

MT. SHAMROCK QUARRY  
**ENVIRONMENT REVIEW COMMITTEE**  
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## Meeting Summary

25<sup>th</sup> May 2022 (4.00 – 5.40pm)

### Committee Members

#### Present:

Nathan Thomas Leigh Elliott	Holcim Australia
Sue Robertson (for Joy Carberry) Don Petty Neville Bassett	Local Community Representatives
Dean Haeusler	Cardinia Shire Council

#### Apologies:

Joy Carberry	Local Community Representative
Stewart Burton	Holcim Australia
Barry Strong	Earth Resources Regulation
Cr. Brett Owen	Cardinia Shire Council

#### Chairperson:

Lisa Barrant	Possibilities Pty Ltd
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## Welcome

Lisa welcomed everyone to the meeting and noted apologies conveyed from Joy Carberry, Stewart Burton, Barry Strong and Councillor Brett Owen.

Holcim were thanked for arranging the site tour which was very informative. On this occasion, the Committee used the site four wheel drive vehicles the group and were able to drive around the entire perimeter of the pit and see the operations and rehabilitation areas from multiple perspectives. The Committee spent time at the look-out platform and walked around some of the Phase A area, noting the ongoing in-fill planting that is happening there.

### Update on actions agreed at previous meetings

**Person  
Responsible**

#### 51.3 EMP 5-year review

*The EMP is being reviewed and updated, as is required by the EMP itself. (Every 5 years).*

Dean was able to report that all referral authorities have now responded and that he would now be able to take the final EMP to Council for endorsement.

As noted previously, the substantive changes proposed within the revised draft are already being implemented by Holcim (alongside existing requirements until finalised) and many other proposed amendments are administrative. For reference, the following alterations to the EMP are proposed:

- **Simplifying the report**

Making the report simpler and more useable for ongoing management by separating out the 'once – off' and completed activities so that that are still able to be viewed

Leigh Elliott



was agreed that a written response from Aecom would be a more straightforward approach.

- As a way of supporting good working relations with all stakeholders, Holcim put forward a suggestion for consideration by the Committee. Holcim has suggested that an independent peer review be undertaken of Aecom's work and this was supported by the Committee. This idea was originally put forward by the EMP auditor and Lisa also suggested this approach could assist build 'technical trust' for the Committee in the data and the interpretations/conclusions being drawn.
- For transparency, Nathan also shared that particular elements of data collection relating to bores and springs had unfortunately, but unintentionally, been incorrect but that this had now been remedied and would be correctly reported moving forward. This included:
  - Incorrect RL level for one bore (which had now been recalibrated)
  - One spring assessment taken at incorrect location
  - Error in the numbering protocol for some of the springs.
- Nathan also outlined that the third recommendation of the report would not be implemented (removing spring locations SP09 and SP10 from the monitoring program).

**Actions:**

Holcim to request written response from Aecom regarding key points from Community's 2020 document as per below.

Holcim to make further enquiries regarding a suitable persons/company to undertake a peer review of the bore / spring monitoring reporting and assessment and that to involve the committee in any briefing scope. Where possible, this brief will be shared with the Committee prior to the next meeting so that the work can be progressed as soon as is practicable.

**Background information:**

At the July 2021 meeting, and after substantial conversation, the Committee agreed to put this item 'on hold' until the same meeting next year when additional data (see below) will be available for review. This additional data, when combined with the current monitoring regime, will provide more insights into changing groundwater levels and spring functioning. The Committee understands that, as a minimum, a full seasonal cycle of data (spring, summer, autumn and winter) are needed for a meaningful discussion and that in fact longer data collection may be necessary.

The following points capture the key discussions from the July 2021 meeting.

- Lisa shared with the Committee correspondence to the ERR on behalf of the ERC (as foreshadowed after the last meeting) and noted that Barry's intention is to respond in writing however he had wanted to talk with the Committee personally prior to doing so.
- The Committee heard in more detail from Matt/Nathan as operator, and Barry as regulator, about the additional monitoring that Holcim has in place (since October 2020) and how this monitoring will add further information to deepen our understanding on the nature of the groundwater flows in and from the pit. The additional monitoring is designed to capture the actual level of the water in the two pit reserves and also the inflows (rain) and outflows (water pumped out). Although this had been explained at the last meeting, the nuanced difference in the nature of the data was perhaps missed in the meeting summary as it is not just more data, it is different data.
- It was recognised that even with this additional monitoring data, it still may not be possible to resolve the question of what effect, if any, the quarry operations, (since the extension permit was granted) are having on groundwater levels and spring functioning. Barry also noted that introducing trigger levels (mentioned in Lisa's

correspondence above) was not a good idea as there were other reasons why groundwater levels might change, outside of quarry operations.

