

Our Ref: 260210



ENGINEERING
PLANNING
SURVEYING
CERTIFICATION
PROJECT MANAGEMENT

ABN 26 134 067 842

8 April 2026

Katrina Wade
Development Services Case Officer
Technical Advice & Development Services
Transport Planning | Planning Integration & Passenger
Transport for NSW

development.north@transport.nsw.gov.au

Dear Katrina,

Karuah Pit Consolidation Project
Karuah Hard Rock Quarry (DA 265-10-2004-MOD2) and Karuah East Quarry (MP09_0175-MOD11)
TfNSW ref: NTH24/00355/004

Thank you for reviewing the project briefing for the proposed Karuah Pit Consolidation Project, particularly the Traffic & Transport Impact Statement (TTIS) prepared by Intersect Traffic, dated 05 February 2026.

The Karuah Pit Consolidation Project will be facilitated by two (2) concurrent Section 4.55(2) Modification Applications as follows:

- Karuah Hard Rock Quarry (KHRQ) DA265-10-2004-MOD2; and
- Karuah East Quarry (KEQ) MP09_0175-MOD11.

With reference to your email dated 11 March 2026 in relation to the abovementioned applications, we provide the following comments in response to the matters raised by TfNSW's preliminary assessment:

- 1. Item 1 - The development states there will be no change to the annual extraction volumes or the transportation rate/s, however, the proposal to align the operations of the two quarry sites will enable changes to occur with regard to traffic movements to / from the quarry complex, by extending the hours available for transportation for one of the quarries.**

BRS comment

The primary purpose of the Karuah Pit Consolidation Project is to extract known remaining resources within currently disturbed/cleared areas of the Karuah Quarry Complex, in particular the remnant dividing highwall between the KHRQ and KEQ extraction areas, in an internally coordinated approach between the KHRQ and the KEQ sites. This will only result in changes to internal extractive operations, with downstream material processing, stockpiling, sale and transport to external customers remaining unchanged via the ongoing operation of two independent standalone quarry operations.

The project will not result in any increased traffic generation. The following should be noted:

- Annual production volumes will remain capped at current throughputs at both quarries (500,000tpa

SYDNEY

P (02) 9659 0005
E sydney@brs.com.au

CENTRAL COAST

P (02) 4325 5255
E coast@brs.com.au

HUNTER

P (02) 4966 8388
E hunter@brs.com.au

COFFS HARBOUR

P (02) 5642 4222
E coffs@brs.com.au

NORTHERN RIVERS

P (02) 6681 6696
E northernrivers@brs.com.au

SOUTHEAST QLD

P (07) 5582 6555
E seqld@brs.com.au

at KHRQ and 1.5 Mtpa at KEQ).

- Employment numbers and contracting arrangements will not change as a result of the proposal;
- Support vehicles / deliveries will not change as a result of the proposal.
- Access arrangements via the exclusively used Andersite Road and Blue Rock Close to The Branch Lane / A1 Pacific Highway interchange will not change as a result of the proposal.

The only change relevant to traffic generation is the proposed widening of the hours of operation of the KHRQ. This change will have the effect of reducing peak traffic volumes by allowing sales to occur over a wider daily operating period. This scenario is similar to the previous KEQ MOD 9 approval (issued in November 2021) which granted approval to extend the hours of operation at the KEQ.

Upon review of the TTIS, BRS agrees with Intersect Traffic's view that the proposal will not increase the number of traffic movements to and from either quarry.

As outlined in the TTIS, the proposal will not increase the number of annual traffic movements to and from either quarry, therefore there is no trigger or warrant to undertake additional modelling or treatment warrants assessments as the quarry operations and traffic movements remain unchanged from that previously approved for the sites. The TTIS states, *'The proposal does not seek to increase the approved annual throughputs at either quarry (500,000tpa at KHRQ and 1.5 Mtpa at KEQ) (sales volumes and expected transaction numbers) and there will be no increase in annual traffic generated by both quarries. There will be no increase in employees at either the KHRQ or KEQ associated with the proposal.'*

Further to this, the proposal to widen the hours at KHRQ would further spread the existing traffic generated by the operations over a longer period of time reducing the peak hour traffic generation rates from the quarries. The reduction in traffic generation during peak periods would lessen the impact on the Blue Rock Close/Andersite Road intersection, Andersite Road/The Branch Lane intersection and The branch Lane/A1 Pacific Highway interchange. The TTIS states, *'An extension of the life of quarrying operations at KHRQ from 3 June 2027 to 31 December 2034 is proposed to align the approved operational timeframe of the KEQ. An extension of hours of operation at KHRQ is also proposed to match the approved hours of KEQ (discussed further below). The extension of hours is expected to spread heavy vehicle movements over wider range of time, thereby reducing average and peak movements.'*

Noting that the KHRQ and KEQ will continue to operate independently of each other therefore there will be no adverse changes with respect to traffic movements to and from either quarry.

