Coral Berry
PO Box 287
RAYMOND TERRACE NSW 2324

21 July 2023

Jessie Evens
Director
Energy and Resource Assessments,
Department of Planning and Environment NSW

Dear Jessie Evans,

RE: Stone Ridge Quarry Project - SSD-10432 EXH-59321711

My friends live near the proposed quarry, and they will be directly affected by this Project's construction and operation. It is a great concern that my friend has health conditions which could be severely exacerbated by dust emitted from the quarry. Furthermore, as a resident of Raymond Terrace, 14 km south of Balickera, I am concerned for the health and safety of the travelling public and people living in the nearby suburbs, which will be impacted by air, water and noise pollution created by this quarry.

I am objecting to the proposed quarry on the following grounds that it turns a healthy environment to a health hazard. This quarry will be toxic to present and future generations of humanity, fauna, and flora. Furthermore, it will be toxic to the environment in terms of air, noise, soil, and water pollution.

Noise pollution will come from the construction, the operation of the quarry, the weekly explosions and traffic noise from heavy haulage trucks. There will be over 300 truck movements a day from Balickera to as far as Sydney, which will increase traffic noise. The noise pollution from this Project will take away the tranquillity the residents and wildlife currently experience. Noise pollution can cause stress which can cause stress-related health problems to people, agriculture involving animals, pets, and wildlife (1).

Explosions from the quarry will put the community at risk of harm from toxic blast fumes such as nitrogen, nitrogen dioxide and nitric oxide. Some weather conditions can cause the gas plume to persist, consequently it could affect nearby people or residents who are downwind of the blast site (2). I have been told by a person that she breathed in toxic fumes from an explosion of a quarry that was 10 kilometres away. She was so ill that she was admitted to hospital and consequently has a chronic respiratory condition.

NSW Health has warned that symptoms from exposure of blast fumes can include eye, nose and throat irritation and coughing. Dizziness and headache. Shortness of breath, wheezing or exacerbation of asthma. Serious lung inflammation (pulmonary oedema) has been known to develop several hours after exposure to very high levels of Nitrogen dioxide.

Crystalline silica is one of the commonest minerals in the earth's crust and forms a proportion of the many materials extracted from quarries (03). For example, silica is found in certain types of stone, rock, sand, and clay (02.). When crushed or abraded during quarrying processes, materials containing silica create respirable crystalline silica (RCS) dust. It is this respirable dust that is associated with the respiratory disease silicosis (03).

Kelvin Duncan, a microbiologist states that coughing is caused by the larger particles of dust, but it's the smaller ones that are a known danger (05). They're released when the… rock gets crushed. These microscopic particles have sharp edges and corners and are known to interfere with lung metabolism (05). Furthermore, when these particles enter the lungs, the dust particles are attacked by the immune system. This causes silicosis (03). This disease makes breathing more difficult and increases the risk of lung infections (04). 'Exceptionally high exposures over a few months or years can cause acute silicosis, which can cause death within months of exposure. Heavy and prolonged exposure to RCS under the conditions that produce silicosis can cause lung cancer (04)'.

Animals can inhale silica dust into their lungs. A study of tissue samples from 259 domestic and wild animals exposed to silica dust from quarries and other sources in the environment found that 201 animals in this study had crystalline material visible by microscopy in their lungs (6).

According to the Cancer Council, 'there is currently no evidence to suggest a safe level of silica dust exposure (7)' and using protective measures will not guarantee people against silicosis. Furthermore, it may not be possible to eliminate silica dust emanating from a quarry - even with health and safety measures in place (8). The Cancer Council states, 'if you want to prevent silicosis or cancer, then prevent silica dust exposure by keeping the dust out of the air (7)'.

Companies who operate quarries that release silica into the atmosphere are expected to follow WHS regulations and provide their employers with protective equipment (3). 'There is no such protection for people who live near quarries. Older people, those with existing respiratory conditions such as asthma, and young children are particularly vulnerable to airborne silica entering their lungs. The risk of harm to health is higher where the prevailing winds carry dust from quarries towards residential settlements and schools (3)'. Furthermore, residents and the travelling public will be exposed to dust left on the roads by the 336 trucks a day on their way to and from the consumers of these products.

The Cancer Council estimates that approximately 600,000 Australians are exposed to silica dust at work each year. However, silicosis is often not diagnosed until it is in its advanced stages. Approximately 350 Australians contract silicosis a year. A further 230 people annually are estimated to be diagnosed with lung cancer caused by exposure to silica dust in the workplace (9 p.5). Other diseases caused by breathing in silica dust include chronic obstructive pulmonary disease (affects lung function) kidney disease and renal failure, scleroderma (affects connective tissue, resulting in scar tissue in skin, joints, or other organs of the body) rheumatoid arthritis (severe and chronically inflamed joints in hands, hips, and knees) increased risk of autoimmune disease and tuberculosis, eye irritation and eye disease (9 p. 7).

