

# Singleton Shire Healthy Environment Group

## “Rixs Creek South Mod 10 - March 2019”



*A community-based group looking to address Environmental issues affecting Singleton Shire residents*

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We seek identification as to what is making our Children and Community Sick so they can be mitigated by OH&S Compliance Orders.

### **SSHEG Focus on Health**

SSHEG is Not Anti Mining or Anti Power Stations

Department of Planning & Environment

GPO Box 39

Sydney NSW 2001

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21 March 2019

## **“Rixs Creek South SSD MOD DA49/94 - Extension of time”**

This SSHEG response is for conditional support for continuation of Mining at Rixs Creek Mine (RCS), as a means to maintain the employment balance while Mines Drifting Air Pollution and their Community Health impacts (as reported by medical Doctors) can be by “Mine Approval Conditions minimised” to acceptable WHO and National Standards; as a first step in NSW.

In 2008 two Singleton Medical Doctors were reporting to NSW Health that Open Cut mining and Coal fired Power Stations were Polluting the Hunter Valley Air to the extent that Residents and especially Children experienced Medical episodes the likes of which were previously unheard of, and medications were struggling to counter these Disease impacts.

Ten years of SSHEG Hunter Valley Air Pollution research and dialogue; three years with NSW Health; five years examination with the Upper Hunter Mining Dialogue has been unable to move Institutional Air Pollution practices. By Oct 2013 the World Health Organisation however emphatically declared the Disease associations and life shortening impact of all levels of Airborne Pollution.

Ten years later now in 2019, again as they did in 2008 Singleton Hunter Valley Doctors are; like our forefathers 100 years earlier, questioning Authorities regarding “Deaths and Sickness from Mining”. Refer Newcastle Herald headlines.

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SEPTEMBER 5 2018 - 11:00AM

## Doctors invite NSW Government ministers for a coalfields stay to experience air pollution first-hand

Joanne McCarthy Local News

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 Doctors say government ministers should breathe Upper Hunter air before approving more coal mines.

HUNTER doctors have taken the unprecedented step of inviting government ministers to stay overnight near Upper Hunter coal fields and experience

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The NSW Health in their reviews and comment on NSW Government Department of Planning & Environment Major Projects Assessments in recent years have detailed their particular concerns relating to Air Quality and impacts on Residents, including having to restate their concerns previously raised regarding impacts on Air Quality.

Realistically, this application for Extension of time of the 1994 Development application DA49/94 coincides across the same Coal Resource with the Rixs Creek Continuation of Mining Project SSD (6300), where the Community Air Quality impacts on Residents has been detailed by NSW Health in “Agency Submissions” dated 3 Dec 2015, 8 Dec 2016 (29 June 2018 illustrated) and 21 Dec 2018. Thus Mod 10 is an application against SSD 6300.

The Health (Disease) summary for Air Quality is detailed on 3 dec 2015:-

*“There is no evidence of a threshold below which exposure to particulate matter (PM) is not associated with health effects. Therefore, it is important that all reasonable and feasible measures are taken to minimise human exposure to PM, even where assessment criteria are met.*

The 28th August 2018 IPC Report for Rixs Creek Continuation SSD 6300 demonstrates that NSW Health<sup>#</sup> is insisting upon “*Mitigation of impacts below traditional acquisition zones*“, while the mine to gain approval is simply trimming its Coal Mining Rate to fall below the already outdated Evaluation Modelling Guidelines and NEPM WHO 2005 based Standards.


SSHEG Community Healthy Living focuses upon Mine Pollution Disease Impacts on Residents - breath by breath; insisting that mines Mitigate Pollution by “*Minimising to World Health Organisation ongoing identified Guidelines*” over each 15 Minute period, of Cumulative Locality readings for PM10 and PM10-2.5 & PM2.5:

**That is the Healthy Air we Breath criteria!**

Thus, SSHEG calls for a Culture Change to “*Minimise Mine Air Pollution Emissions at their every source*”, and referencing 15 Minute PM10 and PM2.5 Real Time Monitoring at specific Resident Localities for Mitigation.

**“Support for NSW Health detailed recognition for Residents around Rixs Creek Mines”**

**Hunter New England Local Health District**  
**Hunter New England Population Health**  
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**Health**  
Hunter New England  
Local Health District

#

29 June 2018

Ms Genevieve Seed  
Senior Planning Officer  
Resource Assessments | Planning Services  
NSW Department of Planning and Environment  
320 Pitt Street | GPO Box 39 | Sydney NSW 2001

Dear Genevieve

Re: RIX'S CREEK COAL MINE CONTINUATION OF MINING PROJECT SSD 6300 - RESPONSE TO REVISED RESPONSE TO SUBMISSIONS

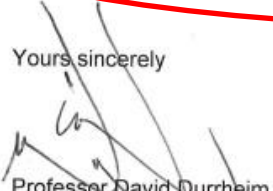
We understand that the Independent Planning Commission have sought further clarification as to whether NSW Health's concerns with regard to air quality have been addressed in the proponent's response to submissions and revised response to submissions.