2. Item 2 - Mid-block capacity assessment has been undertaken for Andersite Road and Blue Rock Close only, local roads which connect directly to the two site accesses.

- The assessment does not address impacts to other roads in the immediate vicinity of the quarries and applicable to the quarries' key transport / haulage routes. This is particularly applicable to the Pacific Highway, a classified (state) road and the associated interchange.***
- No Austroads turn treatment warrants assessments have been undertaken at key intersections along the potential transport routes and no assessment has been demonstrated to determine the existing or proposed traffic impacts on the Pacific Highway, a classified (state) road or the associated highway interchange.***

BRS comment

- a) The haulage route for KEQ (when exiting and vice versa for entry) is Blue Rock Close, Andersite Road, The Branch Lane and Pacific Highway. For KHRQ (when exiting and vice versa for entry) is Andersite Road, The Branch Lane and Pacific Highway.

The key intersections are therefore the following:

- Interchange at Tarean Road / The Branch Lane with the Pacific Highway.
- The Andersite Road and The Branch Lane T-intersection.

- Blue Rock Close and Andersite Road T-intersection.

As stated in the TTIS, 'both Andersite Road and Blue Rock Close as two-lane two-way roads with a 50 km/h speed limit would likely have a two-way mid-block capacity of at least 1,800 vtp/h therefore with peak hour traffic being only in the order of a maximum of 160 vtp/h these roads are currently operating with excellent levels of service and with uninterrupted flow conditions.'

- b) As a B-Double route the Pacific Highway can cater for 19 m Semi Trailers and 19 m Truck and Dog which would be the largest vehicles that transport material from both quarries. The interchange at Tarean Road / The Branch Lane with the Pacific Highway would have been designed to accommodate the swept paths of 19 m Semi Trailers and 19 m Truck and Dogs. It is noted that the construction of the interchange occurred after the KHRQ was well established therefore interchange design would have considered heavy vehicle movements associated with the ongoing operation of the KHRQ. It is also noted that approval of the KHRQ extension into Lot 11 (which is the latest approval for KHRQ operations (DA265-10-2004)) was issued on 03 June 2005, shortly after the interchange became operational. The assessment process for DA 265-10-2004 would have therefore considered heavy vehicle movements associated with the ongoing operation of the KHRQ. Furthermore, it is also noted that the assessment process for the KEQ (MP09_0175), which was approved in June 2014 (after the interchange was operational), considered the suitability of the interchange for heavy vehicles associated with both the KEQ and KHRQ. The proposed modifications will not result in any change to the type of vehicles using the intersection associated with quarry operations.

When assessing the existing Andersite Road and The Branch Lane T-intersection (which is a Rural Basic BAR intersection) against the requirements of *Austroads Guide to Traffic Management Part 6 Intersections, Interchanges and Crossings, Section 2.3.6 Warrants for BA, AU and CH Turn Treatments Figure 2.25* with a speed limit of 60 km/h in The Branch Lane and 50 km/h in Andersite Road and up to 160 vtp/h in Andersite Road, there could be up to 200 vtp/h in The Branch Lane and the BAR type intersection would be satisfactory. Anecdotal evidence suggests that there are fewer peak hour traffic movements in The Branch Lane that could be confirmed with updated traffic counts; however this is considered unnecessary in this instance given that the modification application will not change the type or increase the frequency of heavy vehicles that access the quarries. As there are no left turn movements from trucks from The Branch Lane into Andersite Road a BAL type assessment is not warranted. It also noted that this intersection was considered during the KEQ approval process (MP09_0175) and Schedule 3 Condition 22(c) of the approval required that prior to the transport of products from the KEQ the following was to occur:

22(c) Upgrading the Branch Lane/Andersite Road intersection with appropriate road markings and advance warning signage, to the satisfaction of Council.

These works were completed by KEQ Pty Limited prior to commencement of operations. Since the time that these works were completed there has been no change to the type or frequency of heavy vehicles that use this intersection associated with quarry operations and the modification applications will not change this.

When assessing the existing Andersite Road and Blue Rock Close T-intersection (which is a Rural Basic BAR intersection) against the Austroads requirements with a speed limit of 50 km/h in both roads and 160 vtp/h in Andersite Road and 80 vtp/h in Blue Rock Close a Basic BAR intersection is considered satisfactory. Traffic associated with KEQ are the only users of Blue Rock Close and traffic associated with KHRQ & KEQ are the only users of Andersite Road. The Blue Rock Close / Andersite Road intersection was considered during the KEQ approval process (MP09_0175) and Schedule 3 Condition 22(b) of the approval required that prior to the transport of products from the KEQ the following was to occur:

22(b) Realigning and upgrading the Blue Rock Close/Andersite Road intersection with appropriate road markings, pavement thickening and advance warning signage, to the

satisfaction of Council.

