

Response to Submissions



for the

Bass Point Quarry Extension Project Modification 2

PA 08_0143



Prepared in conjunction with:

R.W. CORKERY & CO. PTY. LIMITED

August 2018

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for the

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PA 08_0143

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1. INTRODUCTION

1.1 SCOPE

This *Response to Submissions* document provides a response to the submissions received by the Department of Planning and Environment (DPE) following the public exhibition of the *Environmental Assessment* for the Bass Point Quarry (the Quarry) supporting an application to modify Development Consent PA 08_0143 (PA 08_0143) for the Bass Point Quarry (the Quarry)

It is proposed that existing limits to product truck despatch during the morning shoulder period (5:00am to 7:00am) be modified. The change to existing approved product despatch operations would include the following.

- An increase to the maximum number of product trucks that may be despatched from the Quarry between 5:00am and 6:00am to 27 trucks (an increase of four trucks).
- An increase to the maximum number of product trucks that may be despatched from the Quarry between 6:00am and 7:00am to 38 trucks (an increase of 15 trucks).

Truck despatch limits for the remainder of the night time period (10:00pm to 5:00am) and during the remainder of the day (7:00am to 10:00pm) would remain as currently approved (that is, 23 laden loads per hour between 10:00pm and 5:00am and 40 laden loads per hour during the remainder of the day). There are no other proposed changes to PA 08_0143 or to the remaining approved Quarry operations.

In accordance with Section 4.55(2d) of the *Environmental Planning & Assessment Act 1979* (EP&A Act), in determining a modification application, DPE (the consent authority) must consider any submission made during the public exhibition period. The *Environmental Assessment* and modification application were placed on public exhibition between 22 February 2018 and 8 March 2018. A total of 16 submissions were received by DPE including the following.

- Three State Government agency submissions.
- A submission prepared by Shellharbour City Council.
- 12 public submissions (of which seven submissions objected and four submissions provided comment).

The key issues raised in the submissions related to the management of transport operations and generation of road traffic noise. Several submissions also referred to the function and maintenance of existing noise barriers on Bass Point Quarry Road. The following subsection provide clarification on the installation and maintenance of the noise barriers as they relate to the ongoing operation of the Bass Point Quarry and an overview of the proposed benefits of the modifications in terms of transportation efficiency. This is followed by a comprehensive response to the issues raised in the Government agency and public submissions. For ease of review, the issues raised in submissions have been grouped in subject areas so that a single response is presented for each issue.



1.2 THE NOISE BARRIERS ON BASS POINT QUARRY ROAD

Several of the Government agency and public submissions raised concerns or requested further assessment or information about the function and location of the noise barriers located along Bass Point Quarry Road. This sub-section provides a summary of the context for the construction of the noise barriers, the intended performance of the barriers and a justification for the methodology selected for the road traffic noise assessment prepared by SLR Consulting.

It should be noted that the Quarry has been a source of extractive materials for over 100 years (commencing approximately 1880). A comprehensive review of the chronology of the approval status of the Quarry is presented in Table 5 in Section 2.6 of the *Environmental Impact Statement* (EIS) for the Bass Point Extension Project (Insite Planning Services, 2011) and the site history is reviewed in Section 8.3 of the EIS in the context of historic heritage. In this context, the development of Shell Cove has occurred around an existing and approved industrial development that provides a significant source of aggregate material for the construction industry in Shellharbour, Wollongong and the Illawarra Region and to the Greater Sydney Region.

The proposal for the subdivision of land and development of residential properties at Shell Cove was presented to Hanson (then Pioneer Concrete Services Limited) in the mid-1980s during review of a draft Local Environmental Plan (LEP). Hanson originally opposed the land release and development based on its proximity to the Quarry and Bass Point Quarry Road. Hanson eventually agreed to withdraw its objection subject to the inclusion of a buffer area in the LEP and provisions related to the grant of development consent in the buffer area that were eventually specified in Clause 26 of the LEP (which commenced in 2000)¹. The buffer zone remains in the current LEP (2013) as a transitional area in the Mineral Resource and Transition Areas Map (see Sheet MRT_031).

In 1994 Hanson was approached by Council with a request that Hanson relinquish existing easements for road access and for water and electricity supply on land that would be subject to the proposed residential development. This was agreed under a Deed in exchange for the construction of a new haulage road by Council and the creation of new easements for access to water and electricity. Annexure F of the Deed referred to satisfaction of criteria set by the EPA. An Amending Deed was agreed in 1997 regarding the release of the easements and included an agreement by Council not to sell land within 300m of Bass Point Quarry Road and to construct noise barriers. By 2000 the noise barriers had not been constructed and Council (through Australand) had commenced marketing land within 300m of the Bass Point Quarry Road.

In September 2001 a Replacement Deed was executed that specified that Council must construct the noise barriers by 31 December 2008. If the noise barriers were not constructed by this time, Hanson reserved the right to commence construction of the noise barriers at Council's expense. In addition, the Replacement Deed made reference to a letter from the EPA (dated 8 December 2000 – EPA reference HOF9171) that referred to specific noise criteria that should be satisfied. The letter notes that Council was the relevant land use manager for the area.

¹ The 2000 LEP is available for review from www.legislation.nsw.gov.au

The EPA correspondence refers to the following noise criteria consistent with the Industrial Noise Policy (DECC, 2000).

- Amenity noise criteria based on an 'urban' category for residences of:
 - L_{Aeq} of 60dB(A) for daytime (7:00am to 6:00pm)
 - L_{Aeq} of 50dB(A) for evening-time (6:00pm to 10:00pm)
 - L_{Aeq} of 45dB(A) for night-time (10:00pm to 7:00am)
- An intrusive noise level of 40dB(A) ($L_{Aeq15 \text{ mins}}$) from Quarry development and operations.

The EPA correspondence then defines two zones – the first being an area exposed to relatively high noise levels, in which development should not occur, and a second zone covering an area of moderate noise level impacts in which residual residential development may occur subject to the following requirements.

- House(s) incorporate acoustic treatments in layout and construction.
- Potential residents are to be formally notified that the site is exposed to noise from the operation of the Quarry and Bass Point Quarry Road.

Hanson is not aware of the manner or the extent to which Council satisfied the above requirements during development of Shell Cove. Notwithstanding this, the EPA expressly acknowledged that industrial noise may be audible at residences outside of these zones and that sensitivity to noise varies for individuals. Council proceeded with the development of Shell Cove on this basis.

The above chronology of events, the various amendments to the Deed agreements and the EPA letter confirm that Council has and continues to be responsible for the construction and maintenance of the noise barriers and satisfying the relevant noise criteria. In the circumstances, all concerns about the function and maintenance of the noise barriers, in their current configuration, should be directed to Council. It appears that several residents of Shell Cove believe that responsibility lies with Hanson on this matter, when in fact it is Council that holds responsibility as the party to the agreement permitting development of Shell Cove to proceed.