- The Community asked if it were possible (as a good faith action on behalf of Holcim) that some mechanism be put implemented by which ongoing water supply be assured for Don's property. Dean will look into this from the Council's perspective and respond when the issue is next brought forward however noted that such agreements were usually only possible on land over which there were active permits. The intention of this request would be for it to apply after the conclusion of operations.
- It was noted that the key questions raised by the Community had not, as yet, been responded to by Aecom. Rather than address this now, and given the additional monitoring in place, Holcim will ask Aecom to incorporate a response as part of their next annual report, due in early 2022.

### **Other background**

At the February 2021 meeting, Nathan and Matt shared some of the actions that Holcim had initiated since November 2020 including additional (inhouse) monitoring of groundwater levels (which will now be embedded in the revised EMP); installing a device to capture the RL of the pit as an additional data point, and also, making the spring water at one of the spring sites more useable by installing a pipe and a storage drum for collection.

There was discussion about the overall complexities of groundwater monitoring and the current questions from the community regarding the groundwater monitoring reports and assessments. The following dot points capture the key sentiments and actions expressed at this February meeting:

- The community members are of the view that AECOM's conclusion that there is no effect on groundwater at all due to the operations of the quarry is difficult to conceive as being true and are affronted, on principle, that this is still being held as a position.  
Lisa noted that in relation to this item, a shared view and perspective may not be possible across the whole ERC. It is very important to formally note the deep concern of the community regarding this matter. It is also important to find a way to work through the issue so that the Committee can continue its good work and also dedicate time to work on the other important focus areas of the EMP.
- There is a need for a 'forward looking' view as to what real actions can be done, in good faith and a practical way, to respond to the situation. In relation to this, the helpful actions already mentioned by Holcim were noted. In addition, community members were asked to consider ideas that could be brought forward for discussion at the next meeting.
- The community would appreciate hearing a response to the 3 key points put forward (with agenda) and Holcim will action this. Broader discussion on this noted that the context for these questions/responses needs to be related to the quarry extension period commencing in 2007 which is when the EMP and ERC came into effect. It was also noted that even when these particular questions are responded to, the Committee might find itself in the same situation next year when reviewing the annual report and there could be a constant to and fro.

More broadly, and in response to the final dot point, Lisa also brought forward an idea to use the current EMP review process to request that the Cardinia Shire Council and the ERR as the regulatory authorities and experts in these matters to provide greater clarity in relation to the monitoring and reporting regime for groundwater/springs. As chair, Lisa expressed the view that this would be helpful for the effective functioning of the committee. For almost all other EMP requirements, there are clear thresholds for monitoring results as well as specified management actions, whereas there are none noted for groundwater and springs monitoring. The absence of clear advice about the best data to use, what thresholds are significant, and how to interpret meaning has made productive discussion as a committee difficult. There was general support for this approach however it was noted that the authorities had already been asked these questions in previous meetings.

In relation to the current report, there were questions about the delay between increasing levels of groundwater and the flow of the springs (difficult to know) and also an anecdotal comment noted in the report regarding the springs (Nathan/Matt to follow up).

**For reference:**

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 the August meeting, Bryan Chadwick 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 complete presentation was attached as part of the meeting summary and it is hoped that will assist.

It was acknowledged 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 Aecom 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 raised during the meeting and these are 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?
- 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 was 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.

*It was suggested by the Chairperson that this item be postponed for discussion until February 2021 when it is hoped that the committee can meet in person.*

## **Environment Management Quarterly Report**

The January 2022– March 2022 Environmental Management Report (distributed with the agenda) was reviewed by the Committee who commented on the easy to read new layout. There were no non-conformances and no questions raised by the Committee. Holcim will add in the 'consultant recommendations' table to the format for future quarterly reports.

## **Other business**

### **Annual EMP Audit**

The final EMP Audit report was shared with the Committee prior to the meeting. There were no questions as the main recommendations had been dealt with during the March meeting. The only discussion related to the ongoing challenge of reducing greenhouse gas emissions. Holcim is exploring hydrogen powered pumps at another site and will be using the proposed land bridge within the pit to reduce the distance that trucks need to travel to move material within the quarry.

### **Slope inspection Report**

This report was tabled and there were no questions raised.

### **Rehabilitation Report**

This report was shared prior to the meeting and there were no questions raised. The Committee noted Joy's support (in absentia) for the implementation of the recommendations.

## **Actions arising**

## **Person Responsible**

### **62.1 Process for appointment of Independent Chairperson**

*The independent chairperson role is due for review (3 yearly appointment).*

Dean talked through the high-level process that the Council would undertake this year in order to meet the Committees terms of reference for the appointment of the Chairperson role. Prior to the August meeting, the position description and written process will be shared for review and endorsement.

Dean Haeusler

## **Meeting Dates for 2022**

The remaining meeting dates for 2022 are as follows:

24 <sup>th</sup> August 2022	Meeting at Council Offices at 4pm
4 <sup>th</sup> November 2022	Site tour at 2.30 pm (if permitted), followed by meeting at site office at 4pm

## **Items for consideration at next revision of EMP**

*(Note: These items have been written into the draft revised EMP and will be removed once approved)*

### **Understory Plantings**

Consider multi species plantings for understory 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?