

HOLCIM EMP CONSULTANT RECOMMENDATIONS 11/2020

| Document | Consultant | Item # | Nonconformance/Opportunity for improvement | Recommendation description | Comments by Holcim | Complete/Not Complete |
|-----------------------------------|-------------|--------|--|---|---|-----------------------|
| 2020 EMP annual report | ERM | 1 | Opportunity for improvement | Review the base EMP induction document for currency to assure it provides a sound basis for others delivering inductions | In progress | In Progress |
| | | 2 | Opportunity for improvement | Toolbox pre-starts are logged in a Toolbox book - the wording in the EMP needs to be changed in the EMP to reflect this | In draft EMP document | In Progress |
| | | 3 | Opportunity for improvement | Consider changing some or all of the paper monitoring checklists to a more user-friendly system, such as tablet-based lists and or the use of photos to indicate non conformance | some can be changed to electronic format or consolidated to reduce | Complete |
| | | 4 | Opportunity for improvement | Review the dust monitoring trends year on year can be useful in determining whether further dust mitigation measures are warranted | will present in first meeting 2021 | Not Complete |
| | | 5 | Opportunity for improvement | Given the importance of reactive dust monitoring in providing real time off site dust impact evaluation, equipment faults and data outages should be reported and corrected quickly and effectively | Ongoing | Complete |
| | | 6 | Opportunity for improvement | Investigate relocating the surface water sampling point to avoid the influence of natural run off | Not started | Not Complete |
| | | 7 | Opportunity for improvement | Amend the water quality monitoring procedure to require testing to be done at the sampling location, rather than samples removed to the office for testing | Turbidity testing requires 240v Power so this can not be done in the field. It is tested within 20min of sampling | Complete |
| | | 8 | Opportunity for improvement | Testing of running water downstream of the V-notch weir should also be conducted to confirm quality of run off | | |
| | | 9 | Opportunity for improvement | Provide inspection personnel with further information on what to look for when determining whether there is an algal bloom in the dam | | |
| | | 10 | Non Conformance | Ensure the annual evaluation of groundwater monitoring and assessment of beneficial use on surrounding properties are completed by the nominated specialist consultants | Completed, the report was available within 1 week of audit, was a timing issue | Complete |
| | | 11 | Opportunity for improvement | Implement the additional minor remedial measures recommended by the consultant report on the slope stability inspection | In progress | In Progress |
| | | 12 | Opportunity for improvement | Amend the targets included in s.2.6.2 of the EMP as these have been superseded | In draft EMP document | In Progress |
| | | 13 | Opportunity for improvement | Seek expert input to assist in determining the significance of rabbit damage in the Net Gain Offset area whether a rabbit-proof fence is warranted to mitigate the damage | Continue to monitor through monthly inspections, no reports of rabbits YTD | Complete |
| | | 14 | Opportunity for improvement | Organise for collection any waste oil drums as storage bin is overloaded | Complete | Complete |
| | | 15 | Non Conformance | In assessing what further waste reductions might be achievable, Holcim should engage with other similar company sites within Australia and elsewhere | | |
| | | 16 | Opportunity for improvement | Items were noted in the equipment graveyard (vehicle, gas cylinders) that need checking for hazardous contents and appropriate disposal | 50% complete | In Progress |
| | | 17 | Opportunity for improvement | Holcim should involve Naturelinks in the LRMP review so that lessons learnt from the rehabilitation successes and setbacks to date can be incorporated into the revised Plan, thereby improving the success rate going forward | Agree | In Progress |
| | | 18 | Opportunity for improvement | Recommendations in the Naturelinks reports related to rehabilitation and the dieback occurrence on the NE slopes should be implemented as part of the LRMP review | Agree | In Progress |
| | | 19 | Opportunity for improvement | Legible location maps should be included in weed spraying work scope forms so that overspraying doesn't occur and a more targeted approach can be developed | Complete | Complete |
| 2019 Slope stability review | AECOM | 1 | Opportunity for improvement | Introduce additional vegetation at the crest of a scarp at "Back scarp of large historical landslide" (refer Attachment 1), as it appeared to be freshly eroded and retreating | In review with naturelinks, planning Autumn 2021 | In Progress |
| | | 2 | Opportunity for improvement | Fill animal burrowing holes and revegetate scarps at Mass11; | | Not Complete |
| | | 3 | Opportunity for improvement | Revegetation of scarp surfaces with grasses proposed at Mass08 and Mass13; and | In review with naturelinks, planning Autumn 2021 | Not Complete |
| | | 4 | Opportunity for improvement | Remedial treatments previously proposed for Mass13 Dam remain, as this has not yet been undertaken. These are aimed at establishing a permanent freeboard and reinstating the dam embankment. Whilst the dams are typically located remotely to existing downslope infrastructure, should failure occur, the more detailed assessment of runoff paths should be undertaken to assess the risk, if any, to potential for downslope damage exists. In the case of the dam at Mass13, more detailed assessment of runoff paths should be undertaken to assess the risk, if any, to infrastructure. | Review with Aecom | In Progress |
| 2020 Future works recommendations | Naturelinks | 1 | Opportunity for improvement | Increase biodiversity of direct seeding mix and include <i>Poa labillardierei</i> , <i>Poa sieberiana</i> var. <i>sieberiana</i> and <i>Austrostipa rudis</i> subsp. <i>rudis</i> . Include <i>Acacia</i> and <i>Eucalyptus</i> seed in mix at sowing rates of 1kg/ha of mixed <i>Acacia/Eucalyptus</i> seed. Full species list to be confirmed | Agree - Tie in with LRMP review | In Progress |
| | | 2 | Opportunity for improvement | Pre-treat all <i>Acacia</i> seeds and use Wattle Grow to enhance seedling survival (Thrall et al, 2001 and Carr et al, 2007) | not specific to LRMP, but consider at the time of hydroseeding | In Progress |
| | | 3 | Opportunity for improvement | Explore the possibility of identifying and isolating locally specific soil bacteria and/or mycorrhizae. Isolate and inoculate soil prior to revegetation works. Note that this would require soil scientists and significant research and investment. | Manage in line with existing LRMP requirements for soil testing in the event of contamination | In Progress |
| | | 4 | Opportunity for improvement | Install Mulch circles around each plant using recycled pallet mulch MR20 at a depth of 10mm at a 50cm radius around each individual plant (to be blown in) | Consider at each planting event where available | In Progress |
| | | 5 | Opportunity for improvement | Stage all plantings for both understorey and mid and upper story plantings over a minimum of 3-5 years following direct seeding. Both under and mid story plantings have increased success once an overstorey is beginning to establish | Consider at each planting event where available | In Progress |
| | | 6 | Opportunity for improvement | Set up irrigation system for SE Extraction – focusing on trouble areas and areas difficult to access with a watering vehicle and hose. | Complete, additional irrigation systems being installed | In Progress |

