

NEWNES KAOLIN PTY LTD

Sand quarry & kaolin mine

20th March 2019

Resource Assessments & Compliance
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
Fourth Annual Environmental Management Report
period - 1st January 2018 to 31st December 2018**

Dear Mr or Ms

Please see following the Newnes Kaolin P/L AEMR for 2019.

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

Note that in June 2018 it became clear to Newnes kaolin that the wind speed and direction data obtained monthly from our on-site Weather Station was erroneous. This problem was foreshadowed in the last AEMR.

After investigations by other consultants which proved inconclusive, in June 2018 Newnes kaolin P/L engaged **Todoroski Air Sciences** to investigate the situation. They removed the data logger to their laboratory and after some investigations confirmed that the logger was not performing correctly and that the data collected previously was in error. By November 2018 replacement parts were installed and the errors in the data logger corrected and the weather station restored to full operation.

Newnes kaolin now has one month of new wind speed and direction data which is insufficient to draw any conclusions. We will prepare an addendum to this AEMR by July 2019, after 6 months of new weather data has been obtained, to confirm the Weather Station is operating correctly.

Given the lack of reliable wind speed and direction data for the full reporting period Newnes kaolin has been able to obtain access to wind speed and wind direction data from the nearby Clarence Colliery weather station.

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

Email: asproust@tpg.com.au

Address: 80 Patrick Street Merewether NSW 2291

Mobile: 0425-285782

Yours sincerely,

Tony Proust

Environmental Manager

NEWNES KAOLIN P/L AEMR

Reporting period: 1st January 2018 – 31st December 2018

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	Starting in 2018 Commencement date: 1/1/2018	AEMR end date	31.12.2018
Name of leaseholder	Newnes kaolin P/L		
Name of mine operator (if different)	As above		
Reporting officer title	Tony Proust Environmental Manager		
signature			
date	20.03.2019		

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 the on-going on site environmental monitoring as required under the DA consent.

In mid 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

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

In early 2017 Newnes Kaolin 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.

In mid 2018 Newnes Kaolin engaged **Todoroski Air Sciences** to investigate the problems with the weather station. Refer to Appendix 3

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 2021. It is anticipated that the construction phase will begin at both Newnes Junction and Glenlee in 2020/2021.

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 AEMR. Refer to Appendix 1 for the report.

The field work for the Annual Monitoring Summer 2019 report was undertaken in February 2019.

The report states as follows:

Virtually all the trees in the study area have suffered fire damage. In 2019 the ground cover has increased in both species number and abundance. The resultant increase in canopy cover is noted with the corresponding record of bird calls.

b) Air quality

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

As indicated at the opening of this report Newnes kaolin became aware that the weather station wind speed and direction data was questionable and/or in error during the reporting period. After investigations by other consultants which proved inconclusive, in June 2018 Newnes kaolin engaged **Todoroski Air Sciences** to investigate the situation. They removed the data logger to their laboratory and after some investigations confirmed that the logger was not performing correctly and that the data collected previously was in error. By November 2018 replacement parts were installed and the errors in the data logger corrected and the weather station restored to full operation.

Newnes kaolin now has one month (December 2018) of new wind speed and direction data which is insufficient to draw any conclusions. We will prepare an addendum to this AEMR by July 2019, after 6 months of new weather data has been obtained, to confirm the Weather Station is operating correctly.

Given the lack of reliable wind speed and direction data for the full reporting period Newnes kaolin has been able to obtain access to wind speed and wind direction data from the nearby Clarence Colliery weather station.

Refer to letter report by **Todoroski Air Services** in Appendix 3.

Newnes kaolin receives PM10 and TSP data from the adjoining colliery E sampler and there are some gaps in the data, due to equipment failure, for the reporting year.

Valid PM10 data were available for ten full days in March and June 2018 during the reporting period. The highest 24 hour average PM10 concentration during the reporting period was 26ug/m³ recorded on 3rd March 2018. This value was below both the performance indicator of 37.5ug/m³ and performance criterion of 50ug/m³.

Valid TSP data were available for ten days throughout the reporting period – months April and July 2018. The highest 24 hour average TSP concentration during the reporting period was 23ug/m³ recorded on 2nd and 20th April 2018.

