NEWNES KAOLIN PTY LTD

Sand quarry & kaolin mine

Annual Environmental Management Report for year ending December 2019

Resource Assessments & Compliance **25th March 2020**
NSW Department of Planning & Environment
PO Box 5475
WOLLONGONG
NSW, 2520
email: compliance@planning.nsw.gov.au
and katrina.oreilly@planning.nsw.gov.au - and – Jennifer.rowe@planning.nsw.gov.au

Re: Newnes Kaolin Sandmine – DA 329-7-2003
Newnes Junction – Sandham Road
Fifth Annual Environmental Management Report
Period - 1st January 2019 to 31st December 2019

Dear Mr or Ms

Please see following the Newnes Kaolin P/L AEMR for 2020.

ALS Laboratory Group in Lithgow have been collecting on-site monitoring data dating from 1.6.16 and have provided multiple data files with details on the project website – www.sydneyconstructionmaterials.com.

The site has been in drought for most of 2019 and consequently there have been no surface water flows in the adjoining water courses and consequently there is no surface water monitoring data.

In October 2019 Newnes kaolin undertook some maintenance work on the site including the removal of regrowth on the site of our proposed office and storage area and the access track which was first cleared in 2011 as 'physical commencement' of the project.

In December 2019 the site was burnt out in a bushfire and the company owned house off Sandham Road was destroyed.

The Newnes Kaolin contractor was engaged to clear fallen trees from the access track to ensure regular environmental monitoring could proceed as usual.

Should any additional information be required I can be contacted as follows:

Email: asproust@tpg.com.au
Address: 81 Harriet Street Waratah NSW 2291
Mobile: 0425-285782

Yours sincerely,

Tony Proust

Environmental Manager

NEWNES KAOLIN P/L AEMR

Reporting period: 1st January 2019 – 31st December 2019

Title Block

Name of mine	**Newnes kaolin P/L**		
Titles/mining lease	**ML1654**		
Mine OP commencement date	**31 March 2016**	**MOP completion date**	**31 March 2019**
AEMR commencement date	**Commencement date: 1/1/2019**	**AEMR end date**	**31.12.2019**
Name of leaseholder	**Newnes kaolin P/L**		
Name of mine operator (if different)	**As above**		
Reporting officer	Tony Proust		
title	Environmental Manager		
signature			
date	20.03.2020		

1. Background

The project was approved in March 2006.

In late 2010 the draft Environmental Management Plan (EMP) was prepared and circulated to all stakeholders with final approval in 2013. The EMP can be accessed on the project website: www.sydneyconstructionmaterials.com

In March 2011 the Department of Planning gave approval for 'physical commencement works'. The work undertaken included the removal of approximately 2500m2 of vegetation and the construction of a small stormwater detention pond and site office foundations and appropriate erosion and sediment controls.

There have been no additional site works undertaken since March 2011, except for regular on-site maintenance and bushfire recovery work and the on-going on site environmental monitoring as required under the DA consent and regular maintenance work including the removal of regrowth and the removal of fallen trees resulting from the December 2019 bushfire.

In the middle of 2016 Newnes Kaolin P/L engaged a Lithgow based laboratory, ***ALS Laboratory Group***, to undertake the groundwater, surface water and air quality data collection and management.

Refer to the project website for the ALS monitoring data: www.sydneyconstructionmaterials.com

Since 2016 Newnes Kaolin P/L have engaged Lithgow based ecologists , ***Consulting and Engineering Services***, to undertake the annual flora and fauna monitoring. Refer to Appendix 1 for the 2019/2020 monitoring results.

Since 2017 Newnes Kaolin have engaged a Sydney based hydrologist/engineering consultants, ***Pell Sullivan Meynink,*** to analyse and interpret the groundwater water and surface water monitoring data.

Refer to Appendix 2 for the report on the data for 2019.

Since 2018 Newnes Kaolin have engaged ***Todoroski Air Sciences*** to prepare an Air Quality Monitoring Review of the air quality data. Refer to Appendix 3 for the report on the data for 2019.

2. Current situation

The project was 'physically commenced' in 2011.

Newnes Kaolin are negotiating a site at Glenlee near Camden for the processing of the raw material which will be transported from Newnes to Glenlee by rail. The mine is unlikely to be operational before 2022. It is anticipated that the construction phase will begin at both Newnes Junction and Glenlee in 2021/2022.

In August 2016 the Department of Planning issued the SEARs for the Newnes Kaolin Processing Plant at Glenlee: State Significant Development – SSD 7833. In August 2018 the Department of Planning extended and updated the SEARs for another two years.

The main focus of Newnes Kaolin P/L in the last 12 months has been monitoring the progress of the rezoning application for the preferred reprocessing site at Glenlee and preparing for the EIS as required under the Secretary's Environmental Assessment Requirements (SEARs) for Glenlee and negotiating access to the processing site at Glenlee in south west Sydney.

