

# **NEWNES KAOLIN PTY LTD**

## **Sand quarry & kaolin mine**

**Resource Assessments & Compliance  
NSW Department of Planning & Environment  
PO Box 5475  
WOLLONGONG  
NSW, 2520**

**31st March 2018**

email: [Christopher.Schultz@planning.nsw.gov.au](mailto:Christopher.Schultz@planning.nsw.gov.au)

**Attn: Chris Schultz**

**Re: Newnes Kaolin Sandmine – DA 329-7-2003  
Newnes Junction – Sandham Road  
Annual Environmental Management Report  
period - 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017**

Dear Mr Schultz

Please see following the Newnes Kaolin P/L AEMR for 2018.

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](http://www.sydneyconstructionmaterials.com). Note that our previous monitoring plan included two dust monitoring locations within 100 metres of each other at the north east corner of the proposed quarry. The southern most of these two locations has been deleted due to the proximity to the northern most dust monitoring location.

Newnes Kaolin P/L proposes to amend the Air Quality Management Plan (AQMP) to reflect this change to the monitoring plan. Should any additional information be required I can be contacted as follows:

Email: [rongoldbery@optusnet.com.au](mailto:rongoldbery@optusnet.com.au)

Address: 3 Karingal Court, Marsfield, NSW, 2122

Mobile: 0410-692404

Yours sincerely,

Ron Goldbery

**General Manager**

## **NEWNES KAOLIN P/L AEMR**

**Reporting period: 1<sup>st</sup> January 2017 – 31<sup>st</sup> December 2017**

### **Title Block**

<b>Name of mine</b>	<b>Newnes kaolin P/L</b>		
<b>Titles/mining lease</b>	<b>ML1654</b>		
<b>Mine OP commencement date</b>	<b>31 March 2016</b>	<b>MOP completion date</b>	<b>31 March 2019</b>
<b>AEMR commencement date</b>	<b>Starting in 2018 Commencement date: 1/1/2017</b>	<b>AEMR end date</b>	<b>31.12.2017</b>
<b>Name of leaseholder</b>	<b>Newnes kaolin P/L</b>		
<b>Name of mine operator (if different)</b>	<b>As above</b>		
<b>Reporting officer</b>	<b>Tony Proust</b>		
<b>title</b>	<b>Environmental Manager</b>		
<b>signature</b>			
<b>date</b>	<b>28.03.2018</b>		

### ***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](http://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<sup>2</sup> of vegetation and the construction of a small stormwater detention pond and appropriate erosion and sediment controls.

There have been no additional site works undertaken since then, 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](http://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 2018 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 early 2018 Newnes Kaolin engaged a Sydney based air quality consultancy (**Pacific Environment**) to report on the air quality data. 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 2020. It is anticipated that the construction phase will begin at both Newnes Junction and Glenlee in 2019/2020.

In August 2016 the Department of Planning issued the SEARs for the Newnes Kaolin Processing Plant at Glenlee: State Significant Development – SSD 7833.

The main focus of Newnes Kaolin P/L in the last 12 months has been 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 2018 report was undertaken in March 2018.

The report states as follows:

*The 2018 monitoring provides the record of the forest vegetation and its re-establishment before the Newnes Kaolin mine is in operation. In 2018 the understory development had advanced to the stage that plant species and abundance were quantifiable for future species-richness assessment.*

The report goes on to say that: *Virtually all the trees had suffered fire damage. which made species identification difficult but it provided an opportunity to assess strand health some 41 months after the fire. No weeds were observed at any of the 10 monitoring sites.*

### *b) Air quality*

Newnes kaolin engaged **ALS Laboratory Group** in Lithgow to collect and manage the air quality data and **Pacific Environment** were engaged to assess and report on the data.

Raw weather station data – wind direction and wind speed - has been collected as required as well as PM10 and TSP. Unfortunately there is some doubt about the validity of the wind speed data because it appears to suggest that the weather is calm for more than 50% of the time. ALS have confirmed that the instrument appears to be working correctly in the field. Nevertheless Newnes kaolin will arrange for the instrument to be checked on site. If the problem cannot be rectified then replacement parts will be ordered and installed.

