6 March 2018

Rose-Anne Hawkeswood
NSW Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

Dear Rose-Anne,

RE: CLEAN TEQ SUNRISE PROJECT MODIFICATION 4 – THIRD PARTY LIMESTONE SUPPLY JUSTIFICATION

Please find below an expanded justification for the proposed third party limestone supply proposed in the Clean TeQ Sunrise Project (the Project) Modification 4 Environmental Assessment (the EA).

As described in Section 3.61 of the EA, additional limestone would be required for the tailings neutralisation circuit to neutralise the additional sulphuric acid required for the modified Project.

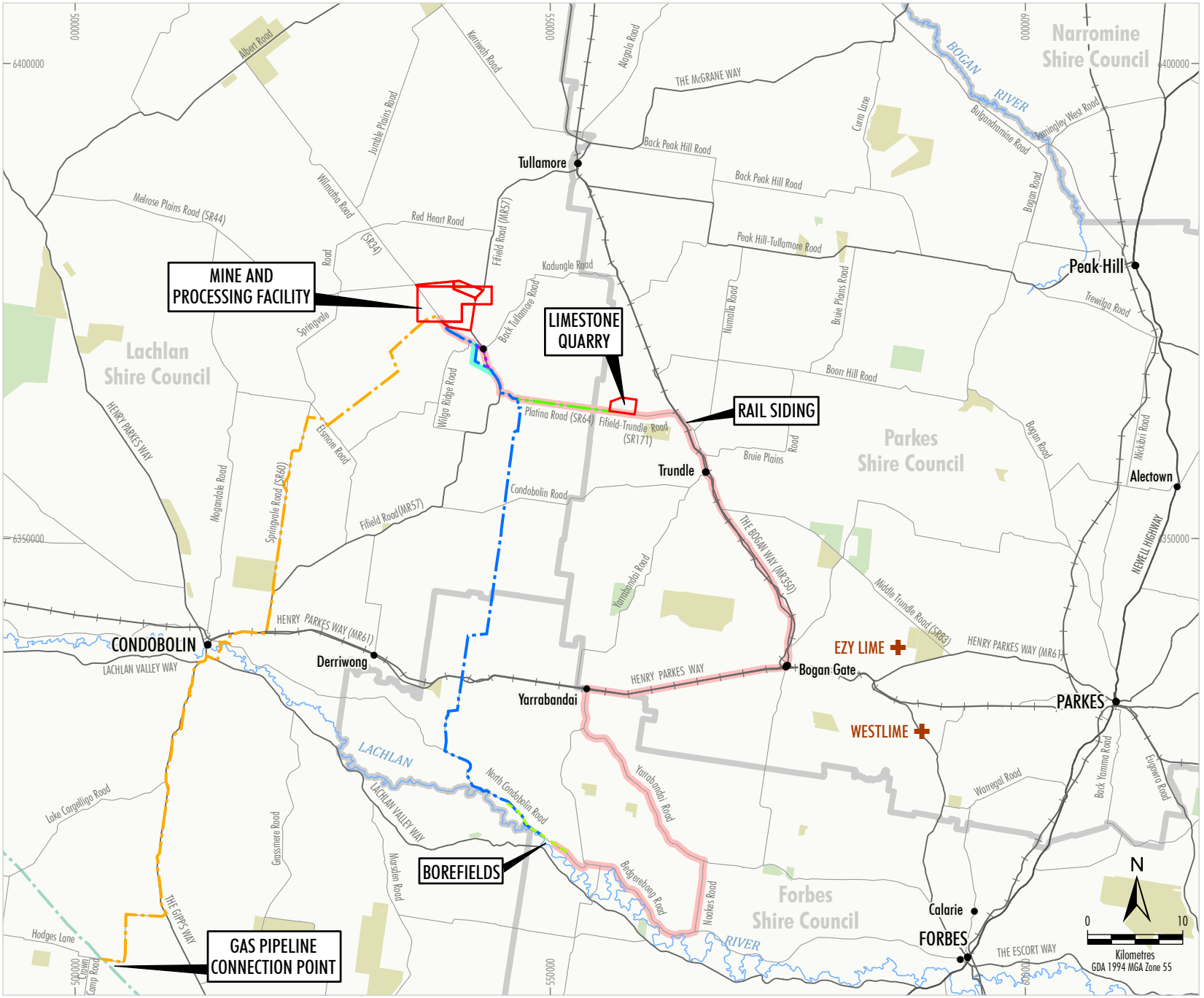
To meet this additional limestone demand, it is proposed that up to approximately 560,000 tonnes per annum (tpa) of higher quality limestone from third party suppliers would be used to supplement the Project limestone quarry supply. The limestone would be transported from external suppliers by road. The combined maximum amount of limestone transported from the Project limestone quarry and third party suppliers would be 990,000 tpa (Section 3.6.2 of the EA).

There are a number of existing limestone quarries in the vicinity of Parkes, including the Ezy Lime and WestLime limestone quarries (Figure 1).

The proposed sourcing of higher quality limestone from third party suppliers to supplement the Project limestone quarry supply would:

- avoid increased amenity and surface development area impacts at the Project limestone quarry;
- result in improved processing plant operational efficiency and therefore lower operational costs;
- result in a smaller tailings storage facility footprint and therefore lower construction and operational costs; and
- reduce road transport of limestone (by mass) to the mine site (although the limestone would have to be transported further).