3. Standards and performance measures

- Condition 15 of the consent specifies as follows:

  The Applicant shall prepare and implement an Air Quality Monitoring Program

- Condition 21 of the consent specifies as follows:
  The Surface Water Monitoring Program shall include detailed baseline data on surface water flows and quality in waterbodies that could potentially be impacted by the development

- Condition 22 of the consent specifies as follows:

The Groundwater Monitoring Plan shall include detailed baseline data on groundwater levels and quality based on statistical analysis to benchmark the pre-mining natural variation in groundwater levels

- Condition 23 of the consent specifies as follows:
  Each year from the date of the consent the Applicant shall report the results of the monitoring in the AEMR

- Condition 24 specifies as follows:
  The applicant shall establish and maintain a meteorological station in the vicinity of the development.

- Condition 30 of the consent specifies as follows:
  That the Flora and Fauna Monitoring Program shall include detailed baseline data on the flora and fauna of the site and adjacent the site including habitat present in the Greater Blue Mountains WHA and along the Wollangambe River and its tributaries

4. Monitoring results

a) Flora and Fauna

Newnes kaolin engaged **Consulting & Environmental Services** based in Lithgow to undertake the annual flora and fauna monitoring as was the case for the 2017 and 2018 AEMR. Refer to Appendix 1 for the report.

The field work for the Annual Monitoring Summer 2019/2020 report was undertaken in March 2020.

Much of the vegetation in the study area has suffered fire damage in December 2019 having been previously burnt out in the 2013 bushfire.

b) Air quality

In accord with the DA consent Newnes Kaolin have a weather station on site which records wind speed and direction.

Since 2016 Newnes kaolin have engaged **ALS Laboratory Group** in Lithgow to collect and manage the air quality data.

Newnes Kaolin P/L are fortunate to have access to the annual wind rose for the neighbouring Clarence Colliery weather station during 2019. A comparison of the Newnes kaolin weather station wind rose and the Clarence colliery wind rose indicates that both stations are recording similar measurements with winds flowing along a west – southwest to east – northeast axis for the area.

On a seasonal basis the Newnes Kaolin Weather Station indicates during summer there is a high percentage of winds from the north-northeast and northeast sectors. The autumn wind distribution pattern is similar to the annual distribution with winds from the west – southwest and east-northeast. In winter and spring the highest percentage of prevailing winds come from the west-southwest.

c) Dust

Newnes kaolin engaged **ALS Laboratory Group** in Lithgow to collect and manage the dust data. Location details of the 3 dust gauges as follows:

DG#1 – Dust gauge adjacent to Weather Station on Sandham Road

DG#2 – Dust gauge adjacent to SW1 in the south east corner of the site

DG#3 – Dust gauge 100m north of SW2 in the north east corner of the site

All gauges recorded an annual average deposited dust level of 4g/m2/month for 2019.

The highest monthly dust deposition rate recorded across all monitors occurred at DDG3 in November with a level of 7.3 g/m2/month

d) Groundwater

Groundwater levels and water quality are measured at six groundwater bores installed at three locations around the site in 2004. Typically these instruments have a life of about 10 years. During the previous reporting period new instruments have been installed.

Newnes kaolin engaged ALS Laboratory Group in Lithgow to collect and manage the groundwater data and **Pells Sullivan Meynink (previously Pells Consulting)** to analyse the groundwater and surface water data and who advised as follows:

Groundwater levels have been plotted as metres below ground level for the 'shallow' and 'deep' bores respectively. Also shown are the daily rainfall figures from the Bureau of Meteorology.

There are gaps in the continuous monitoring , corresponding with upgrading instruments as the operational life of the original instruments expires. Readings from the instrument at bore S54 (GW3A) are only available from 1 April 2019 to 3 September 2019. Readings from the instrument at bore S54 (GW3A) are erroneous from 23 August 2019. Routine manual (dip) readings provide continuity of observations.

The monitoring data for the reporting period is consistent with previous observations.

Refer to Ground and Surface Water Monitoring Report (Appendix 2).

e) Surface water

Surface water monitoring is undertaken twice a year. Given that much of the state has been in drought for most of 2019 and longer, including the subject site, there is no surface water data for the reporting period.

Refer to the Groundwater and Surface water Monitoring Report in Appendix 2.

5. Analysis of Monitoring results

a) Flora and fauna

As noted previously the most notable result is that the site was severely burnt by a bushfire in 2013 and then again recently in December 2019. In particular the baseline data represents eight of the ten monitoring sites with significant fire damage from the October 2013 and the December 2019 bushfires.