Decorative stone will be taken from this quarry in the context that all States, Territories, and the Federal Government are considering banning rock containing dangerous levels of silica to not be processed. This measure is to reduce the growing numbers of people who work in this industry being diagnosed with silicosis (10). Despite the proposed ban for engineered products, Johnathan Walsh, from Maurice Blackburn Lawyers states that this proposed legislation does not go far enough because 'The epidemic of silica disease is not confined to the stonemasonry industry; it is rampant in our metalliferous mining, tunnelling, quarrying and construction industries too. More can and should be done by our Federal, State and Territory governments to better protect workers.' Maurice Blackburn, the ACTU and the AWU are taking this issue head on to protect workers (12). If Maurice Blackburn Lawyers, the ACTU and the AWU are successful in banning the silica industry, then the Strong Ridge Quarry could have to make serious changes or become a white elephant, hence the quarry will fail in being a sustainable venture.

Expenditure on respiratory disease accounted for $4.460 billion in 2018-2019 with the costs of several diseases including silicosis 100% attributable to occupational exposure and hazards. This sum doesn't include non-work exposure and the additional cost to the individual and their families and friends, which is significant (11). Furthermore, the above expenditure doesn't include the health cost of the other chronic diseases caused by silica. People suffering from chronic and severe illness from silica dust reach the stage where they are unable to contribute to the economy and need to depend on Centrelink for income support. Hence, silica dust has become a major burden to society.

Diesel fuel, like gasoline, is a hydrocarbon-based fuel. Short-term exposure to diesel fumes, such as when you fuel your truck or clean up a small spill, can temporarily irritate your eyes, skin, or respiratory tract and/or cause dizziness, headache, or nausea. However, longer-term exposure may lead to more serious health concerns, such as lung cancer, kidney damage, and increased risk of heart attack (14).

Diesel exhaust, a specific type of diesel fume, has more negative health effects than regular diesel fumes. Short-term exposure can irritate your eyes, nose, throat, and lungs; it can cause coughs, bronchitis, headaches, light headedness, and nausea (14).

Lengthy exposure to diesel exhaust may increase your risk of developing asthma, a variety of lung diseases, heart disease, as well as brain and immune system issues. In studies using human volunteers, exposure to diesel exhaust particles made people with allergies more susceptible to the materials to which they were allergic, like dust and pollen. Exposure may also trigger lung inflammation, aggravating chronic respiratory symptoms and increasing the frequency and severity of asthma attacks (14).

A panel of scientific experts convened by the World Health Organization's (WHO) International Agency for Research on Cancer (IARC) concluded in June 2012 that diesel engine exhaust is a Group 1 carcinogen – that is, carcinogenic to humans (15).

Canadian research (May 2018) found that most lung cancers caused by occupational diesel engine exhaust are the result of exposures to low concentrations of the substance (16).

More recent (November 2020) research has found that professional drivers face a routine and serious health risk from diesel exhaust fume exposures at work (15).

Therefore, the large amount of diesel exhaust fumes made to operate the proposed quarry and transport rock products will put the health of workers and the community at risk.

This quarry will go on a hill 98 metres above sea level which has its own natural system of streams, creeks and ponds which drain downhill towards the Balickera Canal. The quarry of 79 hectares will create a large hole in the ground that will disrupt the existing movement of surface water and groundwater. Furthermore, drilling into rock will change the chemical balance of this water. It is most concerning that mining into rock can release arsenic in a location close to the Grahamstown Dam and Balickera Canal which are parts of the drinking water infrastructure for the region. Changes to the natural landscape will at least reduce the quality of drinking water for wildlife living downstream from the quarry site or may even poison wildlife if the water becomes contaminated by arsenic.

A study of agriculture near a stone quarry found that the consequential dust deposits on trees and vegetation caused some species of trees and plants to die while surviving plants provided a reduced crop yield. The study also found that the dust had an impact on the surrounding soil and surface water which also could play a part in the health of vegetation (17). This study suggests that the health of the forest surrounding the quarry will be harmed by dust from the quarry. Furthermore, animals that eat plants in these areas will be subject to the harmful effects of dust.

The large number of heavy haulage trucks used to transport rock from the quarry will cause damage to Italia Road and the Pacific Highway. This cost of repairs to some extend will be paid by rate and taxpayers. The former Government proposed an overpass for the Pacific Highway and Italia Road for $9 million in 2021. This proposal has not been delivered (19). If the quarry goes ahead the need for an overpass at Italia Road should become a priority government project to prevent fatal accidents at the present dangerous intersection.

This project will remove 79 hectares of forest which sequesters carbon that causes global warming. Global warming is occurring at an alarming rate, for example, out of control bush fires in Greece and Canada while at the same time Scientist declare there is less winter ice around Antarctic each year. For example, fossil fuel global warming is causing Antarctica to lose its ice mass (melting) at an average rate of about 150 billion tons per year, and Greenland is losing about 270 billion tons per year, adding to sea level rise (18). This quarry will add to global warming at a time when all global warming projects should be banned to save humanity and the planet.

The evidence of toxins from quarries presented above confirms my fears that this quarry will put the health of Balickera residents and nearby communities at risk. Furthermore, the cost involved to remedy negative consequences caused by this quarry can not be offset by the quarry's profits and contribution to the economy. I therefore, express my opposition to the proposed project.

I have not made any reportable donations to a political party in the last two years, and I also acknowledge and accept the Department's Disclaimer and Declaration.

Thank you for your careful consideration of my submission.

Kind Regards,

Coral Berry

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