to the Shire's restriction on throughput (150,000 tonnes per annum), Talis can see no reason why such a restriction should be imposed on the basis of environmental performance. As we note above, the proposal and its siting will not present an unacceptable additional impact to the levels of dust already likely to be present in the environment as long as appropriate management measures are implemented. We suggest that an increase in throughput is unlikely to present an increase in risk profile that negates this view as long as the measures that have been proposed (including those identified within this document) and other statutory requirements are adhered to. As a Prescribed Activity, we note that issues of throughput are typically handled through Part V of the *Environmental Protection Act 1986* and that this would be an appropriate statutory framework to impose any limits.

Summary

In our view, Talis suggests that the DMP is appropriate for a facility of this nature, particularly given its siting and distance from the nearest receptors. We note that there are some points of clarity that could be addressed within the document and that there are further measures that could be implemented if dust generation from the site became a concern.

The approach also aligns with the DWER's draft guidelines for dust emissions and would be unlikely to trigger a 'detailed analysis' of the proposal's emissions.

We also suggest that the locality itself is likely to present more of a risk of dust generation and that it would be inappropriate for the Shire to require overly onerous measures of this particular proposal in terms of monitoring when the proposed activities are unlikely to be a contributing source of dust emissions.

We trust that the above aligns with your requirements.

Should you require anything further, please do not hesitate to get in touch with the undersigned.

Yours sincerely

Andrew Mack
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