



DUNGOG SHIRE COUNCIL

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Ref: SSDA1; 21/10667

30 July 2021

Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

By email: james.mcdonough@dpie.nsw.gov.au

Dear Mr McDonough

RE: MARTINS CREEK QUARRY PROJECT SSD-6612

I refer to your correspondence dated 3 June 2021, inviting comments on the Amendment Report and Response to Submissions for the Martins Creek Quarry Project (SSD-6612). Council's submission was endorsed by the elected Council at an Extraordinary Meeting held on 28 July 2021.

Please find attached a copy of Council's submission for your consideration. If you wish to discuss this matter further, please contact my office on 02 4995 7777.

Yours faithfully


Gareth Curtis
GENERAL MANAGER


John Connors
MAYOR



DUNGOG SHIRE COUNCIL

SUBMISSION TO AMENDED STATE SIGNIFICANT

DEVELOPMENT 6612 – MARTINS CREEK QUARRY PROJECT

JULY 2021

Thank you for the opportunity to provide feedback on the amended Martins Creek Quarry Project. Correspondence to Council from the Department of Planning Industry and Environment (DPIE) dated 3 June 2021 invited both comments on the Amendment Report and Response to Submissions, as well as advice on recommended conditions. Dungog Shire Council staff have reviewed the Amended Report and Response to Submissions as well as the accompanying appendices and a Councilor workshop has been held to discuss the content of the application. As a result, Dungog Shire Council is of the view that the amended application is deficient in addressing the environmental, social and road network impacts and has engaged consultants to further review the adequacy of the noise and social impact assessments that were submitted with the application.

The Martins Creek Quarry proposal is unique in terms of its history and its location. Key features that are fundamental to Council's consideration of the impacts of the proposal include:

- The close proximity of rural residential dwellings to the proposed active pit;
- A haulage route that traverses a 50 km/hr residential local road network;
- The utilisation of a single lane timber bridge as part of the primary haul route;
- A haulage route that traverses through an active village centre that is also a heritage conservation area; and
- The availability of a rail siding

Given the above, Council is of the view that the proposal to transport 500,000 tpa of quarry product via Haul Road 1 will have significant impacts on the residents and the communities in the vicinity of the quarry and along the haul route. On this basis, Council cannot support the proposal in its current form and therefore is not in a position to provide recommended conditions at this time. Once the applicant has satisfactorily addressed all relevant issues through a further Response to Submissions document, then Council would be in a better position to assist DPIE with relevant conditions of consent. This approach has been discussed with the assessing officer from DPIE, who has confirmed with his supervisor that Council will be given an opportunity to provide further comment on the proposal and provide draft conditions following a further Response to Submissions report for the amended application.

Background

The lodgment of the amended State Significant Development Application (SSDA) for the operation of a hard rock quarry at Martins Creek has been informed by the public and private

submissions to the original SSSA but also the outcomes of numerous legal proceedings regarding the Quarry.

The existing Martins Creek Quarry is operating pursuant to a 1991 development consent. This consent is specifically defined via the Court of Appeal judgements as a quarry primarily for the winning of Railway Ballast. It is accepted that the current approved Martins Creek Quarry operations is a distinct type of development as opposed to a general hard rock quarry and therefore by virtue of its products and operations has reduced impacts on the environment and the community.

The 1991 development consent limited the area of extraction on the subject land and also via condition 6, limited the amount of quarry product which could be transported by road to 30% of the total product. From 2004 to 2012 the quarry was operated outside the terms of this development consent and this continued after the applicants acquired the quarry and until declarations and orders were made in 2019 defining the consent and restraining the breach of it.

Whilst the excessive truck movements in this period cannot be relied on as creating a base level of impact, they are relevant to show the impact of that volume of traffic on the community. They create a benchmark from which the impact can be assessed by the community.

Similarly the noise and dust emissions from production in breach of the 1991 consent cannot be relied as a base background noise and dust emission level but they do inform the community of the impact from those levels of production within lots 5 and 6.

The amended application seeks to focus on the reduction in the development activities from the original SSSA proposal and suggests these concessions make the development acceptable from an environmental and community perspective. The focus of the environmental assessment must be on the impacts of the proposed amended development on the environment and the community.

Section 1.4.1 of the Amended Report and Response to Submissions outlines what Daracon view to be the key parameters of the approved development as determined through the Land and Environment Court and the Court of Appeal. Their parameters are listed within the amended application document as follows:

- extraction primarily for the purposes of winning railway ballast
- extraction of rock from Lot 5 DP 242210 (in Western Lands) and not from Lot 6 DP 242210
- extraction of up to 500,000 tpa (effectively limited by the activities authorised by the EPL licence)
- continuing use rights for the Eastern Lands for the processing of material extracted from the Western Lands
- tertiary processing on the Eastern Lands of up to 449,000 tpa
- no limit on the number of trucks subject, provided that not greatly more than 30% of material per annum is transported by truck
- no limit on proposed haul route on public roads.

Having regard for the above, and the proposed amended development, Council considers that the proposal now incorporates the following:

- The proposal is for a new development application for a hard rock quarry and is not a modification or expansion of the previously approved quarry. The target resource comprises a high quality hard igneous rock suitable for concrete, aggregate, asphalt and sealing aggregate, ballast, gabion, rock fill, rock armour, road pavements, drainage and bulk fill operations. The existing approval was for extraction primarily for the purposes of winning railway ballast.
- The proposed development would result in approximately 22 hectares of additional land disturbance.
- Increased extraction from 500,000 tpa to 1.1 million tpa. This is an increase of 600,000 tpa, more than doubling current extraction.
- Up to 500,000 tpa is proposed to be transported by road. Under the current approval, road transport was restricted to 'not greatly more than 30% of material per annum' which equated to no more than 150,000 tpa based on a maximum extraction of 500,000 tpa.

Council's comments regarding specific aspects of the proposal and the Amendment Report and Response to Submissions are provided below.

Voluntary Planning Agreement

Council is not in receipt of any draft voluntary planning agreement, or any proposed contributions or actions for inclusion in such an agreement, for its consideration.

Traffic Impact Assessment and Pavement Condition Analysis

As the relevant Roads Authority for part of the haul route, Council is particularly concerned about the impacts of the proposal on the local road network. Council has undertaken a detailed review of the proposal based on a total exportation of 1.1M tonnes per annum, inclusive of a road haulage component of 500,000t per annum and the information provided within Appendix C – Traffic Impact Assessment and Appendix L – Pavement Condition Analysis.

