

MT. SHAMROCK QUARRY
ENVIRONMENT REVIEW COMMITTEE
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Meeting Summary

26th February 2020
(4.20pm - 5.45pm)

Holcim Office,
Mt Shamrock Quarry
Pakenham

Committee Members

Present:

	Matt Dodds Stewart Burton Nathan Thomas Ben Appleby	Holcim Australia
	Don Petty Rosemary Buczak Neville Bassett	Local Community Representatives
	Gerard Lynch	Earth Resources Regulation
	Emma Brennan	Shire of Cardinia
Guests	David Western	Earth Resources Regulation
	Terry Flynn	Southern Rural Water
Apologies:	Joy Carberry	
	Cr Jeff Springfield	Shire of Cardinia
Chairperson:	Lisa Barrand (Chairperson)	Possibilities Pty Ltd

Welcome and apologies

Lisa welcomed everyone to the meeting and conveyed apologies from Joy Carberry and Councillor Jeff Springfield. Special guests were also welcomed; David Western from Earth Resources Regulation and Terry Flynn from Southern Rural Water.

This meeting's agenda was substantial and given the time needed for discussion regarding the Springs Item 50.2. all other items were deferred for consideration at the May meeting.

Update on actions agreed at previous meetings	Person Responsible
<p>Action 50.2 Groundwater and springs.</p> <p>As part of the EMP requirements, an annual review of groundwater and springs is undertaken each year. During discussion about the results of the 2018/19 summer inspection, there were questions raised about the connection between the operations of the quarry and the changing flows of the springs. The key question of interest related to what the causes for changing flow rates of the springs might be.</p> <p>Since that time, other background reports have been tabled and discussed by the Committee but it was felt that information and support from hydrology experts would be helpful to the Committees discussion.</p> <p>At this meeting, specialists from both the Earth Resources Regulator and Southern Rural Water were in attendance and were able to present useful background information and engage with the Committee around the key questions that the community had put forward as part of the agenda.</p> <p>Many topics were covered in some detail; the key areas have been noted below with a short summary of points made:</p> <ul style="list-style-type: none"> • <i>The role of both the ERR and SRW.</i> The ERR has a compliance role within the boundaries of the agreed work plan. If issues come up outside of this there are assessment teams that provide guidance. David had the opportunity to look briefly at some of the springs immediately prior to the meeting. SRW does not have any licence coverage for the site as there was no water being diverted but does manage the waters in the southern part of Victoria and Terry was involved in the original EES process. Both David and Terry were very happy to attend and provide information and assistance in the discussion. • <i>An overview of how springs actually emerge and are recharged.</i> Terry provided an overview presentation of how springs are created and charged and the impact quarrying might have. The Committee also discussed the levels of the springs relative to sea level and how this related to groundwater levels as measured by the bore systems. The original thinking at the time of the extension being approved was that removing the basalt would actually increase recharge. The Committee talked about the broader geographic area and how this might impact on the local springs. In short, it is very difficult to know whether the springs are charged just by local waters within the quarry area or from further up the valley. The quarry is at the southern end of the aquifer. • <i>Discussions about hydrographic records and possible reasons for inconsistent changes in groundwater levels as shown by bore readings.</i> This discussion took some time and detailed information about some of the springs was presented and reviewed. In summary, the data collected shows varying changes across the 10 monitored springs that, in some instance/s, does not correlate with AMMR trends. It was noted that some bores had dropped by around 6-7 m over the period of monitoring while there had been some significant shorter-term rises of up to 20m a number of years ago. Terry noted that this was very unusual. More recent data suggests a convergence of groundwater levels. There was discussion about the impact of removing the overburden layers that this may in fact increase recharge. With the level of the ground water now being close to the level of the spring discharge RL, there may be less pressure (ground water height is now close to the level of spring discharge) leading to less discharge. • <i>Particular bores and springs that are on the monitoring schedule.</i> A number of particular bore results and springs were discussed, particularly those bores that have been in place for the entire monitoring timeframe. These were discussed against the changing rainfall averages using detailed data reports 	

compiled by the Neville.

- *Potential reasons for changing groundwater levels and the impact this might have on springs.*

David and Terry raised the following potential reasons for changes but noted that it is not a simple task to understand which might be causing the changes. These reasons included; changing climatic conditions, namely reduced rainfall, increased extraction of groundwater (perhaps dewatering onsite but also removals further up the valley with private bores etc) and changes in land use, (for example stripping, placement of overburden, tree planting, damming of surface water flows, etc). It could be useful for AECOM to consider some of these other potential causal factors in their reporting.

- *Springs on quarry property*

There was a discussion about the springs that are on site and what their environmental responsibility was. Holcim reiterated the importance that the company places on its environmental values and that it does not want to see negative impacts on ground water, hence why the company undertakes the monitoring and actions that it does.

In synthesizing the above information to respond more specifically to the community's questions, the following has been noted:

1. "If the quarry extension had not taken place, and given the drought and other recent weather patterns, what would be the likely expected condition of the springs, both on quarry land but particularly in surrounding areas?

This is very difficult to answer as there are numerous impacts that could affect the groundwater levels (and therefore springs) and there are no nearby relevant ground water monitoring locations (known) that could provide useful reference points. The AECOM report concludes that the beneficial uses of the groundwater have not been impacted by the activities of the quarry and there was a view expressed that there is not enough information available to say that this conclusion is either wrong or right. There is an opportunity for further information to be explored and greater analysis of existing and additional, that may assist, but it may not be definitive.

2. If there are adverse impacts on any springs (both in terms of quality and flow) that are attributable to the activities of the quarry, what are the expectations of authorities in terms of the operators responsibility for mitigation and remediation?

There are no specific penalties and there are no licensing arrangement covering the site. Notwithstanding this, and not making any conclusions as to the cause for changes in the spring flows, it was suggested that Holcim could consider possible ways, in good faith, to provide water to the spring locations for the medium / long term.

3. What is the view of authorities regarding the monitoring of flow rates to help understand impact?

Understanding flow rates from the springs could be useful to add to the overall picture as a time series but may not necessary assist with decision making.

Possible actions and ways forward.

The following suggestions were put forward for follow up:

1. Holcim to discuss with AECOM some more in depth review/analysis of existing and additional information such as quarry depth, sequencing and activity, e.g. 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

<p>report.</p> <ol style="list-style-type: none"> 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. 	
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Environment Management Quarterly Report

DEFERRED to May 2020

New business, discussions and actions arising from this meeting	Person Responsible
The Committee briefly talked about requests for support that Holcim had received from a local volunteer group.	

Meeting Dates

The remaining meeting dates for 2020 are:

27 th May	Site tour at 2.30pm, meeting at site office at 4pm
26 th August	Meeting at Council offices at 4pm
25 th November	Site tour at 2.30 pm, meeting at site office at 4pm

Items for consideration at next revision of EMP

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?