Further review of Appendix H has revealed that the new NEPM air standard for annual average PM10 of 25  $\mu\text{g}/\text{m}^3$  is not predicted to be exceeded in the residential areas immediately north of Singleton are but at least one residence is predicted to reach 25  $\mu\text{g}/\text{m}^3$  and many other residences will be in the vicinity of the goal due to incremental emissions from Rix's Creek and existing air pollution from surrounding mines. Many private residences that are not in the acquisition zones within McDougall Hill and Singleton Heights will have significantly increased predicted daily PM10 impacts from the mine – many with an incremental average 24 hour PM10 impact of 20 to 30  $\mu\text{g}/\text{m}^3$  (Appendix H, Table 3). The cumulative impact at the Country Acres Caravan Park is predicted to exceed the NEPM average 24 hour PM10 goal of 50  $\mu\text{g}/\text{m}^3$  (Appendix H, Table 6, Figure 3 and 4 - noting that the tolerance of 5 days of exceedance of the goal per annum has been removed from the revised NEPM). There are also incremental impacts in mine owned residences and residences subject to acquisition.

While the EIS focuses on assessment criteria we note that there is no evidence of a threshold below which exposure to particulate matter (PM) is not associated with health effects. Therefore, it is important that all reasonable and feasible measures are taken to minimise human exposure to PM.

On review of the revised response to submissions we note that multiple residential areas will experience increased PM10 impacts. If the project is approved it will be important to consider the need for mitigation of impacts beyond traditional acquisition zones, the impact on residential expansion surrounding the mine and targeted interventions such as those promoted through the Dust Stop Program.

Yours sincerely

  
Professor David Durrheim

**Its Community Healthy Living versus Mining Employment Balance!!**



## The extent of the Disease Concern is outlined in SSHEG Submission of Dec 2015 and the Response to Mine Response to Submissions (RTS) by NSW Health and EPA as illustrated below:-

L, however, we note these were difficult to identify in this document. Figure E26 in Appendix L provides the most detailed cumulative annual average PM<sub>10</sub> predictions for the highest impact year of 2023 (below). The areas highlighted with orange lines indicate significant population areas predicted to lie between 20 and 30 µg/m<sup>3</sup> in Singleton Heights and McDougalls Hill and higher in Camberwell. This suggests the annual PM<sub>10</sub> emissions will exceed the current NEPM of 25 µg/m<sup>3</sup>. We acknowledge the response that health impacts are predominantly driven by PM<sub>2.5</sub> rather than PM<sub>10</sub> effects, however, there is emerging evidence that the long term exposure to the coarse fraction (PM<sub>2.5-10</sub>) can have respiratory impacts.

### NSW Health Response to RTS 8 Dec 2016

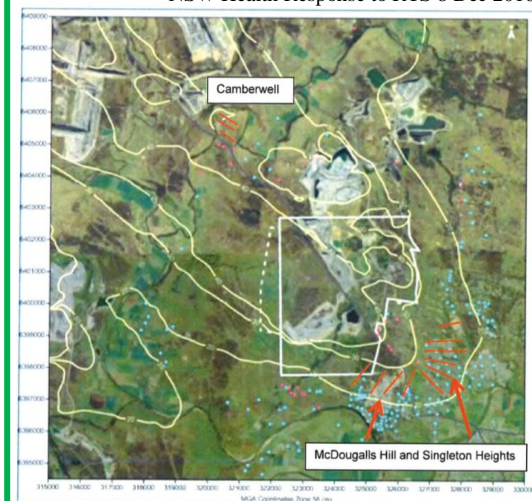


Figure E-26: Predicted annual average PM<sub>10</sub> concentrations due to emissions from the Project and other sources in 2023

### SSHEG Rixs Creek Mine Continuation Dec 2015

In the Short Term, the Upper Hunter Air Quality Monitoring Network has confirmed the Valley Air Pollution Streamline Flow Drifting behaviour of PM<sub>10</sub> and PM<sub>2.5</sub>. The WHO Disease significance now of Rixs Creek Mine Daily PM<sub>2.5</sub> Emissions is coupled with the South Easterly Valley Air Drifting Flow Patterns towards Singleton Residents is illustrated in Figure 1 below. This combination establishes the requirement for Rixs Creek Mine along with other Hunter Valley Mines to strategically locate “Concurrent PM<sub>10</sub>, 2.5 TEOM Type Monitors”, which are then expected to provide the basis for PM<sub>2.5</sub> Fine, PM<sub>2.5-10</sub> Coarse, and PM<sub>10</sub> Real Time Pollution Mitigation Controls to protect Residents.

