NEWNES KAOLIN PTY LTD

Sand Quarry & Kaolin Mine

FINAL Annual Environmental Management Report
April 2022

For year ending December 2021

27th April 2022

Resource Assessments & Compliance
NSW Department of Planning & Environment
PO Box 5475
Wollongong NSW 2520
Email: nswresourcesregulator@service-now.com.

Re: Newnes Kaolin Sandmine – DA 329-7-2003
Newnes Junction – Sandham Road
Seventh Annual Environmental Management Report (AEMR)
Period - 1st January 2021 to 31st December 2021

Dear Mr / Ms

Please see following the Newnes Kaolin P/L AEMR for 2022.

This is the final AEMR for 2022.

This report replaces the interim report submitted in late March 2022.

As reported previously, on March 9th 2022 we requested an extension and the Resources Regulator - in an email dated 14.3.22 – agreed to an extension for the final AEMR to 30th April 2022.

As reported previously, ALS Laboratory Group in Lithgow have been collecting on-site monitoring data since 1.6.16 and have made available multiple, detailed data files via the project website: www.sydneyconstructionmaterials.com

The Newnes Kaolin Sandmine project has yet to begin production as the project has yet to receive consent for the required processing plant at Glenlee, Menangle Park.

Meanwhile N/K will continue to comply with the monitoring requirements at the site at Newnes Junction.

In December 2021 the SEARs for the processing plant expired and N/K requested new SEARs for the proposed processing site at Glenlee.

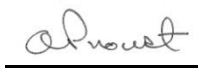
Should any additional information be required please contact me as follows:

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 2021 – 31st December 2021

Title Block

Name of mine	Newnes Kaolin P/L		
Titles/mining lease	ML1654		
Mine OP commencement date	31 March 2020	**MOP completion date**	31 March 2023
AEMR commencement date	1 January 2021	**AEMR end date**	31 December 2021
Name of leaseholder	Newnes Kaolin P/L		
Name of mine operator (if different)	N/A		
Reporting Officer	Tony Proust		
Title	Environmental Manager		
Signature			
Date	27 April 2022		

1. Background

The Newnes Kaolin (N/K) Project was approved in March 2006.

In 2010 a 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 2500m^2 of vegetation and the

construction of a small stormwater detention pond, site office foundations and appropriate erosion and sediment controls.

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

Since 2016 a Lithgow-based laboratory, **ALS Laboratory Group**, has been engaged by N/K to undertake the groundwater, surface water and air quality data collection and management. ALS monitoring data are available on the project website: www.sydneyconstructionmaterials.com

Lithgow-based ecologists, **Consulting and Environmental Services**, were also engaged by N/K in 2016 to undertake the annual flora and fauna monitoring. Appendix 1 contains the 2021 monitoring results.

Since 2017 , N/K have engaged Sydney-based hydrology and engineering consultants**, Pell Consultants (previously Pell Sullivan Meynink)** to analyse and interpret the groundwater and surface water monitoring data. Appendix 2 contains the final monitoring report for the period 2021.

Todoroski Air Sciences have been engaged since 2018 to conduct Air Quality Monitoring Reviews of the air quality data. Appendix 3 contains the review of 202I data.

In October 2013 the site was subject to a bushfire. In December 2019 through to January 2020 the site was again subject to bushfire.

2. Current Situation

The N/K Project was 'physically commenced' in 2011.

N/K are currently negotiating a site at Glenlee, Menangle near Camden for the processing of the raw material which will be transported from Newnes to Glenlee by rail. It is anticipated that the mine will be operational in 2024/2025 and that the construction phase will begin at both Newnes Junction and Glenlee in 2023/2024.

In August 2016 the Department of Planning issued the SEARs for the Newnes Kaolin Processing Plant at Glenlee: State Significant Development – SSD 7833. These SEARs expired in December 2021 and we have applied for new SEARs

N/K are planning to lodge the EIS for the processing plant at Glenlee by the end of 2022.

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 Aauna

In accord with the DA consent NK have commissioned an annual flora & fauna monitoring report for 2022. The field work for this report was undertaken on the 11th and 12th April 2022. The particularly wet summer 2021/2022 delayed the field work and the finalisation of the report, hence the need for the time extension for the lodgement of the AEMR 2022.