In summary, the following issues have not been adequately addressed through the application:

- Increased deterioration of Council's Road Networks - up to 100% of all Class 9 Heavy Vehicles on Dungog Road south of the quarry will be generated by this development;
- Reduction in current pavement design lives;
- Increases in pavement rehabilitation costs due to increased traffic loadings;
- Insufficient detail and apparent underestimation of costs for Capital Works at intersections as identified by the applicant;
- Sight distance may be an issue at the proposed intersection of the internal haul route with Dungog Road;
- Lack of information with respect to calculation of haul road contributions and inadequate haul road contributions;
- Several sections of the haul route (including Dungog Road and Gresford Road) have extremely poor surface conditions which will require immediate rehabilitation / reconstruction;
- Matters arising from the over-dimension access route (separate from the Haul Route) have not been identified nor discussed within the reports;

- Inadequate responses to a number of road access and safety concerns including:-
 - The intersection of Grace Avenue/Station Street/Rail Crossing - This intersection has been identified by both Council and the ARTC as requiring safety upgrades. Lack of available funding from the ARTC is the only reason works have not been undertaken. Whilst this intersection and crossing is projected to be abandoned within four (4) years as far as being part of the identified haul route is concerned, no consideration is given to interim measures;
 - The rehabilitation/reconstruction of Station Street which continues to be significantly impacted by the Martins Creek Quarry operations;
 - Paterson Rail Crossing - Congestion on the northern side of the crossing is already problematic with respect to the blind crest on the approach to the crossing. The need for advanced warning for a closed rail crossing has not been adequately addressed;
 - The narrow section of Duke Street and site distance issues at the Prince Street and Duke Street intersection;
 - Pedestrian Safety - Crossings of King and Duke Streets for pedestrian safety has not been adequately addressed;
 - Gostwyck Bridge Single Lane - Whilst the RMS have identified that the bridge can meet load standards, the alignment and lack of sight distance for traffic to “Give Way” is an ongoing concern;
 - Pavement Widths - Some sections of the identified haul routes have insufficient pavement widths for the design traffic loadings. Rehabilitation costs identified within the reports do not allow for required width increases;
 - Clear Zones - There is insufficient shoulder widths and clearzones on considerable lengths of the identified haul routes. Rehabilitation costs identified within the reports do not allow for required shoulder increases or clearzone creation;
 - Overtaking Areas - Whilst the reports identify the lack of suitable overtaking areas, no consideration is made to provide such;
 - Flood Free Access - The main haul route through Paterson has three (3) identified areas where flooding occurs. Alternate flood free access or quarry processes in times of flood have not been addressed;
- Increased whole of life cost for Haul Route 1 has not been sufficiently addressed due to:-
 - Insufficient detail being provided for the scenarios and treatment types and locations utilised to identify future works on Haul Route 1 over the next 25 years;
 - The exclusion of improvements relating to pavement width, sealing unsealed shoulders, drainage improvements, intersection improvements and geometry improvements as it has been assumed these would be done regardless of Quarry Traffic. This is not supported as traffic generated by the Quarry is a significant factor for these improvements;
 - The calculated increase in cost (\$0.017/t/km or \$110,367pa) is significantly less than the figure identified in Council’s Contributions Plan for Heavy Haulage Generated by Extractive Industries 2017 (\$0.054/t/km or \$344,250pa). It is therefore Council’s position that insufficient detail has been provided to support the predicted extra cost for maintenance and rehabilitation of Haul Route 1. If approved based on the documents provided, this will leave a predicted shortfall

in contributions of almost \$234,000 per annum which will need to be funded by Council's ratepayers and tax payers.

Council's detailed comments and assessment of the Traffic Impact Assessment and Pavement Condition Analysis are included as annexures to this submission.

However, it is Council's view that the community should not be subjected to increased impacts as a result of road haulage and therefore it is Council's position that road haulage associated with the future quarry operations should not exceed 150,000tpa. This is based on 500,000 tpa being the current maximum extraction permitted under the Environment Protection Licence and not more than 30% of that being hauled by road. Further, on the basis of a maximum haulage by road of 150,000 tpa, the maximum truck movements per day should be restricted to 60 (30 Loaded).

Planning Instruments and Strategies

Council understands that the Department will have due regard in their assessment to the relevant Environmental Planning Instruments, specifically Dungog LEP 2014 and its aims and objectives as well as other strategic planning documents that regulate and inform the future development of the Dungog LGA.

Noise Impact Assessment

The noise impacts both within the project area and generated offsite e.g. on the road network, are a major source of concern to Council and residents. Due to the critical nature of this aspect of the application Council has engaged a recognised Acoustic Consultant to review the Noise Impact Assessment (NIA) which forms part of the Amended Report and Response to Submissions. Council is particularly concerned as to how the NIA has determined background noise levels given the history of unlawful operations at the quarry. The outcome of the peer review will be forwarded to DPIE as soon as possible.

Air Quality Impact Assessment

Council's submission to the original proposal requested that the impacts of road dust and diesel emissions on the residents of Paterson (and other residential communities adjacent to transport routes) be addressed. It is noted in the response to submissions that these elements have been included in the Air Quality Impact Assessment.

The Air Quality Impact Assessment concludes that the Revised Project can proceed without causing adverse air quality impacts at private sensitive receptors, although the experience of a number of residents differs from this conclusion. As Council does not have specialist staff who can verify the assumptions used in the modelling nor the methodology of the Air Quality Impact Assessment, it is requested that DPIE ensure that the current Air Quality Impact Assessment is thoroughly reviewed and assessed by NSW Health and the NSW Environment Protection Authority having regard to both potential health and environmental impacts of the quarry.

Blasting

The information submitted with the application suggests that blasting at Martins Creek Quarry has demonstrated compliance with relevant assessment criteria and that the blast criteria can also be achieved for the proposed project. However, the lived experience for a number of residents is that blasting does cause detrimental impacts. These include excessive noise and vibration, which they believe has caused their dwellings and outbuildings to be structurally compromised. Should the development proceed, these impacts would need to be managed through compliance with the relevant blasting criteria and by establishing baseline information on the condition of buildings and structures on private property to enable claims of property damage to be investigated.