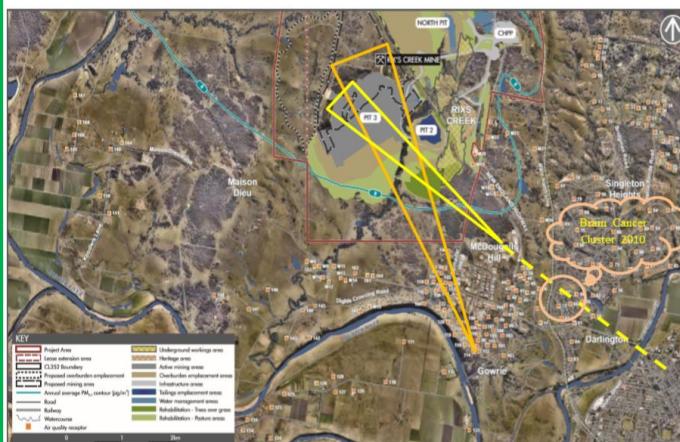


FIGURE 1 Illustration of Air Pollution Drifting Impact on Singleton Assessment Resident Groups

### EPA Response to RTS Report 15 Nov 2016 ATTACHMENT A:

#### Environment Protection Authority's Air Quality Assessment Review RTS

The Environment Protection Authority (EPA) has undertaken a review of the Response to Submissions (RTS) report titled “Rixs Creek Mine – Continuation of mining project Environmental Impact Statement Response to Submissions”, dated 20 October 2016, in relation to the Rixs Creek Coal Mine Extension Project, SSD 6300. The EPA has also reviewed the documents titled “Air quality and greenhouse gas assessment, Rixs Creek continuation of mining project” by Todoroski dated 26 August 2015 (Todoroski 2015) and the Environmental Impact Statement dated 26 October 2015. The EPA provides the following comments in relation to air quality matters.

#### Estimated Impacts from the proposal

The assessment predicts exceedances of the air quality impact assessment criteria at non-mine receptors as summarised in the table below, taken from Todoroski 2015.

#### Impacts greater than criteria – non-mine receptors

| Receptor ID | 24-hr              |                         |      |      |      | Annual  |  |                                |                                  |
|-------------|--------------------|-------------------------|------|------|------|---|--|--------------------------------|----------------------------------|
|             | PM <sub>10</sub>   |                         |      |      |      | PM <sub>10</sub> , PM <sub>2.5</sub> , TSP, dust deposition |  |                                |                                  |
|             | 50                 | cumulative # extra days |      |      |      | 30  | 8  | 90                             | 4                                |
| criteria    | year max           | 2017                    | 2020 | 2023 | 2026 | year max  | year max                                 | year max                       | year max                         |
| 1           | 2020 71<br>2023 77 | 2                       | 21   | 32   | 4    | 2020 34<br>2023 36  |  |                                |                                  |
| 19          |                    | 1                       | 1    | 3    | 1    |   |  |                                |                                  |
| 81          |                    | 2                       | 5    | 5    | 4    |   |  |                                |                                  |
| 140         |                    | 3                       | 2    | 4    | 1    |   |  |                                |                                  |
| 151         |                    | 1                       | 1    | 2    | 1    |   |  |                                |                                  |
| 163         |                    | 3                       | 3    | 1    |      |   |  |                                |                                  |
| 164         |                    | 1                       | 1    | 1    | 1    |   |  |                                |                                  |
| 170         |                    |                         |      |      |      | 2017 79<br>2020 100<br>2023 103<br>2026 99                  | 2017 14<br>2020 16<br>2023 17<br>2026 16 |                                | 2020 5.3<br>2023 5.4<br>2026 5.3 |
| 171         |                    |                         |      |      |      | 2023 36   |  |                                |                                  |
| 172         |                    |                         |      |      |      | 2017 41<br>2020 47<br>2023 46<br>2026 43                    | 2017 9<br>2020 10<br>2023 10<br>2026 9   | 2020 101<br>2023 99<br>2026 95 |                                  |
| 173         |                    |                         |      |      |      | 2017 43<br>2020 39<br>2023 39<br>2026 34                    | 2017 9<br>2020 9<br>2023 9               | 2017 92                        |                                  |
| 174         |                    |                         |      |      |      | 2017 37<br>2020 37<br>2023 36<br>2026 33                    | 2017 9<br>2020 9                         |                                |                                  |
| 175         |                    |                         |      |      |      | 2017 36<br>2020 36<br>2023 36<br>2026 39                    |  |                                |                                  |
| 176         |                    |                         |      |      |      | 2017 38<br>2020 39<br>2023 38<br>2026 35                    | 2017 9<br>2020 9<br>2023 9               |                                |                                  |