Refer to the Flora & Fauna annual monitoring report 2022 by **Consulting & Environmental Services dated 26 April 2022 in appendix.**

b) Air Quality

In accordance with the DA consent N/K have installed a Weather Station on site which records wind speed and direction. The ALS Laboratory Group in Lithgow have been collecting and managing the air quality data since 2016. N/K is fortunate to also have access to the annual wind rose data for the neighbouring Clarence Colliery Weather Station, if required, and access to the weather data from the Bureau of Meteorology (BoM) Mount Boyce weather station.

On a seasonal basis the N/K Weather Station data indicates that during Summer there is a high percentage of winds from the north-northeast (N-NE) and northeast (NE) sectors. The Autumn wind distribution pattern is similar to the annual distribution with winds from the west – southwest (W-SW) and east-northeast (E-NE). In Winter and Spring the highest percentage of prevailing winds come from the west-southwest (W-SW).

N/K engaged **Todoroski Air Sciences** to prepare the **Air Quality Monitoring review for 2021 dated 23/2/22 – see appendix.**

Unfortunately it recently became apparent that the meteorological data collected from the NK weather station during 2021 appears to have an issue with the data logger. Investigations are ongoing to rectify this issue.

Consequently the wind roses from the BoM Mount Boyce AWS weather station have been used as reference to the wind conditions for the site during 2021. The Mount Boyce AWS is located approximately 15kms to the south of the on-site weather station and would experience similar wind pattens. The annual wind rose shows that winds predominantly follow a west and west – southwest to east-northeast axis.

c) Dust

ALS Laboratory Group in Lithgow collect and manage dust data on behalf of N/K. Location details of the three dust gauges are as follows:

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

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

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

As reported by Todoroski Air Sciences in 2021 all gauges recorded an annual average deposited dust level below 4g/m^2/month.

The highest monthly dust deposition rate recorded across all monitors occurred at DDG3 in March with a level of 1.6 g/m2/month. There was one occurrence of no sample measured at the DDG1 monitor in November.

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 periods new instruments were installed as required.

As noted above, N/K has engaged ALS Laboratory Group in Lithgow to collect and manage the groundwater data and Pells Consulting to analyse the groundwater and surface water data. Refer to the final report by **Pells Consulting dated 5th April 2022. See appendix.**

The advice received is as follows:

Groundwater levels have been plotted as metres below ground level for the 'deep' and 'shallow' bores respectively. Groundwater levels data are plotted as reduced levels. Daily rainfall records from the BoM station 63246 Mount Wilson are also presented on the plots.

As reported by Pells Consulting groundwater levels follow trends as observed over the full period of monitoring. In some cases recorded water quality constituents outside of the baseline range set in previous reports. **As no works of significance to groundwater quality have yet been undertaken these exceedances should be noted when establishing revised site-specific trigger values prior to commencement of larger scale works.**

Pells Consulting have identified some items requiring review and revision:

- Water quality in March 2021 featured some strong departures from previous data.
- Some manual groundwater level measurements are inconsistent with plausible trends and with logger data and appear erroneous
- There was poor recovery of logger data and even where logger data appeared to be valid its values were significantly offset from corresponding measurements.

These data inconsistencies have been forwarded to ALS who collect the monitoring data and will be addressed in the next routine update.

The Ground and Surface Water Monitoring Report is provided in Appendix 2.

e) Surface Water

Surface water monitoring is undertaken twice a year.

As reported by Pells Consulting the discharge of water in the designated surface water location SW1 was too low for samples to be taken during September 2021. As for groundwater the March 2021 values were consistently higher compared to previous times and more neutral values and may be due to flushing from higher rainfall at that time.

The Groundwater and Surface Water Monitoring Report is provided in Appendix 2.

5. Analysis of Monitoring Results

a) Flora and Fauna

The site was severely burnt by bushfire in 2013 and again in 2019.

The canopy health due to bushfire impact is still significant and on average has not changed since 2020, now two years and 4 months after the recent fire in 2019.