Groundwater Impact Assessment and Surface Water Impact Assessment

Council does not have the expertise to provide technical feedback in relation to groundwater impacts. Council requests that the Groundwater Impact Assessment be assessed by DPIE – Water and the Natural Resource Access Regulator (NRAR) having regard to the proposed amendments, current legislative requirements and the previous comments provided by NSW Department of Industry dated 24 November 2016 in response to the original SSDA.

In terms of surface water, Council understands that the discharge of waste waters will be controlled under an Environmental Protection License (EPL). Consideration should also be given to whether the proposed development would have any impact on the Lower Hunter Water Plan that is currently under review.

Biodiversity and Offset Assessments

The proposed development would result in the disturbance of an additional 21-22 ha (approximately) of native vegetation from within the Project Area. Dungog Council does not have an ecologist on staff to review the Biodiversity Assessment Report and therefore will rely on the Biodiversity and Conservation Division of the Environment, Energy and Science (EES) Group of DPIE to determine the adequacy of the assessment reports that have been submitted.

However, Council remains concerned that the proposed development has been identified as being likely to have a significant impact on the threatened Koala and Slaty Red Gum. Further, as detailed in Council's submission regarding the original project, the extent of native vegetation disturbance is only based on the areas outside of the existing operational quarry footprint (page 17 of the Biodiversity Assessment Report). Therefore, the cleared lands within Lot 6 DP244210 which is the result of previous unlawful quarry operations have not been considered in any biodiversity impacts.

In relation to the Koala, the report states that under State Environmental Planning Policy (Koala Habitat Protection) 2020, the site is likely to contain Core Koala Habitat as a resident population of the Koala is considered to be present. The report proceeds to recommend that should the project be approved, a Management Plan should be prepared to provide measures for the management of Koalas on site, in keeping with the intent of the SEPP. This recommendation does not appear to have been carried over into the Amended Development Application and Response to Submissions document, nor any of the specific mitigation measures for the proposal. Council is of the view that a plan of management (or equivalent)

for the protection of koala habitat should be prepared in accordance with the guidelines accompanying the SEPP.

In terms of impacts on other threatened species, it is noted that the Biodiversity Offset Strategy indicates the potential for biodiversity offset sites totalling 58.35 hectares to be established within the vicinity of the quarry. This would generate species credits for the following threatened species:

- Slaty Red Gum (*Eucalyptus glaucina*)
- Brush-tailed Phascogale (*Phascogale tapoatafa*)
- Koala (*Phascolarctos cinereus*)
- Southern Myotis (*Myotis macropus*)

Should the project go ahead, Council would encourage the use of local offset sites in the first instance to ensure that local biodiversity and habitat areas are retained within the Shire.

Visual Impact, Rehabilitation and Final Landform

Section 6.17 of the amended report addresses visual amenity, while Section 6.19 addresses the rehabilitation and final landform. Both of these utilise a series of cross sections in an attempt to illustrate the visual impact of the quarry during operations and following rehabilitation. The cross sections provided are ineffective and do not provide a clear representation of the visual impact of the proposal. A series of photomontages should be provided to assist in assessing the visual impact of the proposal and the proposed final landform.

Heritage Impact Statement

Council's submission to the original application noted insufficient consideration of physical works and increased truck movements within the Paterson Heritage Conservation Area as well as potential impacts on various heritage items along the haul route. It is noted that a revised Heritage Impact Statement has been prepared, which considers these issues.

Council remains concerned about the impacts of heavy truck movements through Paterson and the impact that this may have on the character of the Heritage Conservation area and its impact on residents, tourists and visitors.

Rail Logistics

As Council does not support any increased road haulage of quarry products, it is requested that the Rail Logistics Options Report be reviewed by a suitably qualified and independent professional to identify where there can be an increased use of rail in transporting quarry products.

Social Impact Assessment

The Social Impact Assessment prepared by Umwelt is an extensive technical document that is some 360 + pages. The applicant was required as part of the previous response to submissions document to undertake more community consultation to better inform the revised Social Impact Assessment. This assessment remains one if not the most controversial component of the application, Council still has significant concerns regarding the rankings and

findings within the revised SIA and require additional technical advice before providing informed commentary on this crucial aspect of the amended application.

Once a comprehensive review has been finalised comments relating to the revised SIA will be forwarded to the Department in tandem with the independent assessment of the Acoustic Report.

Economics Impact Assessment

The Report describes the financial merits of the Revised Project, including the benefits to Daracon and the community by way of increased economic activity (new jobs, direct and indirect expenditures).

The Report also quantifies the estimated benefits to the State and Commonwealth governments in terms of additional tax revenues, which are typical of such projects.

Daracon advises on page 14 of the Economic Impact Assessment that the Revised Project will incur no additional public infrastructure costs over the lifetime of the project. This declaration is very difficult to reconcile with the road deterioration results observed elsewhere in the Shire and State with similar scaled projects. The same applies to Daracon's statement that the Revised Project will incur no loss of surplus to other industries (to other sectors such as retail and tourism). This claim is unsupported and should therefore not be accepted.

Contrary to these assertions, Council considers there is a strong probability that the Revised Project would create significant direct and indirect costs to the Shire over its lifetime, and that the character of the Martins Creek and Paterson communities would be impacted, most likely affecting several sectors such as retail and hospitality/tourism.

While the Revised Project may offer some economic benefits in terms of employment opportunities for local residents and regional suppliers (fuel, fleet maintenance costs, other purchases) these are limited, Council is concerned that the costs associated with its operation may be significant, not only from a financial basis for Council but from a social and economic perspective for affected residents and local businesses.

Conclusion

Council requests that the matters outlined in the submission are taken into consideration and addressed during the preparation of the response to submissions report by the applicant and the subsequent assessment of the application by DPIE. Should DPIE form the view that it is in a position to refer the application to the Independent Planning Commission (IPC) with a recommendation for approval, then Council respectfully requests that DPIE engage further with Dungog Shire Council prior to finalising any conditions of consent. This further consultation is necessary to ensure all aspects of the final development recommended for determination adequately address the concerns of the local community and establish a consent regime which mitigates/ameliorates any negative environmental, social and financial impacts.