There have been no significant complaints concerning road noise or the function of the noise barriers received by Hanson warranting an approach to Council. For the purpose of assessment of the proposed modification, Hanson has assumed that the noise barriers are therefore functioning appropriately. On this basis, SLR Consulting has predicted road traffic noise levels at residences along Dunmore Road (where there is no noise barrier) on the basis that residences here would potentially be the most affected by the modified transport operations. Satisfaction of the relevant road traffic noise guidelines at this location would be indicative of the noise impacts along Bass Point Quarry Road where the noise barriers would continue to provide a significant level of noise mitigation. Hanson does not see any reason to modify this approach.

It is concluded that consideration of the function of the noise barrier is not relevant to the assessment of the proposed modification, as this is a matter for Council and subject to the Replacement Deed agreement executed in September 2001. Hanson would be comfortable to consult with Council regarding any assessment of structural acoustic integrity of the noise barriers to assist Council to undertake this assessment. However, it is noted that the outcomes of any assessment may result in Council needing to modify the noise barriers to improve their function or to provide acoustic treatments for the affected residences.

1.3 THE IMPORTANCE OF TRANSPORTATION EFFICIENCY

A company such as Hanson, that operates in the construction industry both with production and delivery of extractive materials as well as the production and delivery of concrete produced at its concrete batching plants, places significant emphasis on transportation efficiencies. Transportation activities are a cost to the business and influence the prices set by Hanson and therefore the ability of the Company to be competitive in the industry. Competitiveness is the ultimate determinant of the cost to customers of the final products of the construction industry as a competitive industry naturally act to limit price increases. The prices paid for construction materials or concrete/asphalt contributes substantially to the cost of homes or industrial/commercial projects as well as public infrastructure development such as roads, bridges, tunnels and railways. The Quarry has approval to despatch up to four million tonnes of raw material each year, making this location one of the most significant sources of construction materials in the region.

Hanson's objective in modifying its transportation operations during the morning shoulder period is to improve transportation efficiency by permitting an increase to the number of trucks that are leaving the Quarry during the morning shoulder period. This would give Hanson the flexibility to plan departure times and destinations for trucks travelling towards Sydney to avoid peak traffic periods of congestion. A review of transportation records from the Quarry indicates that a truck departing the Quarry during the peak periods and travelling towards a Sydney location (for example the concrete batching plant at Greenacre), will currently take up to an hour to an hour and a quarter more for the same trip. However, it is not just the departure time that is important, but also the arrival time at the destination. It is just as important to avoid trucks arriving at inner city plants or other destinations when traffic congestion is at its peak.

The benefits of added flexibility and efficiency are not just economic. The following benefits would arguably also result from the proposed modification.

- Reducing the number of trucks contributing to traffic congestion for all road users.
- Reducing fuel consumption and mechanical wear on tyres and engines for the Hanson truck fleet.
- Reducing the emission of greenhouse gases from trucks idling on congested road.
- Ensure traffic delays don't contribute to excessive driving periods and driver fatigue.

As a State significant development, the Quarry has an important role in ensuring the supply of construction materials to Sydney and to other closer destinations in the Illawarra Region. The efficient supply of hard rock aggregates at competitive prices ensures that the Quarry's concrete plants and customers can also operate efficiently and cost-effectively with the benefits ultimately experienced through the pricing of homes, commercial/industrial buildings and infrastructure.

2. RESPONSES TO ISSUES RAISED

2.1 ROAD TRAFFIC NOISE ASSESSMENT

2.1.1 Representative Comment(s)

The EA states that the closest distance from the double-storey residences backing onto Dunmore Road to the centre line of Dunmore Road is 23metres (Section 4.2.4). However, EPA estimates the closest distance as 18 metres to the centre line.....if the measurements had been taken at 18metres, the existing traffic noise would potentially be higher than what is reported in the EA.

Environment Protection Authority

Noise assessment for road traffic noise is intended to be carried out 1m from the façade of the effected residence. Measurements for the traffic noise assessment have been taken in the free field, which will not produce results that are directly comparable to road noise assessment criteria without correction.

NSW Health

The report notes that the LAeq (1 hour) between 5-6am and 6-7am are 65 and 66dBA respectively in the absence of trucks from the quarry. It is not clear whether this is a modelled level in the absence of all trucks or a measured level in the absence of additional trucks.

NSW Health

... a noise assessment been done by SLR Consulting, it would have been nice if they had visited our home to do some tests. What are the decibel readings and when were they done. We have been advised that an assessment was done at Shell Cove school, that's a joke, the school isn't as close to the wall as us and the road is a good five or six metres below the road, so of course it wouldn't be as noisy.

John Brown of Shell Cove NSW (249330)

Has the noise level been measured in Shell Cove, at the times in this application (such as: 0500-0600 hr. and 0600-0700 hr.)... There are no noise level measurements in proposal. Measurements should be compared and zoned appropriately.

(Name withheld) of Shell Cove NSW (248689)

Response

As described in Section 4.2.4 of the *Environmental Assessment*, SLR (2018) considered that the residences most affected by the change to transport operations would be those residences on Dunmore Road that were double-storey, with the second storey elevated to the same level as Dunmore Road. Residences that are directly adjacent to the noise barriers on Bass Point Quarry Road were considered likely to be experiencing a lower noise level because of the mitigating effects of the noise barriers and the fact that Bass Point Quarry Road is below ground level in most places.

Residences along Dunmore Road were considered to be potentially the most affected by the modified transport operations as there is no noise barrier located along Dunmore Road. Where there are double-storey residences, it is noted that the single storey/ground level of the

residence is approximately 3m lower than the level of the adjacent road and that only the upper storey of the double-storey residences are level with Dunmore Road. The closest double storey residences to Dunmore Road are (approximately) 18m from the road centreline.

Given that traffic travels in both directions on Dunmore Road, an offset of 23m was used for placement of a noise monitor in a safe and accessible location within the carpark of the Shellharbour Anglican College, opposite the subject residence on Dunmore Road. The monitoring location was selected to quantify the existing traffic noise levels at this distance from the road, and is consistent with general practice for road traffic noise assessment. The existing traffic noise level monitoring was undertaken continuously for a seven-day period. SLR Consulting consider that the methods used and the data collected for the road traffic noise assessment are consistent with the requirements of the *NSW Road Noise Policy (RNP)* and associated *RNP Application Notes*.

The EPA submission notes that the existing traffic noise levels were measured at an offset of 23m from the road centreline, but should have then been modelled at an offset distance of 18m from the road centreline and based the assessment on this offset distance.

Table 1 presents the updated traffic noise levels for an offset distance of 18m from the road centreline. Based on updated assessment, the proposed number of product despatches to ensure that the increase in the existing (non-quarry-related) traffic noise level is limited to 2dB(A) remains unaltered. In accordance with the RNP, this change in noise level represents a minor impact that is considered barely perceptible to the average person.