The annual average dust deposition rates for each of the 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) 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

(Note that it has been agreed in 2018 that the dust monitoring plan and the AQMP will be amended to delete the fourth dust gauge located adjacent and just to the south of SW2)

According to the monitoring data, 30 of the potential 36 samples were collected across the reporting period representing 83% data availability for deposited dust.

d) Groundwater water

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.

Note that one of the 6 bores, being the NE60 deep bore, no data was recorded for the period July to December 2018 due to a faulty instrument. This instrument will be repaired/replaced for the 2019 reporting period.

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.

The observed groundwater levels are relatively consistent with previous monitoring and remain constant over the monitoring period showing little observable response to rainfall events. The general trend is flow towards the northeast.

The monitoring data for the reporting period is consistent with previous observations. In some cases recorded water quality constituents are 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.

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

e) Surface water

Surface water monitoring is undertaken twice a year. In some of the designated sampling periods the discharge of water in the designated surface water locations was too low for samples to be taken. The data for March 2018 and September 2018 at SW2 accord with previous measurements made.

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. In particular the baseline data represents eight of the ten monitoring sites with significant fire damage from the October 2013 bushfire.

As stated in the Flora and Fauna monitoring report the understory development of the native vegetation has advanced to the stage that plant species and abundance were observed and quantified. The 2019 monitoring provides the record of the forest vegetation and its re-establishment after the bushfire and before the Newnes kaolin mine commences operations.

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 in June 2018 it became clear to Newnes kaolin that the wind speed and direction data obtained monthly from our on-site Weather Station was erroneous. This problem was foreshadowed in the last AEMR.

Following investigations by other consultants which proved inconclusive, in June 2018 Newnes kaolin P/L engaged **Todoroski Air Sciences** to investigate the situation. They removed the data logger to their laboratory and after some investigations confirmed that the logger was not performing correctly and that the data collected previously was in error. By November replacement parts were installed and the errors in the data logger corrected and the weather station restored to full operation.

Todoroski Air Sciences state in their report that they have now compared wind speed and wind direction data from before and after the repairs to the weather station and are confident that sensible weather data is now being recorded. 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). When sampled in September 2017 location SW1 was dry with little flow in either creek.

6. Monitoring result trends

As this is only the fourth AEMR 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 2020.

a) Air quality

Given the lack of reliable wind data from the Newnes Kaolin weather station, **Todoroski Air Sciences** have compared the limited wind data available from the repaired weather station with the annual windrose from the nearby Clarence Colliery weather station. The December 2018

data available from the Newnes kaolin weather station suggests a similar pattern of wind and implies the newly repaired weather station is recording sensible wind speeds and directions.

Todoroski Air Sciences recommend that the weather station be checked regularly for any anomalous readings and a further review of the data be performed following collection of a years worth of data.

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

Please note that up till now the PM10 and TSP data has been obtained by an E-sampler. It is planned to install two High Volume Air Samplers. The HVAS units have been purchased by Clarence Colliery and are in storage, waiting for power to be brought to the site.

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

The surface water data accord with previous measurements made. Note that location SW1 in particular is sometime dry with little if any flow.

e) Flora and fauna

It is important to note that the site vegetation was devastated by a severe bushfire in October 2013 the impact of which is still very apparent physically in the ground.

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 wild fire in October 2013 and the vegetation will take years to recover.
- b) detention basin over flow

The PIRMP will be subject to another desktop review in 2019/2020, 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:

16th meeting of the CCC was held on 27th June 2018

17th meeting of the CCC was held on 4th December 2018

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

APPENDICES

- 1) Flora and Fauna – Annual Monitoring Summer 2018/2019 – by Consulting & Environmental Services Lithgow
- 2) Groundwater & Surface Water monitoring report – by Pells Sullivan Meynink Engineering Consultants
- 3) Air Quality Monitoring Assessment - by Todoroski Air Sciences
- 4) ALS Laboratory Group Environmental monitoring data report – September – December 2018 and other spreadsheet data
refer to project website – www.sydneyconstructionmaterials.com

Appendix 1 – Flora & Fauna – Annual Monitoring summer 2018

report by : Consulting & Environmental Services, Lithgow, NSW – dated 12 March 2019

(under separate cover)

Appendix 2 - Groundwater and Surface Water monitoring report

By: Pells Sullivan Meynink Engineering Consultants - report dated 11 February 2019