Annexure A- Review of Traffic Impact Assessment

DUNGOG SHIRE COUNCIL

**REVIEW OF TRAFFIC IMPACT ASSESSMENT
(SECA SOLUTIONS – MAY 2021)**

FOR

**MARTINS CREEK QUARRY UPDATED PROJECT
MARTINS CREEK NSW**

SUMMARY

It is the opinion of the writer that there are a number of issues with respect to the Traffic Impact Assessment that have not been adequately addressed. These include:-

- Road Safety issues including:-
 - The Station Street/Grace Avenue/Rail Crossing intersection;
 - The lack of site distance and congestion associated with the Paterson Rail Crossing;
 - The single lane Gostwyck Bridge approaches, site distance and traffic management;
 - Flood prone sections (3) of the identified Haul Route;
 - Passive transport (walking/cycling)
- Parking and traffic conflict in Paterson;
- Current roadwork requirements and ongoing rehabilitation works;
- Some statements and assumptions are erroneous with respect to Council's position regarding current and proposed works for the proposed haul routes;

Report Commentary:-

The EIS is supported by a Traffic and Access Assessment prepared by SECA Solution Pty Ltd. Information from this assessment that is relevant to the Dungog LGA relates primarily to the proposed Haulage Route 1. It is proposed that up to 500,000 tonnes of extracted material will be removed from the site via road haulage.

The maximum daily truck movements have been identified as 280 (140 Loaded) for up to 50 days per annum with the residual movements being restricted to 200 (100 Loaded) for remainder of year. It is further noted that there will be no transport on Saturday, Sunday or Public Holidays. This does not, however, does not necessarily take into account the expected haulage of other resources (flyash, quarry equipment, etc) into the quarry.

The report further identifies that the maximum hourly truck movements will be 40 (20 laden) and it is expected that market demands will require the majority of product to leave the quarry early in the day for delivery ie between 7.00am – 9.00am. Truck movements would be expected to then drop off significantly after 11.00am and further again after 3.00pm. It is noted that the morning peak times will conflict with commuter traffic and school buses.

1. Introduction

The report utilises the following proposed criteria:-

Total Maximum Annual Extraction	1.1 million tonnes
Maximum annual export by Road	500,000 tonnes
Maximum Daily Truck Movements	280 (140 Loaded) for up to 50 days 200 (100 Loaded) for remainder of year
No transport on Saturday, Sunday or Public Holiday	

2. Existing Traffic Conditions

The report identifies the major haul route as being MR101 through from Grace Avenue to Bolwarra. The report has the following issues identified:-

- Lack of consideration given to sight distance for laden trucks coming on to Gostwyck Bridge (single lane timber bridge);
- Highlights the need for vehicle entering the King/Duke Street intersection in Paterson *“to slow down and large vehicles e.g. semi-trailer or truck and dog combination are required to use all of the provided road pavement width to complete the turn within their lane”*.
- Highlights the lack of shoulders and formed verges along the haulage route;
- Highlights the possible conflict due to the number accesses to private rural holdings;
- Highlights that there are no overtaking lanes provided along the route;
- Only limited reference is made to the haulage of over-dimension vehicles along MR301 and MR101. These include over width and overmass vehicles which cannot access via Gostwyck Bridge. At present these movements are occurring at a rate of more than one per month;

Currently Planned Roadworks

Roadworks – It is stated that *“there are no planned road upgrades within the general vicinity of the Quarry site or along Haul Route 1”*. This is not correct. What was discussed was Council’s 4 year Delivery Program which did not identify works in the short term. I note, however, that there are considerable sections of the Haul Route that do require rehabilitation/reconstruction works. These include Station Street (which will continue to be utilised by the quarry for at least 4 years), Gresford Road, King Street adjacent to the rail crossing, Maitland Road between Prince and Albert Street and rehabilitation of a section of Tocal Road.

Flood Prone Land

Flood Prone Land – It is stated that *“Daily traffic movements will vary due to market demands as well as weather conditions. It is expected that during heavy rain events or flood events, road haulage will slow down or, depending on the severity of the event, cease”*. This has certainly not been Council’s experience. Post the devastating 2015 floods, the quarry operated and transported considerable amounts of ballast along flooded roads around Paterson – some whilst the roads were still submerged. Whilst Council understands that emergency works are sometimes required, the lasting detrimental effects to the pavement and reduction in serviceable pavement lives needs to be considered.

Pedestrian and Cycling Facilities

Pedestrian and Cycling Facilities – I don’t believe the report gives enough consideration to the need for wider pavements south of the quarry to accommodate cyclists in the rural areas. For Road Reconstruction south of Martins Creek, it has been Council’s practice for at least the past 10 years to rebuild the roads to a 9m width being 2x3.5m lanes and 2x1.0m sealed shoulders.

Traffic Flows

- The report identifies tube counters being installed in the week beginning 28th April 2018 over 21 days. This is an improvement on the initial report which utilised data collected over only 7 days. The report does, however, provide very little detail of actual heavy vehicle movements other than in certain table 2.5.6. This table identifies overall increases in heavy vehicle movements based on quarry production compared to the overall number of heavy vehicles from Class 3 and above. The quarry traffic (Classes 9 & 10) have a much larger impact based on Equivalent Standard Axles (ESA's) than the average of the heavy vehicle movements.
- There is no traffic data for Station Street nor Grace Avenue. It is understood that this section of roadway will continue to be utilised as the primary access/egress for four (4) years. Load limits beyond the Quarry on Grace Avenue and in Station Street in its entirety would dictate that the >90% of all heavy vehicle movements in this area are quarry related. Station Street and Grace Avenue therefore require further analysis as the report does not take into consideration the heavy vehicle component of these roads especially along Station Street which is a very narrow street with no footpath, or kerb and gutter and in an extremely poor condition. The overwhelming bulk of traffic utilising this road is quarry related traffic;
- Table 2-2 identifies only overall vehicle movements and not the predominance of heavy vehicle traffic generated by the quarry especially along Dungog Road;
- The report makes several references to traffic volumes on the haul routes as being not related to the traffic operations associated with the Martins Creek Quarry. This is an unbalanced view of the data which identifies all traffic movements including light vehicles which have an almost nil effect on pavement design and/or fatigue.