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| | | 7 | Opportunity for improvement | Expand species lists to allow for local species found in drier areas ideally from Dry Forest and Shrubby Foothill Forest EVC's which exist/existed both within the quarry area and in the immediate surrounds. Table 2 outlines species local to the area more tolerant of drier soils and conditions more appropriate for areas of SE Extraction. This factors in soil, slope and aspect. These species are tolerant of dry, shallow soils, North to North Westerly aspect and steep slopes as exhibited at SE Extraction areas. | Agree | In Progress |
| | | 8 | Opportunity for improvement | Where possible decrease slope angle of future revegetation areas. | Not Applicable - already shallower than minimum requirements (minimum 1:1.5, currently 1:2.5) | In Progress |
| 2020 rehabilitation progress report | Naturelinks | 1 | Opportunity for improvement | Diversify seed mix and include Poa species, Austrostipa sp and other appropriate species | Include in LRPM review | In Progress |
| | | 2 | Opportunity for improvement | Brushcut biomass and follow-up spray works - 2x runs per annum | build into 2021 plan, where available slashing will assist | In Progress |
| | | 3 | Opportunity for improvement | Plant and direct seed with appropriate species following control reference appendix 2 | Agree - tie in with LRMP review | In Progress |
| | | 4 | Opportunity for improvement | Seasonal Ecological burn of understory followed by intense weed control and localised direct seeding. | Not permitted | Complete |
| | | 5 | Opportunity for improvement | Knapsack spray of germinating Avena - 2 x visits | Build into 2021 plan | In Progress |
| | | 6 | Opportunity for improvement | Setup irrigation systems and easy access tank for SE extraction areas | complete, additional irrigation lines being added throughout 2020 | Complete |
| | | 7 | Opportunity for improvement | Use watering budget on areas where irrigation systems unavailable | agree | Complete |
| | | 8 | Opportunity for improvement | Adjust species list to accommodate more dry tolerant species found in the area | Agree - tie in with LRMP review | Complete |
| | | 9 | Opportunity for improvement | Provide mulch circles around all future plantings | Consider during each planting | In Progress |
| | | 10 | Opportunity for improvement | Increase biodiversity in all strata - includes planting and seed mix | Agree - tie in with LRMP review | In Progress |
| | | 11 | Opportunity for improvement | Infill planting to be staged over minimum 3-5 years after initial planting, this ensures plantings and species lists can be adapted to more suitably reflect differing site conditions during management of revegetation | Agree - monitor based on annual reports | Complete |
| | | 12 | Opportunity for improvement | Decrease slope in future revegetation areas | Not Applicable - already shallower than minimum requirements (minimum 1:1.5, currently 1:2.5) | Complete |
| | | 13 | Opportunity for improvement | Avoid soil compaction (no vehicles or heavy machinery on revegetation surfaces after topsoil spread) | Already in practise, once topsoil has been spread no access | Complete |
| | | 14 | Opportunity for improvement | Increase depth of topsoil | Minimum 200mm as per approvals | Complete |
| 2020 Die Back Report | Naturelinks | 1 | Opportunity for improvement | Infill plantings of dry tolerant species -500 individuals. | complete - a total of 1700 Plantings have been completed | Complete |
| | | 2 | Opportunity for improvement | Increase diversity of plantings and include some tall and low shrub plantings. | Agree - tie in with LRMP review | In Progress |
| | | 3 | Opportunity for improvement | Minimum of 2 x broadleaf weed control visits per annum, using broadleaf specific herbicide only (e.g. Lontrel). High weed infestations present through large areas of the site are likely to result in reduced recruitment of desired species. Weed cover is significantly denser in areas exhibiting high rates of dieback. | Agree - brushcutting / slashing in addition to chemical application | In Progress |
| | | 4 | Opportunity for improvement | Supplementary watering provided for two years following all infill plantings (Dec-March or as required) | agree - in progress | In Progress |
| | | 5 | Opportunity for improvement | Access track provided through site to ensure access for future management vehicles, to ensure effective and efficient watering and weed control. | In review with Naturelinks - additional access gates may assist | In Progress |