Table 1
Assessment Location 18 m off-set from the centre line of Dunmore Road (dBA re 20 µPa)

Period	Existing Total Traffic Noise Level ¹	Existing Number of BPQ Despatches ²	Existing BPQ Truck Noise Level Contribution ³	Existing Non-BPQ Traffic Noise Level ⁴	Proposed Number of BPQ Despatches ⁵	Proposed BPQ Truck Noise Level Contribution ⁶	Limit Existing Non-BPQ Traffic Noise Level Increase ⁷	Future Total Traffic Noise Level ⁸
LAeq(1hour) 5:00am to 6:00am	67.5	23	62.8	65.7	27	63.5	2	67.7
LAeq(1hour) 6:00am to 7:00am	68.6	23	62.8	67.3	38	65.0	2	69.3
LAeq(9hour) 10:00pm to 7:00am	63.2	76	58.4	61.5	-	-	-	-
L _{Amax} ⁹	-	-	73 to 80	-	-	73 to 80	-	-

Note 1: Measured and façade corrected existing total traffic noise level including Bass Point Quarry (BPQ) truck movements.

Note 2: Existing number of BPQ truck despatches per period.

Note 3: Calculated and façade corrected existing BPQ truck noise level contribution.

Note 4: Calculated and façade corrected existing traffic noise level excluding BPQ truck movements.

Note 5: Proposed number of BPQ truck despatches per period.

Note 6: Calculated and façade corrected proposed BPQ truck movement noise level contribution.

Note 7: Existing non-BPQ traffic noise level increased limited to 2dBA.

Note 8: Calculated and façade corrected future traffic noise level including proposed BPQ truck movements.

Note 9: Measured and façade corrected existing and proposed BPQ truck maximum noise level range.

Source: SLR Consulting

Additional information has been presented in **Table 1**, to clarify the assessment conclusions. As demonstrated in **Table 1**, SLR Consulting isolated existing quarry-related traffic noise from the existing total traffic noise levels so that the change in noise levels takes into account the contribution of all Quarry-related product despatch when limiting the change to existing (non-quarry-related) traffic noise level to 2dBA. The final outcome and predicted change between the existing total traffic noise levels and the future total traffic noise levels would be as follows:

- 5:00am to 6:00am: $67.7\text{dB(A)} - 67.5\text{ dB(A)} = 0.2\text{dB(A)}$.
- 6:00am to 7:00am: $69.3\text{dB(A)} - 68.6\text{ dB(A)} = 0.7\text{dB(A)}$.

In view of the foregoing, it is considered that SLR Consulting has taken a highly conservative approach to assessing potential changes to total traffic noise levels as a result of the proposed change to Quarry-product despatch levels.

It is noted that the assessment of the change in noise level is façade corrected (see Note 1 to **Table 1**), which is standard practice for road traffic noise assessment and described in **Table 7** or Section 2.5.4 of the Road Noise Policy (DECCW, 2011).

In addition, the noise monitoring was undertaken continuously over a seven-day period between 4 July 2017 and 10 July 2017 with the results presented in Appendix C of the Traffic Noise Assessment (SLR, 2018).

2.1.2 Representative Comment(s)

The EA does not make it clear what the existing $L_{Aeq(9\text{hour})}$ road noise traffic level is on Dunmore Road to compare against the Road Noise Policy criteria.

Environment Protection Authority

Response

The existing total traffic noise level for the night time period (10:00pm to 7:00am) is presented in **Table 1** and is calculated to be $L_{Aeq(9\text{hour})}$ 63.2dB(A) at an offset distance of 18m.

Both the existing total traffic noise level $L_{Aeq(9\text{hour})}$ 63.2dB(A) and the existing (non-Quarry-related) traffic noise level $L_{Aeq(9\text{hour})}$ 61.5dB(A) exceed the night time assessment criteria specified in the RNP of 55.0dB(A). Therefore, reliance is placed on the relative increase criteria described in Section 2.4 of the RNP and guidance on Section 3.4 of the RNP on applying the assessment and relative increase criteria which states the following.

Where existing traffic noise levels are above the noise assessment criteria, the primary objective is to reduce these through feasible and reasonable measures to meet the assessment criteria. A secondary objective is to protect against excessive decreases in amenity as the result of a project by applying the relative increase criteria.

In assessing feasible and reasonable mitigation measures, an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person.

Feasible and reasonable mitigations are discussed in Section 2.1.4.

2.1.3 Representative Comment(s)

There are insufficient details of the modelling [of road traffic noise] provided in the EA..... and therefore it is not possible to independently check the results presented in the EA.

Environment Protection Authority

Additional information is required to explain the USEPA method for predicting LAeq noise levels from traffic. The PHU is not familiar with this method and has not found any direct references to it.

NSW Health

The traffic noise report does not include details of the noise meter used, calibration details or atmospheric conditions during the 7 day monitoring period, which are details usually included in acoustic assessments.

NSW Health

Response

As described in the traffic noise assessment (SLR, 2018) both operator-attended and unattended noise measurements were conducted and utilised the instrumentation presented in **Table 2**. SLR maintains certification to the Quality Assurance requirements of AS/NZS ISO 9001:2015, ensuring that the traffic noise measurement procedures, instrumentation calibration, data analysis, modelling and calculations are guided by the requirements of the RNP, and relevant Australia Standards where applicable.

Table 2
Acoustic Instrumentation

Purpose	Instrument	Model	Serial Number
Operator-attended	Sound Level Meter	B&K 2260	2414605
Unattended	Noise Logger	B&K 2250L	3005904
As required	Acoustic Calibrator	B&K 4231	2022772

Source: SLR Consulting

The traffic noise assessment (SLR, 2018), is based on field measurements of the existing total traffic noise levels (refer Appendix C of (SLR, 2018)) and truck pass-by maximum noise levels (refer Appendix D of (SLR, 2018)). To determine the existing (and future) quarry-related truck noise levels, traffic noise predictions are based on the methodology endorsed by the US Environmental Protection Agency Report 550/9-74-004 dated March 1974, but including modifications based on equations in Appendix A-13 and certain amendments recommended in the UK Calculation of Road Traffic Noise (CORTN). The prediction methodology is generally conservative and takes into account vehicle volume, speed, type, pass-by duration and facade reflection and assumes no intervening barriers or topography with all receivers having a full angle of view to the road. The key noise input parameters include a façade corrected typical truck pass-by maximum noise level of L_{AMAX} 74 dBA at an offset distance of 23m, observed on Dunmore Road travelling at an average speed of 40km/hr in the vicinity of the nearest residence. The average speed takes into account the short length of road, incline and presence of a school zone.

2.1.4 Representative Comment(s)

The EA does not include an assessment of feasible and reasonable mitigation before applying the 2dBA allowance.

Environment Protection Authority

Additional discussion of noise mitigation measures should be included. Measures include limiting vehicle speed, maintaining road surfaces and preventing engine braking. It should be clarified whether there are any sections along the route where engine braking is required for safety purposes and the driver code of practice updated accordingly.

NSW Health

Response

Section 3.3.1 of the RNP refers to feasible mitigation as follows.

A noise abatement measure is feasible if it can be engineered and is practical to build, given project constraints such as safety and maintenance requirements.

Following from this, Section 3.3.2 of the RNP refers to reasonable mitigation as follows.