Clean TeQ Holdings Limited ABN 34 127 457 916
12/21 Howleys Rd, Notting Hill VIC 3168 Australia I PO Box 227, Mulgrave VIC 3170 Australia
T: +61 3 9797 6700 F: +61 3 9706 8344 E: info@cleanteq.com



LEGEND

- NSW National Parks and Wildlife Service
- State Forest
- Local Government Boundary
- Railway
- Existing Gas Pipeline
- Mining Lease Application Boundary
- Approved Gas Pipeline
- Approved Water Pipeline
- Approved Limestone Quarry Water Pipeline
- Approved Borefield Infrastructure Corridor
- Approved Fifield Bypass
- Proposed Water Pipeline Alignment Option (MOD 4)
- Proposed Short-term Water Transport Route (MOD 4)
- Limestone Quarry

Source: Black Range Minerals (2000); NSW Department of Industry (2017); NSW Land and Property Information (2017); Office of Environment and Heritage NSW (2017)

CLEAN TEQ SUNRISE PROJECT

Regional Location and Location of Potential Third Party Limestone Suppliers

Figure 1

CTL-16-02 Mod4_Limestone JL_201A

The Road Transport Assessment (GTA Consultants, 2017) considered the implications of third party limestone supply and concluded that no significant impacts on the performance capacity, efficiency and safety of the road network are expected to arise as a result of the modified Project.

Further explanation of these points is provided below.

If the additional limestone for the modified Project was solely sourced from the Project limestone quarry, the amount of limestone required for the tailings neutralisation circuit would increase from 990,000 tpa (as proposed in the EA) to approximately 1,200,000 tpa. This increase would be required as the limestone from the Project limestone quarry would be lower quality (i.e. lower calcium carbonate concentration per mass and therefore lower neutralising capacity) compared to the third party supplier limestone.

For the Project limestone quarry to solely supply this amount, the following changes to the approved Project limestone quarry would be required:

- surface development area expansion to allow for the recovery of additional limestone required over the Project life; and
- an approximate 50% increase in production rate (i.e. from 790,000 tpa to 1,200,000 tpa).

The increased limestone demand would also result in the following (relative to modified Project described in EA):

- increased road transport of limestone (by mass) to the mine site (although the limestone would be transported a shorter distance);
- reduced processing facility operational efficiency as more limestone would need to be handled/processed; and
- increased tailings storage facility footprint would be required as the limestone used in the tailings neutralisation circuit reports to the tailings storage facility.

Table 1 provides a summary of the potential implications of solely sourcing limestone for the modified Project from the Project limestone quarry.

Table 1: Summary of Potential Implications of Solely Sourcing Limestone from the Project Limestone Quarry

Aspect Considered	Limestone Supply Option	
	Project Limestone Quarry Only (increase rate and total disturbance)	**Project Limestone Quarry Supplemented with Third Party Limestone** (as described in the Modification 4 EA)
Project Limestone Quarry		
Amenity impacts of the Project limestone quarry associated with the increased production rate (e.g. potential air, noise and blast impacts).	The potential amenity impacts would increase, generally in proportion to increased production rate (i.e. approximately 50% increase from the approved Project).	No change to the approved amenity impacts.
Surface development impacts of the Project limestone quarry associated with the increased surface development area (e.g. potential heritage and biodiversity impacts).	The total surface development area would likely increase significantly (e.g. the ~30% increase in production rate included in Modification 1 required an increase in the total surface development area of approximately 70%). This increase in surface development area would likely lead to additional biodiversity and/or heritage impacts.	No change to the approved surface development area impacts.
Road Transport		
Impacts associated with transport between the limestone quarry to the mine (e.g. traffic through Fifield).	Road transport volumes associated with limestone would increase, generally in proportion to increased production rate (i.e. approximately 50% increase from the approved Project).	Road transport volumes associated with limestone would increase, generally in proportion to increased production rate (i.e. approximately 25% increase from the approved Project). The Road Transport Assessment (GTA Consultants, 2017) concluded that no significant impacts on the performance capacity, efficiency and safety of the road network are expected to arise as a result of the modified Project.
Impacts associated with transport from the third party limestone suppliers to the mine (e.g. traffic through Trundle).	Road transport associated with limestone would not change compared to the approved Project (i.e. no third party limestone supply).	Road transport volumes associated with limestone would increase, generally in proportion to increased production rate (i.e. approximately 25% from the approved Project). The Road Transport Assessment (GTA Consultants, 2017) concluded that no significant impacts on the performance capacity, efficiency and safety of the road network are expected to arise as a result of the modified Project.
Processing		
Processing Facility Operational Efficiency	The operational efficiency of the processing facility would decrease as additional limestone (an approximate 20% increase) would need to be handled/processed compared to the modified Project resulting in increased operational costs.	The operational efficiency of the processing facility would decrease compared to the approved Project, but less than if all limestone was sourced from the Project limestone quarry.
Tailings Storage Facility	The tailings storage facility footprint would increase to store the additional tailings generated resulting in significant increases in construction and operational costs.	The tailings storage facility footprint would increase, but less than if all limestone was sourced from the Project limestone quarry.

Given the above, it is considered that the proposed sourcing of higher quality limestone from third party suppliers to supplement the Project limestone quarry supply is justified on environmental, economic and social grounds.

Yours sincerely,

CLEAN TEQ HOLDINGS LIMITED

JOHN HANRAHAN
ENVIRONMENTAL & APPROVALS LEAD – CLEAN TEQ SUNRISE PROJECT