Road Safety

The report identifies a number of safety concerns which have not been adequately addressed. These include:-

- Station Street/Grace Avenue intersection conflict with rail crossing. The report identifies that the *"ARTC has prepared plan for upgrade but no timeframe for works"*. This is contradicted later in the report (p52) which states that *"the railway crossing on Grace Avenue has been reviewed by ARTC and they have no plans to upgrade this crossing"*. In actual fact, this intersection was identified by the ARTC in 2012 as a safety concern. The ARTC expended significant funds on survey, design and estimating for the proposed rail crossing upgrade which included boom gates, etc. The reason the works did not proceed is that the ARTC had significantly underestimated the cost of the works and therefore requested Council fund the shortfall. As Council did not have any funds allocated for the works, the project was not undertaken. Based on road condition and safety, consideration should be given to ensuring construction of the new access road and intersection with Dungog Road be a requirement prior to any increased operation of the quarry approved by this application;
- One-way bridge operation on Dungog Road at Gostwyck Bridge. The report has identified that the *"RMS has stated that the current bridge can continue to operate as one-way"*. Council's issue is not with the capacity of the bridge (which is the RMS concern) but the lack of sight distance to the north and the increased potential for road accidents as a result of increased heavy vehicle movements;
- Bus Routes and Associated Facilities. The report identifies that there are local school bus routes in operation along the haul route but *there are no bus stops within the general locality of the subject site"*. There are, however, a number areas along the haul route where school buses pick-up and drop-off children at individual residences. These drop-off areas are not

necessarily clear of the through traffic lanes. Increased heavy vehicle movements will create increased safety concerns for these drop-off points. There are also issues with drop off points within the township of Paterson (Duke Street) without any defined crossing points;

- On-street Parking Provision - Whilst the issue of on-street parking adjacent to the site has been identified, the report does not fully consider the on-street parking issue and access to off-street parking within the Paterson Business Area as a result of the proposed intersection modification works at King and Duke Street;
- Vehicle Speeds - It is acknowledged that Daracon has put in processes to ensure their truck drivers obey speed limits. What is not identified is the speed some pinch points (ie King/Duke Street intersection in Paterson) are taken at resulting in Heavy Vehicles partially crossing to the incorrect side of the road to complete the manoeuvre

3. Proposed Development

- Only limited reference is made to the haulage of over-dimension vehicles along MR301 and MR101. These include over width and overmass vehicles which cannot access via Gostwyck Bridge. At present these movements are occurring at a rate of more than one per month;
- The report correctly identifies that visibility to the right for drivers exiting Station Street is impacted upon by the vertical alignment of the road over the rail crossing. The report then states that the visibility has been assessed as greater than 100m in both directions. This seems contradictory and may be based on *“the raised seating position for drivers of trucks”* which should not be considered under the standards;
- The level crossings in Martins Creek and Paterson are continually referred to as only causing minor traffic delays as *“there are just 5 trains per day per direction in this location”*. The rail crossings are, in fact, on the main northern rail line and as such service 5 local commuter trains (10 movements), 6 XPT services (6 movements) and numerous coal and freight services;
- Limited reference is made to the lack of sight distance on the northern side of the Paterson level crossing nor the conflict that may occur due to queueing vehicles at that location.

4. Transportation Analysis

- It is understood that the exported product will utilise imported materials (such as flyash) and then blended on site for exportation. The traffic generation does not appear to have been taken into account on the overall heavy vehicle movements generated by the proposed development;
- Heavy Vehicle Flows - The report identifies in Table 2-14 a summary of the heavy vehicle flows along the transport route. Based on this data, the following table indicates the overall increases in heavy vehicles on the various haul roads south of Martins Creek Quarry and the effect quarry production has on traffic volumes:-

Output	Basis	Laden Truck Movements per annum*	Unladen Truck Movements per annum*	Total Heavy Vehicle Movements per annum*
90,000	30% 300,000t	2,769	2,769	5,538
134,700	30% 490,000t	4,145	4,145	8,289
150,000	30% 500,000t	4,615	4,615	9,231
500,000	Proposal	15,385	15,385	30,769

Based on 32.5t Loads

Output	Basis	Laden Truck Movements per annum*	Unladen Truck Movements per annum*	Total Heavy Vehicle Movements per annum*
90,000	30% 300,000t	3,191	3,191	6,383
134,700	30% 490,000t	4,776	4,776	9,553
150,000	30% 500,000t	5,319	5,319	10,638
500,000	Proposal	17,730	17,730	35,460

Based on 81% @ 32.5t and 19% @ 11.66t

- The following tables identify the amount of Class 4 (3 axle truck) and Class 9 (6 axle articulated) vehicles on the various sections of Haul Route 1 as a result of Martins Creek Quarry operations in April/May 2018 based on the data in the SMEC Analysis (May 2021) as provided by the proponent.
- Assumptions are made that the average number of truck movements generated by the Martins Creek Quarry (section 3.4) are based on 5 days of haulage not a 7 day average. A reduced figure is therefore utilised based on this assumption.
- It is also assumed that this average can be extrapolated for the whole of year thus representing an approximate exportation of 500,000t per annum by road.

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 4 Vehicles - All	AADT Class 4 Vehicles - Martins Creek Quarry	AADT Class 4 Vehicles - NON Martins Creek Quarry	% of Class 4 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	12	13	-1	100%
Gresford Road	1756	16	13	3	81%
Total Road	2395	17	13	4	76%

Class 4 Rigid Truck Movements – Proposed 500,000t/annum

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 9 Vehicles - All	AADT Class 9 Vehicles - Martins Creek Quarry	AADT Class 9 Vehicles - NON Martins Creek Quarry	% of Class 9 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	48	48	0	100%
Gresford Road	1756	65	48	17	74%
Total Road	2395	51	48	3	94%

Class 9 – 6 Axle Articulated Truck Movements – Proposed 500,000t/annum

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 3 and above - All	AADT Class 3 and above - Martins Creek Quarry	AADT Class 3 and above - NON Martins Creek Quarry	% of all Heavy Vehicles attributable to Martins Creek Quarry
Dungog Road	760	99	61	38	62%
Gresford Road	1756	174	61	113	35%
Total Road	2395	160	61	99	38%

All Heavy Vehicle Movements (Class 3 and above) – Proposed 500,000t/annum

Again, based on the figures provided, the above tables show between 35% and 62% of all heavy vehicle movements on Haul Route 1 are attributable to the Martins Creek Quarry.

Further analysis of this data is provided in Council’s response to the Appendix L – SMEC Analysis Report.