Selecting reasonable measures from those that are feasible involves judging whether the overall noise benefits outweigh the overall adverse social, economic and environmental effects, including the cost of the abatement measure.

Current noise mitigation measures implemented by Hanson for transport operations at the Quarry include the following.

- Compliance with requirements relating to operating hours, truck despatch levels and use of the approved transport route.
- Ongoing maintenance of the condition of Bass Point Quarry Road to limit noise sources such as potholes or edgewear.
- The Driver's Code of Conduct stipulates that all heavy vehicle drivers must operate their vehicle in a safe manner both within and external to Bass Point Quarry.

The Driver's Code of Conduct would continue to be implemented and includes direction for all drivers on the following matters.

- Speed limits within the Quarry Site (20 km/hr), on Bass Point Quarry Road (50 km/hr) and Dunmore Road (70km/hr with 40kph in the school zone).
- Advice for management of driver fatigue.
- Drivers are prohibited from using of exhaust brakes along Bass Point Quarry Road and Dunmore Road unless required in an emergency. Signage at the entry and exit of Bass Point Quarry Road reminds drivers of this requirement.
- Measures to reduce vehicle noise.
- Load covering for all laden vehicles.
- Timing for departure and arrival to remain within approved limits and avoid convoying.

- Management of breakdowns and incidents.
- Awareness of pedestrians and cyclists on roads.
- Maintenance of a complaints and incidents register for all traffic related matters.
- Monitoring of vehicle compliance through quarterly spot checks that will be documented, and outcomes discussed with the driver and/or transport contracting company.

Maintenance of the road surface along the approved transportation route is subject to an existing developer contributions maintenance agreement between Shellharbour Council and Hanson Construction Materials Pty Ltd. Under the agreement, Hanson is responsible for the maintenance of Bass Point Quarry Road from the Bass Point Quarry entrance to the roundabout at the intersection with Golf Drive. Shellharbour City Council is responsible for the maintenance (funded by Hanson's contributions) of the road along Buckleys Drive and the intersection of Golf Drive to Dunmore Road and along Dunmore Road from the intersection of Dunmore Road/Buckleys Drive to the roundabout at Lindsays Lane (Shellharbour Road).

The feasibility of noise mitigation should be considered in relation to the proposed change. That is, a change in noise levels of no more than 2dB(A) above the existing traffic noise level (excluding existing Quarry traffic). A change in noise level of 2dB(A) is a level that is not perceptible to the average human ear and is considered negligible.

The RNP provides the following order of priority for identifying feasible and reasonable mitigation.

- a) Road design and traffic management.
- b) Quieter pavement surfaces.
- c) In-corridor noise barriers/mounds.
- d) At-property treatments or localised barriers/mounds.

It is not possible to adjust road design for access to the Quarry. Hanson would continue to manage Quarry-related traffic in accordance with a Transport Management Plan and Driver's Code of Conduct. The Driver's Code of Conduct is the principal guide for driver behaviour and includes a process for induction and training. The Traffic Management Plan and Driver's Code of Conduct would be updated to incorporate the proposed modification to the satisfaction of RMS and DPE.

Hanson currently maintains the road surface along Bass Point Quarry Road. It is noted that in the past Hanson has installed speed humps along Bass Point Quarry Road in order to better manage truck speed, however advice from the community was that trucks were generating more noise to brake for the speed humps and as empty trucks travelled over the speed humps. The speed humps were consequently removed.

It is not feasible to construct in-corridor noise mitigation and at property treatments are not reasonable given the negligible change in noise level and the cost implications. Noise mitigation at the Shell Cove development is also principally the responsibility of Shellharbour City Council in accordance with the Replacement Deed agreement discussed in Section 1.2.

Hanson considers that all feasible and reasonable noise mitigation has been considered and implemented and that the predicted change in the existing traffic noise level (excluding existing Quarry traffic) would be limited to 2dB(A) above that of the corresponding 'no build option' in accordance with the RNP.

2.1.5 Representative Comment(s)

EPA requests the following additional information to allow an assessment of the impacts from the proposal:

- Confirmation of the date when the noise barriers along Bass Point Quarry Road were put in place.*
- What noise level and from what number of laden trucks despatched from the quarry, were the barriers originally designed to meet at the nearest residences to Bass Point Quarry Road?*
- Under the proposed Modification 2, what is the predicted noise level at the nearest residence to Bass Point Quarry Road from the increased truck movements during the morning shoulder hours of 5am to 6am and 6am to 7am?*
- What truck speeds (or modified truck speeds from those in the Project Approval) are required on Bass Point Quarry Road to meet the predicted noise level associated with Modification 2?*
- Clarification of the use of 23metres offset distance, or modelled results at 18metres distance.*
- Predicted LAeq(9hour) noise levels on Dunmore Road with the proposal.*
- More details of the inputs into the noise model to predict road traffic noise levels.*
- An assessment of feasible and reasonable mitigation to reduce existing noise levels before applying the 2dBA allowance, as per the Road Noise Policy.*
- Clarification of the use of 23metres offset distance for the prediction of LAmax noise levels, or predicted LAmax noise levels at 18metres distance.*

Environment Protection Authority

Response

A response to the EPA queries is provided as follows.

- The noise barriers along Bass Point Quarry Road were constructed in stages from 2002 to 2013. It should be noted that during this period, which preceded operations under PA 08_0143, there were no restrictions on hourly truck despatches during any time of the day throughout the entire week.
- The criteria relevant to the noise barriers are described in Section 1.2. There was no stipulation about truck volumes, only that transport operations would occur over 24 hours.
- The Road Traffic Noise Assessment has not considered road traffic noise levels at residences adjacent to Bass Point Quarry Road but has instead relied on the assumption that the noise barriers would be providing the intended level of mitigation in accordance with the agreement described in Section 1.2. In addition,

SLR Consulting concluded that noise impacts at residences on Dunmore Road that are two-storey, with a second storey elevated to the level of Dunmore Road, and that do not have the benefit of a noise barrier would be the most impacted by transport operations. Therefore, by demonstrating that the proposed modification would limit the change in noise level at residences along Dunmore Road to less than 2dB(A), it may be concluded that noise levels at residences along Bass Point Quarry Road would experience the same or lower change in noise level.

- It is not necessary to modify speed limits under the proposed modification and it is noted that trucks braking to reduce their speed may result in a noise impact, as was demonstrated during the short period of use of speed humps on the road. As specified in the Driver's Code of Conduct for the Quarry, driver speed is limited to 50km/hr on Bass Point Quarry Road.
- The use of a 23m offset from Dunmore Road was based on the centreline of the road. It is noted that the EPA has requested the assessment consider noise from an 18m offset from the road. This has been presented in **Table 1** and it is noted that the proposed number of product despatches remain unaltered with the reduced 5m offset distance.
- Predicted $L_{Aeq(9hour)}$ noise levels on Dunmore Road have been provided in **Table 1**.
- More details of the inputs into the noise model to predict road traffic noise levels have been provided in Section 2.1.3.
- An assessment of feasible and reasonable mitigation has been provided in Section 2.1.4.
- Predicted L_{AMAX} at a distance of 18m from Dunmore Road have been provided in **Table 1** and discussed in Section 2.1.2.