Data collected prior to the fires represent background information indicative of the local environment before the Newnes kaolin mine becomes operational.

b) Air quality

In accordance with the monitoring schedule, dust and weather station data is sampled monthly and shared with Clarence Colliery. The E-sampler data, owned by Clarence Colliery, is shared with Newnes Kaolin.

The air quality data collected to date reflects the existing air quality at Newnes Junction and Clarence more generally. Given that Newnes Kaolin is yet to commence mining/quarrying activities it is reasonable to assume that the air quality data collected to date reflects the existing situation in the vicinity of the site.

As stated above the data from the Newnes kaolin weather station and the Clarence Colliery weather station correlate. Refer to Appendix 3.

c) Dust

The dust samples are collected monthly in accordance with the monitoring schedule.

The results are consistent and within expectations given the location of the nearby colliery and coal rail loading infrastructure and that the Newnes Kaolin operations are not yet underway.

d) Groundwater

The groundwater data accord with previous measurements made. However there are instances where the recorded constituents are outside the baseline range indicated in the Newnes Kaolin Groundwater MP. As no works of significance have yet been undertaken on the site these exceedances should be noted when establishing revised baseline levels prior to commencement of larger scale works.

e) Surface water

In accordance with the monitoring schedule surface waters are sampled bi-annually.

There are two sampling locations: SW1 (South Creek) and SW2 (North Creek). Given the region was in drought for the whole year 2019, and longer, there were no surface water samples collected.

6. Monitoring result trends

As this is only the fifth AEMR, and the mine is yet to become operational, it is unlikely that any significant discernible trends will be apparent at this stage. However, it is important to note that there, can, and often will be, significant natural variability from year to year particularly in air quality, groundwater and surface water.

Newnes Kaolin hopes to have sufficient monitoring data to be able to discern any trends before the commencement of operations in about 2022.

a) Air quality

Todoroski Air Sciences have compared the wind data available from the repaired Newnes kaolin weather station with the annual wind rose from the nearby Clarence Colliery weather station. Comparison of the weather station suggests a similar pattern of wind and implies the newly repaired weather station is recording sensible wind speeds and directions.

Note that Newnes Kaolin has an arrangement with Clarence Colliery to share air quality monitoring data.

b) Dust

The dust sample data is consistent with previous monitoring results. Average dust deposition rates of the monitoring sites indicate that compliance with the dust performance indicator (3 g/m2/month) was achieved at all of the monitoring sites during the reporting period.

c) Groundwater

The observed groundwater levels are consistent with previous monitoring and remain relatively constant over the monitoring period. There is little observable response to rainfall events.

d) Surface water

There was no surface water data for the year 2019 due to drought conditions prevailing on site.

e) Flora and fauna

It is important to note that the site vegetation was devastated by a severe bushfire in October 2013 and then again in December 2019 the impact of which is still very apparent physically in the ground. Nevertheless the data collected prior to the fires helps to establish the background information useful prior the start of mining operations.

7. Incidents and Compliance

There have been no incidents or matters of non-compliance to date.

8. Pollution Incident Response Management Plan

As reported previously the PIRMP was subjected to a desktop test for the first time in 2016. The 2 key issues identified were:

a) Threat of bushfire to the workers on site. Note that the site was devastated by a bush fire in October 2013 and the vegetation will take years to recover.
b) Possible detention basin overflow

The PIRMP will be subject to another desktop review in 2020, and prior to any new work on the site, particularly relating to bushfire evacuation and related matters.

9. Community Consultative Committee

The Newnes kaolin CCC has met twice during the last year as required under the DA consent:

18th meeting of the CCC was held on 3rd July 2019
19th meeting of the CCC was held on 11th December 2019

Minutes of the CCC meeting will be posted on the project website as required.

APPENDICES

1) **Flora and Fauna – Annual Monitoring Summer 2019/2020 – by Consulting & Environmental Services Lithgow – dated 24th March 2020.**

2) **Groundwater & Surface Water monitoring report – by Pells Sullivan Meynink Engineering Consultants – dated 12 March 2020.**

3) **Air Quality Monitoring Assessment - by Todoroski Air Sciences – dated 10 March 2020.**

refer to project website – www.sydneyconstructionmaterials.com

Appendix 1 – Flora & Fauna – Annual Monitoring summer 2019/2020

Report by : Consulting & Environmental Services, Lithgow, NSW – dated 24th March 2020.

(under separate cover)

Appendix 2 - Groundwater and Surface Water monitoring report

Report by: Pells Sullivan Meynink Engineering Consultants - report dated 12 March 2020.

(under separate cover)

Appendix 3 - Air Quality Monitoring report

Report by: Todoroski Air Sciences dated 10 March 2020.

(under separate cover)

Clarence wind rose – January 2019 to December 2019 – submitted as additional weather data to compliment data from the Newnes kaolin Met Stn for 2019