5. Improvement Analysis

Section 5.1 of the Seca report suggests *“The Revised Project represents a reduction in the volume of quarry related trucks compared to historic operations and the Original Project as per the 2016 EIS.”*. Council does not agree with this statement. As above, the historic traffic volumes generated by the quarry occurred without valid development consent. Existing traffic generation for the quarry is limited under the existing approved limited operations under the Court of Appeal judgment delivered on 20 June 2019, being a maximum 134,700 tonnes per annum transported by road. Comparison to the 2016 proposal is also irrelevant as these volumes were never approved. The proposed development will significantly increase heavy vehicle movements on Council’s road network and the impacts of these vehicle movements must be addressed by the proponent.

The applicant has identified four (4) sites where they are proposing to undertake works being:-

- New Site Access Road and Dungog Road intersection – “by the end of year 4”
- Dungog Road and Gresford Road intersection CHR / AUL improvements – “within 12 months of the s138 Roads Act approval from Dungog Shire Council.”
- King Street and Duke Street intersection improvements (within the village of Paterson) to better cater for heavy vehicle movements – “within 12 months of the s138 Roads Act approval from Dungog Shire Council.”
- Gostwyck Bridge approach upgrade works – “within 12 months of the s138 Roads Act approval from Dungog Shire Council.”

The above does not provide any tangible timeframe for the construction of these works. As above, Council considers that these road works are necessary to cater for the proposed

development and should be constructed prior to any increased operation of the quarry approved by this application, at full cost to the applicant.

In addition to the above, a number of issues have been identified within the report without satisfactory response. These include:-

- Station Street/Grace Avenue intersection conflict with rail crossing. The report identifies that the *“ARTC has previously proposed an upgrade no timeframe for works”*. In actual fact, this intersection was identified by the ARTC in 2012 as a safety concern. The ARTC expended significant funds on survey, design and estimating for the proposed rail crossing upgrade which included boom gates, etc. The reason the works did not proceed is that the ARTC had significantly underestimated the cost of the works and therefore requested Council fund the shortfall. As Council did not have any funds allocated for the works, the project was not undertaken. This intersection will continue to be utilised by the proposed development for a further four (4) years at an increased heavy haulage movement rate;
- One-way bridge operation on Dungog Road at Gostwyck Bridge. The report has identified that the *“RMS has stated that the current bridge can continue to operate as one-way”*. The bridge is unlikely to be replaced as it is heritage listed. Again, Council’s issue is not with the capacity of the bridge (which is the RMS concern) but the lack of sight distance to the north and the increased potential for road accidents as a result of increased heavy vehicle movements.
- Lack of road shoulders - not addressed.
- Existing Pavement Issues - not addressed.
- Prince Street/Duke Street Intersection - The poor road alignment (horizontal and vertical) and narrow pavement widths have not been addressed.

6. Summary

It is agreed that the identified upgrade works should be undertaken as a condition of consent for the proposed development. The upgrades being determined on the level of transport that is taken from the quarry by road. These would include:-

Option 1: Preferred Option – Application, if approved, based on:-

- 1.1M tonnes total annual production;
- No more than 150,000t exported by road/annum.

Minimum Conditions to be Applied:-

- *Maximum haulage by road of 150,000 tonnes per annum;*
- *Maximum truck movements per day be restricted to restricted to 60 (30 Loaded);*
- *Road Haulage Contributions be based on Dungog Shire Councils Contributions Plan for Heavy Haulage Generated by Extractive Industries 2017 @ \$0.054c/t/km;*
- *The following Road Works are required to be constructed to the satisfaction of Dungog Shire Council:-*
 - *Rehabilitation of the full length of Station Street in Martins Creek due to its use for up to four years as the primary haulage route;*
 - *Safety Improvements to the Station Street/Grace Avenue Rail Crossing as identified by the ARTC;*

- *Due to sight distance issues and increased truck and train movements, advanced warning flashing lights for the Paterson Railway Level Crossing are to be installed on both Gresford Road and Duke Street;*
- *In conjunction with TfNSW and Dungog Shire Council, identify and construct suitable crossing points for pedestrians in both King and Duke Streets in Paterson.*

Option 2: Not Supported Option – Application, if approved, based on:-

- 1.1M tonnes total annual production;
- 500,000t exported by road/annum.

Minimum Conditions to be Applied:-

- *Maximum haulage by road of 500,000 tonnes per annum;*
- *Maximum truck movements per day be restricted to 280 (140 Loaded) for up to 50 days per annum with the residual movements being restricted to 200 (100 Loaded) for remainder of year.*
- *Road Haulage Contributions be based on Dungog Shire Councils Contributions Plan for Heavy Haulage Generated by Extractive Industries 2017 @ \$0.054c/t/km;*
- *The following Road Works are required to be constructed to the satisfaction of Dungog Shire Council and trafficable prior to any increase in Road Haulage:-*
 - *New Site Access Road including the Dungog Road intersection;*
 - *Dungog Road and Gresford Road intersection CHR / AUL improvements;*
 - *King Street and Duke Street intersection improvements (within the village of Paterson) to better cater for heavy vehicle movements;*
 - *Gostwyck Bridge duplication and associated approach upgrade works.*
- *The following Road Works are required to be constructed to the satisfaction of Dungog Shire Council within 12 months of the completion of the new Site Access Road:-*
 - *Rehabilitation of the full length of Station Street in Martins Creek due to its use for up to four years as the primary haulage route;*
 - *Safety Improvements to the Station Street/Grace Avenue Rail Crossing as identified by the ARTC;*
 - *Due to sight distance issues and increased truck and train movements, advanced warning flashing lights for the Paterson Railway Level Crossing are to be installed on both Gresford Road and Duke Street;*
 - *In conjunction with TfNSW and Dungog Shire Council, identify and construct suitable crossing points for pedestrians in both King and Duke Streets in Paterson.*

Council considers that these road works are necessary to cater for the proposed development and should be constructed prior to any increased operation of the quarry being approved by this application, at full cost to the applicant.