2.2 ROAD TRAFFIC NOISE LEVELS

2.2.1 Representative Comment(s)

Shell Cove residence, particularly those who reside in Hicks Terrace adjacent [sic] to Dunmore Road already currently experience excessive noise from trucks to and from the quarry. The level of noise generated now or the projected noise is not simply an "irritation to the community" as stated in Hanson's documentation it is much more than that to residents who live in the vicinity and live with the constant noise from quarry trucks. Any increase in the number of trucks will see a further impact on residents' health and lifestyle.

(Name withheld) of Shell Cove NSW (249448)

A[sic] increase of 4 [trucks] between 5-6 is really annoying as it is so early to be disturbed. Then the 15 extra [trucks] between 6-7 is still early for a lot of noise.

John Brown of Shell Cove NSW (249330)

This proposal means a significant increase in noise, during the night and early hours of 0500-0600 & 0600-0700. It is not "negligible", as proposal would like to describe... It means that there would be a truck every 2.22 minutes between 0500-0600 hr ... Between 0600-0700 hr, there would be a truck on Quarry Road, every 1.57 minutes... This is the period when people are still sleeping/resting. People are at home.

The Shell Cove coastal town is a very quiet rural area. Despite the Shellharbour City Council (SCC), zoning it as "urban area" - it is not typical or comparable in noise levels - to that of an urban city. This truck traffic starts at unreasonable hour of 0500 and awakens residents from sleep, (despite the noise abatement measures that our home has).

(Name withheld) of Shell Cove NSW (248689)

Response

The proposed increase in allowable movements in the morning shoulder period would result in noise levels at all privately-owned residences along the approved transport route that are consistent with permissible modifications to existing development described in the RNP.

It should be noted that the Quarry has been a source of extractive materials for over 100 years with the development of Shell Cove having occurred around an existing and approved industrial development that provides a significant source of aggregate material for the construction industry in Shellharbour, Wollongong and the Illawarra Region and to the Greater Sydney Region.

The proposed modifications would result in a change to noise levels of less than 2dB(A) during the morning shoulder period. This is a change in noise level that is not perceptible to the average human ear. It is therefore assumed that these residents would continue to enjoy the local setting in much the same manner as they are at present.

2.3 SLEEP DISTURBANCE

2.3.1 Representative Comment(s)

The LAMAX noise levels may be potentially higher than those reported in the EA. EPA does not agree with the measurement of LAMAX noise levels at 23metres offset, considering that the nearest double-storey residence is 18metres from the Dunmore Road actual centre line and even closer to the centre line of the south-bound lanes.

Environment Protection Authority

The assessment provided has considered the LA(max) in one location and compared this to the LAeq. Additional assessment is required to demonstrate the potential impact of this proposal on sleep disturbance.

NSW Health

Response

The maximum truck pass-by noise levels have been determined at a distance of 18m from Dunmore Road as presented in **Table 1**, and range from L_{AMAX} 73dB(A) to 80dB(A).

The Road Noise Policy does not establish a criteria level for sleep disturbance. Consistent with the RTA *Environmental Noise Management Manual* (RTA, 2001) (which is endorsed by the EPA), a screening criterion of the prevailing L_{Aeq(1hour)} traffic noise level plus 15dB for the assessment of possible sleep disturbance was considered. The weekday L_{Aeq(1hour)} traffic noise levels (very conservatively in the absence of trucks from the Quarry) at an offset distance of 18m for the period between 5:00am to 6:00am and 6:00am to 7:00am are 65.7dB(A) and 67.3dB(A) respectively (see **Table 1**). Based on these levels, the L_{AMAX} screening criteria are 80.7dB(A) (5:00am to 6:00am) and 82.3dB(A) (6:00am to 7:00am).

These maximum truck pass-by noise levels would meet the EPA's screening criterion for both the 5:00am to 6:00am and 6:00am to 7:00am periods in relation to the potential for sleep disturbance due to traffic noise and further assessment is not required.

2.4 NOISE BARRIERS

2.4.1 Representative Comment(s)

It is recommended that an assessment of structural acoustic integrity of the acoustic barrier be undertaken prior to the determination of this modification. This will ensure that the wall continues to serve as a sufficient noise attenuation barrier and no upgrades or maintenance is required on the barrier. A visual survey of an agreed number of points along the quarry road should be made and a report compiled listing any works needing to be undertaken to ensure the residents are protected by the additional noise impacts during the proposed times

Shellharbour City Council

... my wife and I ... live on the noise barrier in Rangoon [Avenue] and it is already very noisy in the early mornings ... it isn't really a noise barrier!!!. The gap at the base of the wall is a minimum of 10cm which we have tried to cover in with timber or rocks, but the noise still comes.

John Brown of Shell Cove NSW (249330)

Dunmore road is already a very busy road with Trucks going to and from the Garbage Dump, the building of 2 new sub divisions of several hundred homesites [sic] who are required to have a large wall built around them to stop noise and dirt from spoiling their homes and lifestyle. Why can't a wall be built on the other side of the road?... Everywhere else in Shell Cove that the trucks pass through the owners of the Quarry have built high walls to stop the mess and noise.

Terry & Sue Beaumont, Connie & Joe Vella of Shell Cove (249653)

Residents, who live in the 'newer' Shell Cove marina area, DO NOT have the benefit of a concrete "Noise Abatement Wall", along the Quarry Road. This wall ... stops where the new eastern marina zone is. -It should extend all the way ... the entire Quarry Road should be covered by such a wall. The current wall, (covers both north & south sides of road) - it was considered important to build it initially by Quarry & SCC - for first western part of Shell Cove's Quarry Rd.

(Name withheld) of Shell Cove NSW (248689)

Response

As described in Section 1.2, the construction, maintenance and the performance of the noise barrier is the responsibility of Shellharbour City Council and the Shell Cove developer. Bass Point Quarry has been an operating Quarry for over 100 years. The noise barriers were constructed to provide noise mitigation so that the development of the Shell Cove estate could occur. It was in fact stipulated that Shell Cove should not encroach on a Quarry buffer zone to the north east of the Quarry Site.

The extension of the noise barrier to Dunmore Road is also therefore a matter for Shellharbour City Council and the Shell Cove developer. Hanson would expect that residents would have been made aware of the presence of the Quarry by the developers of Shell Cove.

Concerns regarding the function of the noise barrier should be directed to Shellharbour City Council.

2.5 NOISE MONITORING

2.5.1 Representative Comment(s)

Modification conditions should include requirements for continuous speed and noise monitoring and reporting to the EPA. This could include the installation of fixed speed cameras along the access road.

(Name withheld) of Shell Cove (247228 & 246573)

Response

Bass Point Quarry performs quarterly noise monitoring, as a requirement under the development approval and the Environmental Protection Licence managed by the EPA. All noise monitoring has met the conditions set out in the development approval, Bass Point Quarry Noise Management Plan and the Environmental Protection Licence.