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 five full days throughout the reporting period. The highest 24 hour average PM10 concentration during the reporting period was 12ug/m<sup>3</sup> recorded on 1st December 2016. This value was below both the performance indicator of 37.5ug/m<sup>3</sup> and performance criterion of 50ug/m<sup>3</sup>.

Valid TSP data were available for nine days throughout the reporting period. The highest 24 hour average TSP concentration during the reporting period was 16ug/m<sup>3</sup> recorded on 23 February 2017.

The annual average dust deposition rates for each of the sites indicate that compliance with the dust performance indicator (3 g/m<sup>2</sup>/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 Meteorological 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 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)

As reported by Pacific Environment *“46 of the potential 54 samples were collected across the reporting period representing 85% 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 reporting period new instruments have been installed. There is a gap in the data reflecting the problems with the instruments during the reporting period but that has now been rectified and it is anticipated that starting early in 2018 that continuous groundwater data will be obtained.

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.

There has been relatively little observable response to rainfalls during the last monitoring period. Groundwater levels in NE60 are more dynamic and are considered to reflect flow through stress relief openings close to the edge of the valley.

Refer to Ground and Surface Water Monitoring Report (Appendix 3).

#### *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.

Refer to the Groundwater and Surface water Monitoring Report in Appendix 3.

### **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.

### *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.

**Pacific Environment** have recommended that Newnes Kaolin seek to amend the current AQMP to reflect the on-site activities. In particular they recommended that the AQMP be amended to include the E-sampler to measure PM10 and delete reference to a High Volume Air Sampler.

In view of the limited data capture achieved by the on-site meteorological station Newnes kaolin is currently evaluating the next course of action to resolve the issue. Note that it is intended to replace the E sampler with two High Volume Air Sampler instruments once power can be brought to the site.

### *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 third 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 expects to have sufficient monitoring data to be able to discern any trends before the commencement of operations in about 2020.

*a) Air quality*

As reported by **Pacific Environment** PM10 concentrations were available for 5 days during the reporting period. The highest 24-hour average PM10 concentration was 12 ug/m<sup>3</sup> recorded on 1<sup>st</sup> December 2016. This value was below both the performance indicator of 37 ug/m<sup>3</sup> and performance criterion of 50 ug/m<sup>3</sup>

Similarly the TSP concentrations were available for nine days during the reporting period. The highest 24 hour average TSP concentration during the reporting period was 16 ug/m<sup>3</sup> recorded on 23 February 2017.

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. As reported by **Pacific Environment** the annual average dust deposition rates of the monitoring sites indicate that compliance with the dust performance indicator (3 g/m<sup>2</sup>/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 SWI 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 to the May 2016 CCC meeting the PIRMP was subjected to a desktop test for the first time. 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 2018/2019, 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:

14<sup>th</sup> meeting of the CCC was held on 11<sup>th</sup> May 2017

15<sup>th</sup> meeting of the CCC was held on 29<sup>rd</sup> November 2017

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

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## **APPENDICES**

- 1) Flora and Fauna – Annual Monitoring Summer 2018 – by Consulting & Environmental Services Lithgow
- 2) Groundwater & Surface Water monitoring report – by Pells Sullivan Meynink Engineering Consultants
- 3) Air Quality Monitoring Assessment by Pacific Environment
- 4) ALS Laboratory Group monitoring data reports -

refer to project website – [www.sydneyconstructionmaterials.com](http://www.sydneyconstructionmaterials.com)

**Appendix 1 – Flora & Fauna – Annual Monitoring summer 2018**

report by : Consulting & Environmental Services, Lithgow, NSW – dated 21 March 2018

(under separate cover)

## **Appendix 2 - Groundwater and Surface Water monitoring report**

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**By: Pells Sullivan Meynink Engineering Consultants - report dated 28 March 2018**

**(under separate cover)**

## **Appendix 3 - Air Quality Monitoring report**

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**By: Pacific Environment, Sydney office, dated 21 March 2018**

**(under separate cover)**