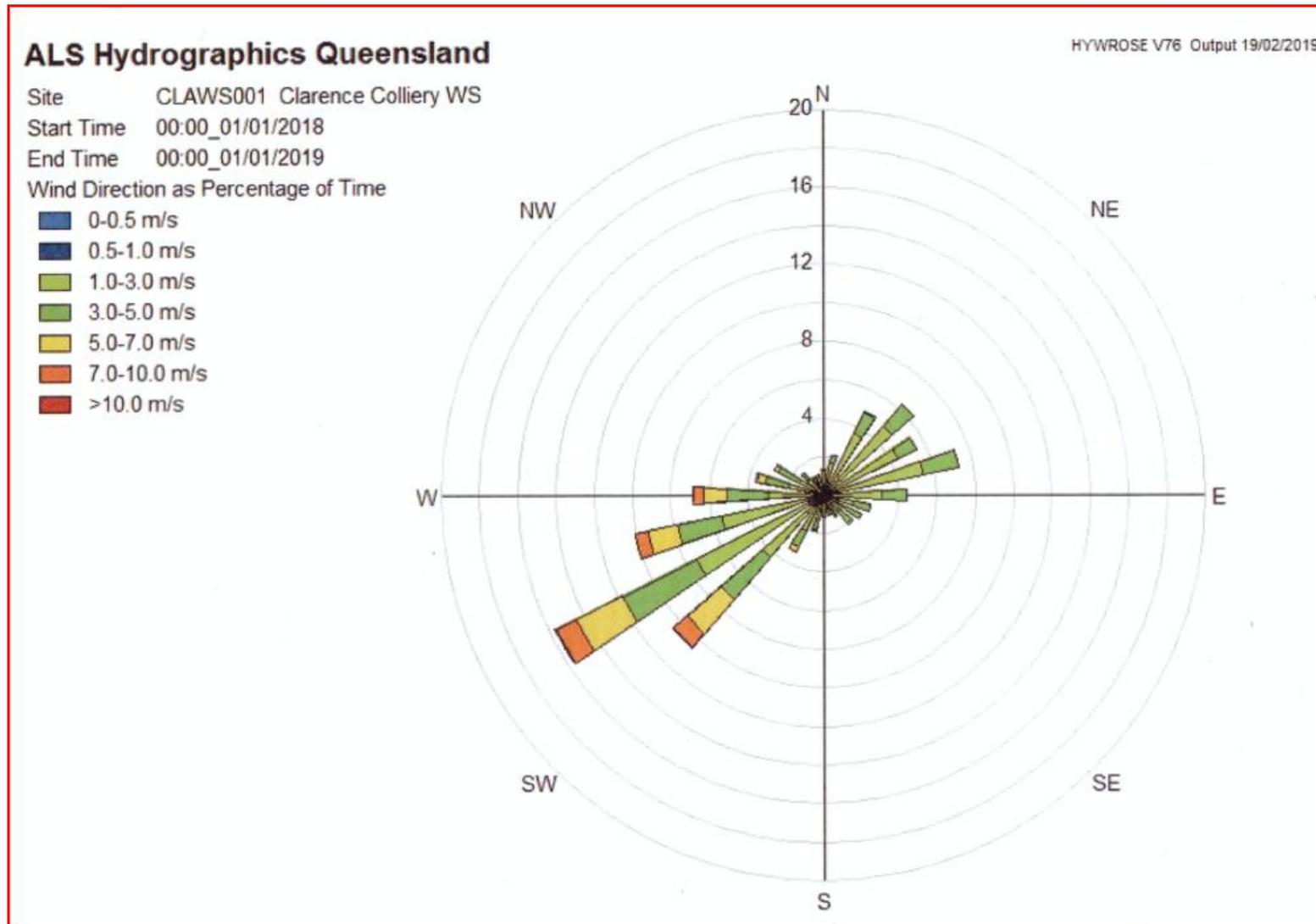
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Appendix 3 - Air Quality Monitoring report

See letter report by Todoroski Air Sciences dated 15 March 2019

(under separate cover)

Clarence wind rose – January 2018 to January 2019 – submitted in absence of valid wind speed and direction data from Newnes kaolin Met Stn for 2018



Appendix 4 - Environmental Monitoring Data report

By: ALS Environmental, Lithgow office, September - December 2018

(under separate cover)