Road maintenance and management of state roads, including the installation of speed monitoring and fixed speed cameras is a matter for the Roads and Maritime Services and Shellharbour City Council.

2.6 OPERATIONAL NOISE

2.6.1 Representative Comment(s)

EPA does not consider that the proponent has adequately assessed the potential operational noise impacts and requests additional information.

Environment Protection Authority

Response

Hanson reiterates the information presented in the *Environmental Assessment* that the closest residences to the Quarry are located on the Farm Way, have been developed since the original assessment for the Bass Point Quarry Extension Project was finalised and are approximately 1.5km from the existing stockpiling area and approximately 1.2km from the approved relocated stockpiling area.

With regards operational noise impacts, the proposed change to operations would require that four additional trucks are loaded between the hours of 5:00am and 6:00am (in addition to the existing 23 that are currently loaded) and an additional 15 trucks that may be loaded between the hours of 6:00am and 7:00am (also in addition to the existing 23 that are currently loaded). It has been concluded that this would generate noise levels consistent with the noise levels currently approved under Condition 3 of Schedule 3 of PA 08_0143.

It is not agreed that Bass Point Quarry Road is a private haul road for the following reasons.

1. The road is located within Lot 4002 DP1235539, Lot 1240 DP1170339 and Lot 6600 DP1138496. These lots are all owned by Shellharbour City Council and therefore Bass Point Quarry Road is not on privately-owned land. The road is within an easement created and owned by Shellharbour City Council.
2. An easement for the land was created during a subdivision for the Shell Cove development.
3. The road is currently also used by development traffic to access the Shell Cove development.

The Definitions provided in PA 08_0143 incorrectly identify Bass Point Quarry Road as follows.

The haul road owned and maintained by the Proponent from the site to the intersection between Buckleys Road and Southern Cross Boulevard, as shown in Appendix 4.

However, Hanson does not own this section of road, and Hanson requests that this definition be corrected in PA 08_0143.

In the event that the EPA wish to nominate noise limits in Hanson's Environment Protection Licence (EPL) 2193, then any noise limits must be consistent with Condition 3 of Schedule 3 of PA 08_0143, which specifically exclude truck noise along Bass Point Quarry Road, as the performance of roadside noise barriers along Bass Point Quarry Road are the responsibility of Shellharbour City Council in accordance with the Replacement Deed (refer to Section 1.2).

2.7 OPERATING HOURS

2.7.1 Representative Comment(s)

The change in hours must only be limited to weekdays. Therefore, such movements should be prohibited on weekends and public holidays.

Shellharbour City Council

Response

PA 08_0143 permits Quarry operations including product despatch over 24 hours each day and 7 days a week.

It is unreasonable to prohibit movements on weekends and public holidays, considering that the needs of businesses in and around the Sydney Region for aggregate products does not cease on weekends or public holidays.

2.8 TRUCK DRIVER BEHAVIOUR

2.8.1 Representative Comment(s)

Large numbers of quarry trucks regularly stop along Dunmore Road behind the residences on Hicks Terrace with engines running and lights on, awaiting entry to the Bass Point Quarry (Video can be provided for the 5/3/18, 4-:50am). This not only impacts residence with the noise

but impedes traffic and creates a dangerous situation with some of the trucks (with trailers) stopping illegally in the merge left lane, that acts as an entry point at the roundabout to Bass Point Quarry Road and Southern Cross Boulevard... trucks stop during the day directly behind the houses lifting the trays on their trucks to dispose of small residual amounts. It is our understanding that the quarry was contacted in relation to this matter and yet the practice continues.

(Name withheld) of Shell Cove NSW (249448)

Response

Hanson agrees with this submission with regards to safe and sensible behaviour by truck drivers. Quarry traffic is managed according to the Bass Point Traffic Management Plan. The plan includes a Driver's Code of Conduct for Heavy Vehicles that must be signed by all Hanson drivers and adhered to. We encourage any member of the public who encounters a potential Hanson heavy vehicle incident to report the incident to Quarry management. All Hanson heavy vehicles are identifiable by a four-digit code located on the back of the truck as well as any trailer attached.

Section 3.3.3 of the Environmental Management Strategy for the Quarry describes the complaints procedure. All complaints are recorded and referred to Quarry management to initiate an investigation. Quarry management will respond to complaints within 48 hours of receipt of the complaint.

Hanson also intends to implement a disciplinary procedure through the Driver's Code of Conduct for Heavy Vehicles. This procedure will stipulate disciplinary procedures that would apply to drivers that are the subject of a substantiated complaint. Hanson does not hesitate to dismiss drivers who are not following the Driver's Code of Conduct for Heavy Vehicles.

2.9 COMPRESSION BRAKES

2.9.1 Representative Comment(s)

I would like a grantee that trucks will not use their compression brakes, they have stopped most of them using them but there has been a few trucks still using them

John Dalby of Shell Cove NSW (249664)

... residents are currently impacted by the noise generated through the use of compression brakes, particularly when quarry trucks approach the roundabout at Dunmore and Shellharbour Roads. ... (If proposed roundabout for Shell Heights is approved) residence will see a substantial increase in noise from the quarry trucks travelling along Dunmore Road, including the additional gear changes and use of their brakes in order to negotiate a second roundabout or the possibility of the trucks travelling over the top thereby creating yet again further noise.

(Name withheld) of Shell Cove NSW (249448)

There should also be no use of compression braking along the quarry access road.

(Name withheld) of Shell Cove (247228 & 246573)



Neighbourhood Forum ... also recommended that a condition of consent be imposed "that all trucks being dispatched before 7 am be NOT fitted with compression/exhaust brakes and all such trucks meet the new environment and safety standards, and be fitted with tachographs and or telemetrics

David Winterbottom (Neighbourhood Forum 5) of Wollongong, NSW (250105)

Response

Due to the relative proximity to residential homes within the vicinity of the Bass Point Quarry Road, drivers are requested to limit the noise created in this area as much as possible. Exhaust brakes are an integral part of the braking system for a heavy vehicle and are fitted by the manufacturer as a required safety standard. Hanson trucks can be carrying in excess of 50 tonnes at any given time and as such, relying on disk brakes alone is not a safe option.

All Hanson truck drivers are to adhere to the standards presented in the Driver's Code of Conduct – including the limitation of compression braking, which can only be used for safety reasons. Hanson has also provided a sign at the entrance / exit of Bass Point Quarry Road as a reminder to heavy vehicle drivers to adhere to this request.

Hanson fleet are fitted with a system called TRIMVIEW which tracks all movements, speed and heavy braking and is how Hanson monitors the performance and behaviour of the heavy vehicle fleet.

Please note that Bass Point Quarry Road is also currently providing access to the marina development due to the road weight restriction along Bass Point Tourist Road. As such, Hanson does not have control of driver behaviour for trucks using Bass Point Quarry Road associated with non-Hanson projects.