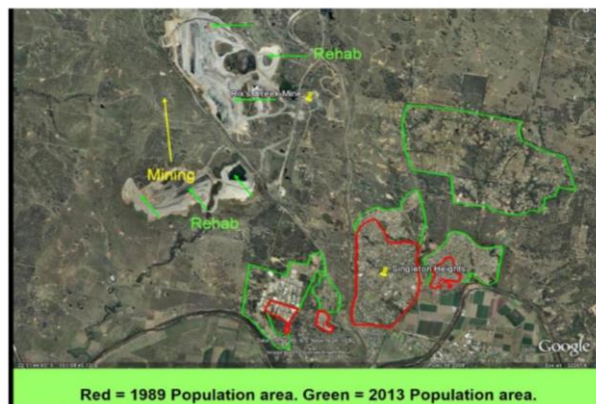
Rixs Creek planned 40yr Mine Life approval in 1995 included Air Quality Assessments for 22<sup>nd</sup> year 2018, only for Annual Average **Dust** Deposition & **Dust** Concentration levels; with 24 Hour TSP (<50µm) HVAS sampling at Singleton Heights, Retreat and East of the Mine. Most common winds were NNW-SE or SSE, as now illustrated.

**More Residents now live SE of Mine Pollution Plumes.**

Mine Polluted Air Drifting SE Patterns impact Singleton Heights; as does the Diesel Exhausts of the New England Hwy & Coal Trains, & Power Stn Fly Ash Plume drifts.

### Rix's Creek Mine Community Consultative Committee Meeting Minutes –27/05/2014

Rehabilitation has been designed to shield the operation from nearest residences / townships and to move away aligned to production rates.



Red = 1989 Population area. Green = 2013 Population area.

In the Hunter Valley the “*Corridors of Mine Air Pollution*” are observed to generally Drift across the Valley floor on the NNW-SE and SSE Corridors, as well as into Microvalleys pockets adjoining the Escapements.

The 1995 Rixs Creek Mine Consent apparently recognised these impacts by limiting Mine operation when Air Drifting Wind Velocity was adjudged at the time to impact Camberwell, Maison Dieu and Singleton Heights. **Perhaps this continues today!**

| AIR QUALITY |  |
|-------------|--|
| 23. (i)     | The Applicant shall cease all mining operations at any time when the average hourly wind velocity from any direction exceeds 10 m/s.   |
| (ii)        | The Applicant shall cease all out-of-pit overburden dumping and shaping, topsoil stripping and emplacement and bund wall and earthworks construction at any time when the average hourly wind velocity exceeds 5.6 m/s from the segment due west clockwise through to the northeast. |
| (iii)       | The Applicant shall cease all mining operations at any time when visibility is impaired on the New England Highway as a result of mining operations in accordance with the requirements of the Council.  |

| DUST SUPPRESSION   |  |
|--|--|
| 24. (i)  | The Applicant shall provide a standby water cart for each operating water cart proposed in the EIS at each stage of mining.  |
| (ii)   | the Applicant shall install automatic water sprays on the coal stockpiles such that the stockpiles are sprayed when the wind speed from any direction exceeds 5.6 m/s.   |
| Automatic water sprays have been installed on coal stockpiles in compliance with this condition. Refer to Section 3.8. As part of the future operations it is proposed that adequate road watering equipment will be available for the scale of the operation. |  |
| ENVIRONMENTAL OFFICER  |  |
| 25.  | Prior to the commencement of any construction or operations in the coal lease application area the Applicant shall appoint an on-site environmental officer responsible directly to the mine manager whose qualifications are to the satisfaction of the Department. |

Today, SSHEG calls for a Culture Change to “*Minimise Mine Air Pollution Emissions at their every source*”. **Our comprehensive 10 years Air Quality Health investigations outlined below are worthy of further consideration by all as a way forward.**

It is no wonder that NSW Health would not water down its objections to the guidelines to Mine Approvals, rightly reminding the Authorities, as is also the SSHEG opinion, that lower Mine Pollution well below the “Industry Status Quo” are now overdue.

**That is “*Minimisation of Mine Pollution At all times*”.**

*Thanking you in anticipation of your acknowledgement.*

Dr Neville Hodkinson PhD

**Singleton Shire Healthy Environment Group**