Council does have concerns with respect to road capacity and safety and has:-

- Identified a number of key safety concerns which are mentioned throughout the report;
- Identified within both its Delivery Programme and Operational Plans, works along MR101 subject to funding availability;
- Identified and received funding for three (3) separate Black Spot projects along the proposed haul routes in recent years;

- Undertaken pavement widening and upgrade works at the Maitland LGA Boundary. These works also included widening of the pavement, guardrail installation, the used of a painted median and a reduction in the speed limit to address safety and speeding concerns at this location;

The Traffic Impact Assessment also fails to take into consideration the issue of the major haul route being flood prone in at least three (3) separate locations within the Dungog LGA. These areas have all been cut on average once per annum over the past 10 years. During the catastrophic April 2015 event, Martins Creek Quarry was called upon to provide rail ballast for emergency railway maintenance. This resulted in the quarry utilising the haul routes whilst they were still inundated by flood waters. This has had a longer term detrimental effect on these roads and alternate flood free access needs to be considered as part of this process.

DUNGOG SHIRE COUNCIL

REVIEW OF MARTINS CREEK HAUL ROUTES

**ANALYSIS OF FUTURE PAVEMENT MAINTENANCE REQUIREMENTS RESULTING FROM A
PROPOSED INCREASE IN QUARRY TRUCK TRAFFIC**

(SMEC AUSTRALIA - MAY 2021)

FOR

**MARTINS CREEK QUARRY UPDATED PROJECT
MARTINS CREEK NSW**

SUMMARY

1. Whilst it is understood that modelling has been undertaken utilising SMEC's Pavement Management System which utilises International Standards, condition ratings are only "indicators" of pavement condition.
2. There is insufficient evidence within the report (ie. Works Programmes, rehabilitation requirements and methodologies, reseal frequencies, existing pavement characteristics, etc) to either quantify or justify the predictions as regards 25 year funding requirements for both current and predicted traffic;
3. There are assumptions being made with respect to pavement material qualities, geotechnical issues, etc;
4. The report does not give consideration to extra works required for pavement widening for increased pavement life and traffic safety;
5. Due to the report being based on maintaining "road pavements at their current condition level" for the next 25 years. There is no consideration made for service level increases or improvements that would be expected to pavement conditions especially in the village of Paterson and narrow sections of Dungog Road and Gresford Road;
6. The projected annual funding increase of \$110,367pa (\$0.017/t/km) is significantly less than the figure identified in Council's Contributions Plan for Heavy Haulage Generated by Extractive Industries 2017 being \$344,250pa (\$0.054/t/km)and, as such, does not adequately address the overall effect of Heavy Vehicle movements generated by the proposal.

Commentary:-

Background

The premise of this commentary is the submission of the applicant equating to 140 loaded trucks per day (280 movements) and the following:-

- Product haulage from the Martins Creek Quarry along Haulage Route 1 of 500,000 tonnes per annum;
- A maximum of 140 laden (280 movements) per day, 5 days per week for up to 50 days per annum;
- A maximum of 100 laden (200 movements) per day, 5 days per week for the residual of the year;
- Payloads of 32.5 tonnes;
- Dungog Shire Road length of 12.75km;
- Equivalent Standard Axle Loads (ESA) - Laden Truck/Dogs 6.8 ESA's and Rigid Trucks 3.07 ESA's;
- A proportion of 81% for Truck & Dog movements and 19% for Rigid Truck movements;

Notes:-

- It is noted that in actual practice (as detailed on p18 of the report) payloads of up to 34.14t for Truck and Dog laden movement (7.3 ESA's) and 14.9t for Rigid Trucks (3.6 ESA's) can be expected;
- The assumption that the percentage of movements for an increased freight task of almost 3.5 times the maximum current approved exportation does not, in the writer's opinion, appear

to be what would be expected by such an increase. Expectations would be that increased production would generate more truck and dog movements for road base type products;

- The modelling has not taken into account Unladen Trucks (ie 1.1 ESA's) or a further 19,503 total ESA's per annum. This alone represents a misrepresentation of over 15%;
- The modelling also does not take into account product being delivered to the quarry (eg flyash) or other Heavy Vehicle movements for the delivery of plant and equipment;

Modelling Scenarios

Heavy Vehicle Flows - The report identifies in Table 3-1 a summary of the heavy vehicle flows along the transport route. Based on this data, the following table indicates the overall increases in heavy vehicles on the various haul roads south of Martins Creek Quarry and the effect quarry production has on traffic volumes:-

Output	Basis	Laden Truck Movements per annum*	Unladen Truck Movements per annum*	Total Heavy Vehicle Movements per annum*
90,000	30% 300,000t	2,769	2,769	5,538
134,700	30% 490,000t	4,145	4,145	8,289
150,000	30% 500,000t	4,615	4,615	9,231
500,000	Proposal	15,385	15,385	30,769

Based on 32.5t Loads

Output	Basis	Laden Truck Movements per annum*	Unladen Truck Movements per annum*	Total Heavy Vehicle Movements per annum*
90,000	30% 300,000t	3,191	3,191	6,383
134,700	30% 490,000t	4,776	4,776	9,553
150,000	30% 500,000t	5,319	5,319	10,638
500,000	Proposal	17,730	17,730	35,460

Based on 81% @ 32.5t and 19% @ 11.66t

- The following tables identify the amount of Class 4 (3 axle truck) and Class 9 (6 axle articulated) vehicles on the various sections of Haul Route 1 as a result of Martins Creek Quarry operations in April/May 2018 based on the data in the SMEC Analysis (May 2021);
- Assumptions are made that the average number of truck movements generated by the Martins Creek Quarry (section 3.4) are based on 5 days of haulage not a 7 day average. A reduced figure is therefore utilised based on this assumption.

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 4 Vehicles - All	AADT Class 4 Vehicles - Martins Creek Quarry	AADT Class 4 Vehicles - NON Martins Creek Quarry	% of Class 4 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	12	13	-1	100%
Gresford Road	1756	16	13	3	81%
Total Road	2395	17	13	4	76%

Class 4 Rigid Truck Movements

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 9 Vehicles - All	AADT Class 9 Vehicles - Martins Creek Quarry	AADT Class 9 Vehicles - NON Martins Creek Quarry	% of Class 9 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	48	48	0	100%
Gresford Road	1756	65	48	17	74%
Total Road	2395	51	48	3	94%

Class 9 – 6 Axle Articulated Truck Movements

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 3 and above - All	AADT Class 3 and above - Martins Creek Quarry	AADT Class 3 and above - NON Martins Creek Quarry	% of all Heavy Vehicles attributable to Martins Creek Quarry
Dungog Road	760	99	61	38	62%
Gresford Road	1756	174	61	113	35%
Total Road	2395	160	61	99	38%

All Heavy Vehicle Movements (Class 3 and above)

The above tables indicate that between 35% and 62% of all heavy vehicle movements on Haul Route 1 are attributable to the Martins Creek Quarry. It should be noted that:-

- The above tables are based on production outputs from April/May 2018;
- The average daily production outputs being 67.7 Truck & Dogs and 18.7 Rigid Trucks. Interpolation of average loads would indicate a daily output of 2,384t or an annual output of approximately 620,000t per annum.