2.10 CONGESTION / TRUCK MOVEMENTS

2.10.1 Representative Comment(s)

... congestion on the roads, especially at the roundabout at Albion Park which is already a nightmare, that number of extra trucks will only add to the pain and frustration of drivers heading to Sydney, maybe it will improve when the by-pass goes through but that will be years off.

John Brown of Shell Cove NSW (249330)

There is no mention in proposal, of how many trucks will be 'Entering' the Quarry Road at this time, in order to 'load-up'. ... at least as many despatched/leaving, will enter... this proposal has 65 trucks (total), despatched/leaving the quarry with heavy loads (some double tray trucks), between the hours of 5am & 7am. So please consider: - empty & loaded OR entering & exiting truck traffic, in entirety. Could this mean that there is actually double what is being proposed in truck movements, in & out of Quarry? =130 trucks?

(Name withheld) of Shell Cove NSW (248689)

... An increase to the maximum number of product trucks that may be despatched from the Quarry between 5:00am and 6:00am to 27 trucks (an increase of four trucks) would actually be 8 truck movements as they are going up n [sic] back making a [sic] huge noise in a residential

area. This is a key time where families are sleeping... An increase to the maximum number of product trucks that may be despatched from the Quarry between 6:00am and 7:00am to 38 trucks (an increase of 15 trucks) would actually be an increase of 30 trucks increase. If there are any modification to be down it should be reduced.

(Name withheld) of Shell Cove NSW (248681)

Response

Increasing truck movements between the hours of 5:00am to 7:00am allows for better management of peak hour traffic exiting the Quarry. Instead of preventing trucks from leaving the Quarry until after 7:00am because the maximum truck levels had been reached in the previous hours (currently 23), it spreads out the departures over multiple hours.

The motivation for the proposed modification was Hanson's recognition that trucks were idling at the Quarry waiting to leave at 7:00am, as truck movement limits were reached during the morning shoulder period. This results in a peak for truck despatch between 7:00am and 9:00am which negatively impacts peak hour traffic within Shellharbour, Wollongong and the Illawarra Region and onwards towards the Greater Sydney Region. Early morning delivery of material is vital to the construction industry, either for infrastructure projects, or for concrete batching plants that require aggregates for the production of concrete.

PA 08_0143 permits the despatch of 23 trucks per hour between the hours of 10:00pm and 7:00am. Hanson is seeking to change the truck movements to the following:

- 5:00am to 6:00am – maximum of 27 laden trucks despatched per hour (an increase of allowable trucks by 4).
- 6:00am to 7:00am – maximum of 38 laden trucks despatched per hour (an increase of allowable trucks by 15).

It is noted that demand for aggregate products is greater than these despatch levels permit, however the Night-time Traffic Noise Assessment (SLR, 2018) identified that truck levels should be limited to these levels in order to ensure that the change in traffic noise was 'negligible' and would result in a barely perceptible change on noise levels (an increase of 2dBA) compared to that generated by current road usage.

Please note that when discussing truck levels, the level described in PA 08_0143 is the maximum number of movements permitted at any particular time of day. Because the demand for products is project dependent and market driven, the maximum number of transport movements is not always reached.

2.11 TRUCK SPEED

2.11.1 Representative Comment(s)

Should the modification be approved, speed limits must be imposed on the additional hours –as outlined in condition 29. Limiting to speed to 50km/h as currently conditioned in AM time is recommended.

Shellharbour City Council

The noise from the truck movements is significantly increased in proportion to the speed of the trucks. This is both from tyre noise and rattling of the truck bodies.

The modification conditions should include a speed limit on the quarry access road of 40km/hr between the hours of 7.00pm to 7.00am.

(Name withheld) of Shell Cove (247228 & 246573)

Response

Hanson imposes a 50km/hr speed limit on Bass Point Quarry Road at all times. It is noted that this speed limit is lower than that specified in Schedule 3, Condition 29 of PA 08_0143.

Speed limits within the Quarry Site are limited to 20km/hr, which is also lower than the speed limits specified in Schedule 3, Condition 29 of PA 08_0143.

2.12 ROAD SURFACE

2.12.1 Representative Comment(s)

The road surface, there is a need to repair the road, and resurface the road. When the vehicles hit the irregular and the broken surfaces this adds to the noise especially when the trucks are empty.

John Dalby of Shell Cove NSW (249664)

The condition of the road surface along the quarry access road has deteriorated with sections showing significant cracking. This is resulting in increased noise from trucks in both tyre noise and rattling of truck bodies. This is due to poor maintenance and results in increased noise to residents particularly in the quieter night hours. A strict road maintenance routine should be agreed as part of the modification conditions.

(Name withheld) of Shell Cove (247228 & 246573)

Every heavy or empty truck, affects local road surface conditions. SCC needs to ... look at the road surfaces, especially the smaller one's [sic] like Shell Cove & Dunmore Rd. -the impact of trucks can visually be seen.

There is also the rock debris that is dropped from trucks onto the roads. The Bass Quarry Co. "tries" to regularly clear this debris, but the risk for broken windscreens is visually evident.

(Name withheld) of Shell Cove NSW (248689)

Response

The marina development is currently only accessible via Bass Point Quarry Road and as such has contributed to the deterioration of the road. Hanson has committed to maintain the road surface of Bass Point Quarry Road and currently plans to resurface the road once the use of the road by construction vehicles accessing the marina development has been completed.

Buckleys Road and Dunmore Road are Council roads and as such Shellharbour Council is responsible for maintenance of these roads. Hanson is required to pay developer contributions to Shellharbour Council for road maintenance of the public roads section of the approved transport route. Hanson also pays for a street sweeper to clean the road, once a week. The

existing approval stipulates that Quarry-related product despatch must use Dunmore Road when leaving the Quarry. This is one of the operating conditions set out by the Department of Planning and Environment and as such, a requirement for all transport of Quarry products travelling by road.

2.13 ROAD SAFETY

2.13.1 Representative Comment(s)

There will be a huge increase on local public roads of heavy AND empty trucks, putting [sic] the safety of the community drivers at great risk.... These trucks can not stop quickly with such heavy loads... This increase of truck traffic means a truck every 2 minutes & will no doubt affect the safety of drivers.

(Name withheld) of Shell Cove NSW (248689)

Response

The proposed modification does not represent a substantial increase to approved truck despatch levels. It is proposed that truck despatch increase by four trucks between 5:00am and 6:00am and by 15 trucks between 6:00am and 7:00am.

Transport personnel are trained, experienced and qualified for their jobs. In addition, driver behaviour is guided by a Drivers Code of Conduct. Drivers are instructed to be safe, responsible and courteous and Hanson welcomes the local community to express their concerns directly to Hanson when unsafe or bad behaviour is noticed.

Hanson considers that the proposed modification would not result in significant safety risks to the local community or on the road network.

2.14 ALTERNATIVE TRANSPORT

2.14.1 Representative Comment(s)

if the current application is granted, it should have a condition including to the effect that "Hanson be given twelve months to produce a report examining the feasibility of reinstating a ship to move some quarry product from Bass Point to its operations near Glebe, and show cause why it should not pay to the NSW Government an amount of 3 cents per net tonne kilometre of road haulage to offset external costs as noted by IPART in 2012, to be applied to road works and mitigating truck noise.

