

MT. SHAMROCK QUARRY
ENVIRONMENT REVIEW COMMITTEE
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Meeting Summary

26th August 2020
(4.00pm - 5.30pm)

Via Zoom

Committee Members

Present:

Matt Dodds	Holcim Australia
Nathan Thomas	
Don Petty	Local Community Representatives
Rosemary Buczak	
Joy Carberry	
Barry Strong	Earth Resources Regulation
Melanie Wright	Shire of Cardinia
Cr Jeff Springfield	
Stewart Burton	Holcim Australia

Apologies:

Chairperson:

Lisa Barrant (Chairperson) Possibilities Pty Ltd

Guests

David Western Earth Resources Regulation
Terry Flynn Southern Rural Water
Bryan Chadwick AECOM
Aimee Cullum AECOM
Neville Bassett Community

Welcome and apologies

Lisa welcomed everyone to the meeting and conveyed apologies from Stewart Burton. Barry Strong was welcomed as the new representative from ERR and quick introductions were made as there were a number of special guests in attendance. AECOM representatives Bryan and Aimee were thanked for coming along to assist with item relating to Groundwater and Springs (Action 50.2) Likewise, David and Terry were also thanked for supporting the discussions of the Committee from a regulatory perspective.

Update on actions agreed at previous meetings

Person
Responsible

Action 50.2 Groundwater and Springs

Following a comprehensive discussion in February 2020 (attended by technical specialists from the ERR and SRW), the following actions were agreed:

1. Holcim to discuss with AECOM some more in depth review/analysis of existing and additional information such as quarry depth, sequencing and activity; for example; extraction, overburden placement, rehabilitation/revegetation, etc. and consideration of other potential explanations (e.g. quarry operations, groundwater catchment changes due to land use changes including a review of other local springs where possible to ascertain comparative flow changes, etc.). This will build confidence in the conclusions of the report.
2. Holcim to consider flow rate monitoring for springs as a means of providing a more comprehensive picture of the spring functioning.
3. Holcim to consider what 'good faith' actions might be taken (irrespective of further analysis) to provide increased water supply at spring sites.
4. On the request of ERC members ERR are available to come and look at any relevant spring sites on private land in the next few weeks to better understand the context and any concerns.

At the May 2020 meeting, Nathan and Matt reported that internal discussions had commenced on all three of the Holcim actions but that due to the significant challenges with site access etc. (brought about by COVID-19) they were not yet ready to bring them to the Committee and therefore this item was held over. It was also agreed that AECOM attend the August meeting to help the discussion.

At this meeting, Bryan from AECOM shared a presentation for responding to action items 1 and 2 above and the intention was to also respond to the specific questions put forward, in this case by community representatives, prior to the meeting. Unfortunately, we ran out of time to look at the specific community questions however the presentation has been attached as part of this meeting summary and it is hoped this will assist.

It is important to acknowledge that 'online' is a difficult forum for sharing detailed technical and visual data with a large group and that not all questions or comments were able to be heard in the time available. Everyone's patience and good will was appreciated in very difficult circumstances.

In summary, the presentation shared broad quarry event information and groundwater monitoring graphs specifically relating to MB01 and MB06 to assist explain the connection between rainfall (shown using AMRR) and groundwater levels. It was put forward that groundwater levels around the pit strongly mirror the rainfall trends and that there was no evidence that the quarry activities are influencing these groundwater levels. Bryan explained that the tightness or impermeability of the basalt formation is not allowing groundwater inflows and the recharge is instead coming from the Werribee formation (and therefore) from rainwater recharge. Shorter term changes showing in other bores inside the pit may have been influenced by the pit lake. It was noted that the quarrying operations themselves do not intercept with the Werribee formation.

There were a number of questions / points that were raised during the meeting and these have been summarised below in no particular order.

- There was debate around AMRR data, its calculation and its use in linking changing groundwater levels to being just linked to rainfall.
- Questions were raised about how the conceptual model used for understanding and explaining the behaviour of the groundwater system at the site (developed some years ago) has been re-informed by the additional information collected and the changing quarry activities since 2006 and the events shown in the pictorial slide (slide 8?). For example, there may be local characteristics that need to be better understood, for example regional v radial flow?

Matt Dodd

- A lack of meaningful ‘reference’ groundwater measurements from outside the site makes it difficult to have comparison points and it may never be possible to fully understand the full dynamics at play. Would it be possible to find a bore in the old volcanics elsewhere that would make a useful comparison? AECOM have not been able to identify one that is suitable. Or perhaps springs in local areas not near the quarry? It was suggested that perhaps bores in the south and the north west may assist.
- Questions were raised about the springs that were not flowing in spite of the recent heavy rain.
- Regarding the expected future functioning of the springs: It was discussed that if the conclusions of the AECOM analysis are correct, in that the groundwater is changing with rainfall recharge and not caused by the quarry operations, then it should follow that the current very wet conditions should see higher groundwater levels and discharge from the springs. Bryan noted that the flow from the springs would also depend upon flow through the colluvium layer.
- In relation to the springs, it was explained by AECOM that the lower groundwater levels will have an impact the flow of the springs however not all the water discharged as groundwater is shown directly through the springs themselves and that it was a better and more accurate approach to measure the groundwater level via the monitoring bores rather than measure spring flows which was difficult or not possible to do.
- There are still questions in the ‘pre-questions’ that need to be looked at. (See note above).

It is clear that this is a complex topic and not easy to discuss in a large group environment over zoom. Lisa will work with all the parties offline prior to the next meeting to identify steps for assisting the Committee work through the key issues.

Environment Management Quarterly Report

This report was carried over to the November meeting. In the meanwhile, if anyone has any particular questions, Matt encourages people to call him directly. Matt noted that some positive inroads had been made into achieving the GHNG target with moving to 20% greenpower.

Meeting Dates

The remaining meeting for 2020 is:

25th November Site tour at 2.30 pm (if permitted) , followed by meeting at site office at 4pm

Items for consideration at next revision of EMP

Understorey Plantings

Consider multi species plantings for understorey areas where original revegetation / screening plantings only included a single species of tree. This should be done as soon as practicable after trees thin out to allow for successful planting.

Quarterly reporting of LRMP activities and outcomes

Should the LRMP report be quarterly, six monthly or annual?