Based on the current proposal, this would revert to:-

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 4 Vehicles - All	AADT Class 4 Vehicles - Martins Creek Quarry	AADT Class 4 Vehicles - NON Martins Creek Quarry	% of Class 4 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	9	9	0	100%
Gresford Road	1756	12	9	3	75%
Total Road	2395	13	9	4	69%

Class 4 Rigid Truck Movements

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 4 Vehicles - All	AADT Class 4 Vehicles - Martins Creek Quarry	AADT Class 4 Vehicles - NON Martins Creek Quarry	% of Class 4 Vehicles attributable to Martins Creek Quarry
Dungog Road	760	9	9	0	100%
Gresford Road	1756	12	9	3	75%
Total Road	2395	13	9	4	69%

Class 9 – 6 Axle Articulated Truck Movements

Location	AADT - All Vehicles - Southbound Traffic Only	AADT Class 3 and above - All	AADT Class 3 and above - Martins Creek Quarry	AADT Class 3 and above - NON Martins Creek Quarry	% of all Heavy Vehicles attributable to Martins Creek Quarry
Dungog Road	760	90	52	38	58%
Gresford Road	1756	165	52	113	32%
Total Road	2395	151	52	99	34%

All Heavy Vehicle Movements (Class 3 and above)

The above tables indicate that **between 32% and 58% of all heavy vehicle movements on the Haul Route 1 will be attributable to the Martins Creek Quarry** proposed operations. Further noting that no figures have been provided for Station Street or Grace Avenue in Martins Creek which will continue to be utilised by the Quarry for four (4) years.

Modelling Analysis & Treatments

There are significant estimates and assumptions being made with regards to the pavement details within Dungog Shire Council. These include, but are not limited to:-

- Existing pavement depths;
- The CBR of the existing pavements;
- The quality of existing pavements for stabilisation;
- Treatment options that can be utilised; and
- The report identifies that improvements relating to pavement width, sealing unsealed shoulders, drainage improvements, intersection improvements and geometry improvements are not included as it is assumed these would be done regardless of Quarry Traffic. I believe this assumption is flawed as significant increases in Heavy Vehicle movements associated with the quarry would certainly modify Council position with respect to pavement and sealed shoulder widths. This is the basis for Council's practice to rebuild/rehabilitate the road network south of Martins Creek Quarry to 9.0m (2 x 3.5m lanes and 2 x 1.0m shoulders) where the road north of the Quarry is only constructed to 8.0m (2 x 3.5m lanes and 2 x 0.5m shoulders).

Clarifications are also required for:-

- The "Level of Service" and design life was utilised for the calculations for pavement rehabilitation?;
- The sections of Dungog Road and Gresford Road where pavement widths are less than satisfactory. "As is" modelling would not take into account shoulder widening considerations to ensure predicted pavement lives for rehabilitation are achieved?;
- What considerations were made for the Urban section of Paterson as regards widths and processes for rehabilitation?;
- It is assumed figures in Table 6.5 are averaged and "peak" costs for rehabilitation are spread over a number of years. For example, Council has allocated \$797,000 for one 900m long section of Gresford Road alone. Where does this magnitude of figure show in the table?;
- There is no actual Works Programme provided in the report for a reader to quantify the assumptions made;

It is noted that Maitland Council's Unit Rates for treatment have been utilised (Section 6.3) for both Council's calculations. Further, the report also notes that Maitland Roads tend to be in better condition and have stronger pavements as compared to the Dungog Roads;

- In addition to the above, what factors have been applied to the unit rates from Maitland Council to compensate for the probability of increased pavement thicknesses works required to rehabilitate these poorer pavements?;
- What is the methodology utilised by Maitland as regards the rehabilitation calculation (flexible pavements, overlay depths, stabilisations, seal types, etc)?

Road Contributions

It is noted, based on the identified SMEC Modelling Scenario, that an annual increase in funding of \$110,367 per annum is required.

As noted above, there is insufficient information to accurately assess the treatment scenarios and schedule of works identified in the modelling results and justification for this resulting analysis. Specifically, the scenario **excludes** improvements relating to pavement width, sealing unsealed shoulders, drainage improvements, intersection improvements and geometry improvements are not included as it is assumed by the proponent these would be done regardless of Quarry Traffic.

As shown in the previous Heavy Vehicle movement tables, 32% to 58% of all heavy vehicles and 69-100% of all larger (Class 4 and Class 9) Heavy Vehicles are directly attributable to the Martins Creek Quarry. This level of Heavy Vehicle traffic causes significant concerns for existing pavement lives and is the governing factor for pavement design. In addition, the safety aspects of such an increase in Heavy vehicle movements cannot be ignored. I would therefore suggest that widening and sealing of shoulders for improved pavement lives and safety is significantly attributable directly to the traffic generated by Martins Creek Quarry.

It is therefore Council's position that the identified increase in funding requirements for resurfacing and rehabilitation of \$110,367 per annum is significantly lower than the actual costs directly attributable to the traffic generation. Reference is made to Council's adopted Contributions Plan for Heavy Haulage Generated by Extractive Industries 2017. This document specifically identifies the cost for rehabilitation of the Rural Sub-Arterial Road Network based on the ESA's utilised for design. As such, this can then be extrapolated to identify a total cost per tonne per km for heavy vehicle haulage. This results in the following figures:-

- Heavy Vehicle Costs for 500,000t against No Quarry = \$110,367pa = \$0.017/t/km
- Council's identified Costs (Heavy Haulage Plan) = \$0.054/t/km
- Differential = \$0.037/t/km

It is therefore Council's position that the proposal falls well short of actual costs attributable to the Heavy Vehicle traffic movements generated by the Martins Creek Quarry and that Council's adopted Heavy Haulage Plan should be utilised for the calculation of these contributions. Further, the identified improvement works that have been put forward by the proponent should be treated as a condition of consent and not factored into the ongoing increased pavement rehabilitation and maintenance cost associated with the Martins Creek Quarry.