David Winterbottom of Wollongong, NSW (250105)

Response

The Independent Pricing and Regulatory Tribunal 2012 report relates to the grain line network and as such, is not related to aggregate transport in NSW.

Hanson is constantly investigating methods to improve the efficiency of transport operations. Currently Hanson has proposed the development of a concrete batching plant at Glebe Island that will be supported by new aggregate shipping terminal facilities. The facilities will have the capacity to manage up to 1 million tonnes of concrete aggregates per annum delivered by ship.

Should this application be approved, aggregate for this facility would be primarily supplied from the Bass Point Quarry.

The impetus for the proposed modification has been principally for the improved efficiency of current transportation operations from the Quarry. Aggregate is delivered from Bass Point Quarry to many destinations other than the centre of Sydney. These destinations often rely on an early start. Increasing traffic congestion between Shellharbour and Sydney has caused delays as heavy vehicles are slowed by traffic congestion. To improve the efficiency of these operations, Hanson is proposing to move more of these operations to the morning shoulder period so that it is not relying so heavily on delivery during peak traffic hours. The proposed modification would permit this and remain at a level that maintains the amenity of local residents.

2.15 DUST

2.15.1 Representative Comment(s)

The report has included a discussion about air quality impacts from the proposal to address concerns identified during public consultation. The PHU acknowledges that this proposal does not increase the total number of authorised truck movements per day and will therefore not significantly alter the air quality impacts. Concerns about dust from road surfaces and truck movements should be dealt with in due course by the NSW EPA and the proponent by implementing and enhancing existing control measures.

NSW Health

Will the dust increase as our home has considerable dust on our eastern side of our home to the point when I hose the home the water is grey, also I was at killalea state park and noticed dust coming from a few trucks leaving the quarry

John Dalby of Shell Cove NSW (249664)

... but in the 3 years we have lived here the dirt from the development behind us has almost ruined our quality of life with red brown dirt. The council have fined them but to no avail.

Terry & Sue Beaumont, Connie & Joe Vella of Shell Cove (249653)

Response

Air quality is a major component of Bass Point Quarry's monitoring and compliance requirements. It is a requirement that all haul trucks are to have their loads wet down as well as cover their loads before exiting the Quarry. Dunmore Road is a shared transport route with residential traffic, school traffic, people accessing the train station as well as local earthworks for both the new residential area and the marina development – it is inequitable to assume that Hanson trucks would be generating more dust along Dunmore Road, adjacent to Hicks Terrace, than could be reasonably expected on any busy suburban road.

Please note that along with the marina development occurring along the harbour, there is a large subdivision (Shell Heights) taking place to the west and in close proximity of Hicks Terrace which could plausibly be a major factor contributing to dust in the area. Prior to the Shell Heights subdivision, the Shell Harbour Junction train station and Shell Harbour Anglican College were both been constructed in close proximity to Hicks Terrace.

2.16 LOCAL BENEFITS

2.16.1 Representative Comment(s)

The increase in trucks will not benefit local employment as the truck drivers used are contractors.

William Noel Paine of Albion Park Rail NSW (247285)

Response

The Environmental Assessment notes that there is not likely to be any changes to employment as a result of the proposed modification. It is however noted that there may be benefits through the re-arrangement of shifts opportunities for additional shifts or working hours.

The most significant benefits experienced by the community would be for commuters travelling towards Wollongong and Sydney during the morning peak period. It is anticipated that the proposed modification would allow greater flexibility for Hanson to coordinate product despatch activities and potentially reduce the contribution of these trucks to traffic delays during the morning peak period.

2.17 ALBION PARK ROAD BYPASS

2.17.1 Representative Comment(s)

I believe that there should be no increase in traffic allowed along the Princes Highway until the Albion Park Road Bypass has been built.

William Noel Paine of Albion Park Rail NSW (247285)

Response

This comment is a matter for DPE as it is clear that the capacity of the Princes Highway would not be significantly impacted by the proposed increase to approved truck despatch levels. It is proposed that laden truck despatch increase by four trucks between 5:00am and 6:00am and 15 trucks between 6:00am and 7:00am.

3. CONCLUDING STATEMENT

Hanson notes that there are those in the local community that are concerned about the possibility of the Quarry transportation activities generating more noise as a result of the proposed modification and that this would occur early in the morning. However, the change to transport operations has been limited to the morning shoulder period, when noise from a variety of sources is starting to increase and the change to transport operations has been deliberately limited to ensure that the change in noise levels are negligible. In fact, as demonstrated in Section 2.1.1, Hanson has taken a highly conservative approach in this respect. While Hanson has limited the contribution to road noise from its transportation activities to 2dB(A), the change to overall noise levels is less than 0.7dB(A). A change in noise level of 2dB(A) is not perceptible to the average human ear and therefore it is most likely that the change in noise is not going to be perceived by the local community. Regardless, Hanson would continue to implement all reasonable and feasible mitigation as described in Section 2.1.4.

Ultimately, a change to transportation levels of four additional trucks between the hours of 5:00am and 6:00am and 15 additional trucks between the hours of 6:00am and 7:00am is a minor change to the approved operations considering that transportation activities are approved to despatch 500 heavy vehicles each day. Hanson has demonstrated that the change in noise levels resulting from the proposed modification would also be minor with the change in average road traffic noise levels not perceptible to the average human ear. **Table 1** in Section 2.1.1 demonstrates that during the morning shoulder period, noise generated by Quarry product despatch activities is less than other noise in the vicinity, with the Princes Highway, railway line and Shellharbour Junction station as well as traffic on Dunmore Road contributing to a relatively noisy environment. Within this environment, Hanson considers it unlikely that road traffic for Quarry product despatch would cause additional sleep disturbance.

Hanson has addressed the local community's questions about the function and condition of the noise barriers, noting that these barriers are the responsibility of Shellharbour City Council. Hanson would be amenable to further discussion regarding management of these barriers with Council to assist in addressing the concerns of the residents of Shell Cove. However, this is not a matter for this modification application given that it is anticipated that noise levels experienced at residences along Bass Point Quarry Road would increase to a lesser extent than those along Dunmore Road given the mitigation that is in place. Hanson plans to resurface Bass Point Quarry Road in the near future, once the use of the road by construction vehicles accessing the marina development has been completed. This is part of Hanson's ongoing commitment to maintain the road and should improve noise generation from vehicles using Bass Point Quarry Road.

The Bass Point Quarry is a State significant extractive industry operation and is an important contributor to development locally, in the Illawarra Region and the Greater Sydney Region. While the change in noise level generated by transportation operations would be experienced locally, the proposed modification should also be considered in terms of the benefit to the State of NSW. Although the proposed change to the transportation operations and the noise levels generated by these activities would be minor, the benefits through improvements to flexibility and efficiency of the transportation operations of the Quarry would be substantial and would be experienced by all road users on the delivery route towards Sydney.