Summer rains show in summary :

- site 1 has a watercourse across 15m of its 20m width
- site 5 is an entirely wet area as a 'hanging swamp'

- ground covers are in a slow phase of emergent diversity
- site 4, 7 & 8 ground leaf litter consistent with bushfire affects
- forest regeneration continues to support an increasing avian population

b) Air Quality

In accordance with the monitoring schedule, dust and weather station data are sampled monthly.

The air quality data collected to date reflects the existing air quality at Newnes Junction and Clarence more generally. Given that N/K 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.

Note that the meteorological data collected at the site during 2021 appears to have an issue with the data logger. NK is investigating this matter and will report back in due course.

Consequently the wind roses from the BoM Mount Boyce AWS weather station have been used as reference to the wind conditions for the site during 2021. The Mount Joyce AWS is located approximately 15kms to the south of the on-site weather station and would experience similar wind pattens. The annual wind rose shows that winds predominantly follow a west and west – southwest to east-northeast axis.

c) Dust

Dust samples are collected monthly in accordance with the monitoring schedule.

The results are consistent over time and within expectations given the location of the nearby colliery and coal rail loading infrastructure and that the N/K operations are not yet underway.

d) Groundwater

As noted above the groundwater data is at variance with previous observations. Further investigations will be required to clarify these differences. However, there are instances where the recorded constituents are outside the baseline range indicated in the N/K 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). The discharge of water at SW1 was too low for samples to be taken during September 2021.

6. Monitoring result trends

As this is only the seventh 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, or emerging trends, before the commencement of operations in 2024/2025.

a) Air Quality

Todoroski Air Sciences have utilised weather data from the nearby BoM Mount Boyce weather station. Comparison of the Weather Station results suggests a similar pattern of wind to previous results.

b) Dust

The dust sample data are consistent with previous monitoring results. Average dust deposition rates of the monitoring sites indicate that compliance with the dust performance indicator (below 4 g/m^2/month) was achieved at all of the monitoring sites during the reporting period.

c) Groundwater

Notwithstanding the above comments, the observed groundwater levels are generally consistent with previous monitoring and remain relatively constant over the monitoring period despite the issues with the 2021 data. There is little observable response to rainfall events.

The Pells Consulting Groundwater Report concludes as follows:

- Water quality in March 2021 featured some strong departures from previous data.
- Some manual groundwater level measurements are inconsistent with plausible trends and with logger data and appear erroneous
- There was poor recovery of logger data and even where logger data appeared to be valid its values were significantly offset from corresponding measurements.

  These data inconsistencies have been forwarded to ALS and will be addressed in the next routine update.

d) Surface Water

There was limited surface water data for the year 2021 due to dry conditions prevailing on site particularly in September 2021.

e) Flora and Fauna

The site vegetation was devastated by severe bushfires in October 2013 and December 2019.

Ground covers are in a slow phase of emergent diversity.

Forest regeneration continues to support an increasing avian population.

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 and review for the first time in 2016 and was reviewed for the second time in 2020. The two key issues identified were:

a) that there is significant threat of bushfire to workers on-site including those gathering annual monitoring data. As noted above, devastation of the site by bush fires in October 2013 and December 2020 means that the vegetation will take years to recover. The PIRMP now includes a draft Bushfire Management Plan which will be periodically reviewed as required going forward.

b) the potential for detention basin over-flow into the National Park.

Note that the PIRMP is in draft form only until the site at Newnes Junction is activated.

9. Community Consultative Committee

The Newnes Kaolin CCC has met twice during the past year as required under the DA consent:

- 22nd meeting of the CCC was held on 17th August 2021
- 23rd meeting of the CCC was held on 15th December 2021

Minutes of the CCC meeting will be posted on the project website as required - www.sydneyconstructionmaterials.com

APPENDICES

1) Flora and Fauna – Annual Monitoring Summer 2020/2021
   Consulting & Environmental Services Lithgow
   Dated 26 April 2022 – under separate cover

2) Summary of Groundwater & Surface Water Monitoring Data
   Pells Consulting
   5 April 2022 – under separate cover

3) Air Quality Monitoring Data Review
   Todoroski Air Sciences
   23 February 2022 – under separate cover

4) Recent Site Photographs – see below
   Refer to Project Website – www.sydneyconstructionmaterials.com

Existing on-site detention basin as it was in August 2020 after recent rain

Project site in August 2020 – post bushfire in January 2020