These works were completed by KEQ Pty Limited prior to the commencement of quarrying operations. Since the time these works were completed there has been no change to the type or frequency of heavy vehicles that use this intersection associated with quarry operations and the modification applications will not change this.

- 3. Item 3 - TfNSW note, given quarries operate on a campaign-basis, all demonstrated traffic impacts should consider the impacts of 100% of the cumulative quarry heavy vehicle generated movements travelling in each of the available directions, to and from the subject quarries, to determine the full impact of the proposal and existing developments on the road network.**

BRS comment

This statement is incorrect and was not part of the project briefing issued to TfNSW on 05 February 2026. For clarification, both quarries operate on a continuous operation and sale basis.

The operation of KHRQ and KEQ contribute towards satisfying significant and ongoing market demand associated with various State Significant Infrastructure (SSI) projects in the Greater Newcastle, Hunter Valley and Mid-North Coast regions. These projects are critical to deliver improved connectivity of the Mid North Coast to Newcastle, the Hunter Valley and Sydney and include the Newcastle Inner-city Bypass (SSI-6888), Pacific Highway widening at Hexham Straight, Singleton Bypass, and the M1 Pacific Motorway extension to Raymond Terrace (SSI-7319).

The quarries supply high quality quarry products to a large and rapidly emerging customer base that includes TfNSW, a number of local Councils, the Port of Newcastle, Ausgrid, Newcastle Airport, Tier 1 infrastructure providers as well as the general construction, development and infrastructure industries within greater Newcastle, Hunter Valley and the Mid North Coast Regions. Additional supplies are provided to downstream businesses, including the Tea Gardens Hunter Readymix Concrete Plant, which in turn contributes to the local construction industry.

As noted above, there are no proposed increases in peak hour traffic movements that would be generated by the proposed modifications at either quarry site. For this reason, it is not warranted to undertake additional traffic counts and SIDRA modelling and undertake an assessment of traffic impacts in support of the modifications.

- 4. Item 4 - In order to understand the impacts of the proposed development modification on the broader road network and in particular the classified (state) road and associated interchange, TfNSW recommend the proposed modification is accompanied by supporting documentation in particular the TTIS is updated to identify and address all relevant traffic impacts of the proposal, these include but are not limited to:**
- a. Identify all key transport / haulage routes applicable to each quarry. Noting the TTIS currently only addresses traffic impacts to Andersite Road and Blue Rock Close**
 - b. Identify the maximum daily and hourly production and transportation rates for each quarry noting the weighbridge records (supplied for one quarry only) demonstrate only the laden heavy vehicle movements relevant to individual campaign/s occurring at that time, not what the quarry's maximum output capacity is for daily / hourly material production and transporting.**
 - c. Identify the peak hours for traffic movement, for each quarry, and the cumulative impacts of those peak hours.**
 - d. Include traffic counts of existing background traffic on all roads located between the subject quarries and the classified (State) road, as per the key transport / haulage route/s.**
 - e. Undertake Austroads turn warrants assessments for all key intersections along the key transport / haulage routes.**

- f. Address the existing condition of the relevant roads (including any relevant quarry signage) and address the impacts the additional 7 years of operational life for KHRQ may have on the road conditions and maintenance requirements.**

BRS comment

- a) Provided below are the key transport/haulage routes. These will not change as part of the proposed development:
- KEQ (when exiting and vice versa for entry) – Blue Rock Close, Andersite Road, The Branch Lane and Pacific Highway. Split of approximately 90% south / 10% north on Pacific Highway when laden trucks leave the quarry.
 - KHRQ (when exiting and vice versa for entry) – Andersite Road, The Branch Lane and Pacific Highway. Split of approximately 90% south / 10% north on Pacific Highway when laden trucks leave the quarry.
 - Negligible truck movements continue along Tarean Road into Karuah (i.e. less than 0.5%).
 - No trucks turn right into The Branch Lane.
- b) The transportation rates for each quarry remain unchanged by the modification applications and are generally consistent with what was considered as part of the original approvals for both the KEQ and KHRQ, that is:

For KEQ

- Average truck loads per day 216 laden movements (e.g. 432 total per day).
- Average 22 laden movements per hour (e.g. 44 movements per hour).

For KHRQ

- Average 65 laden trips per day (e.g. average 130 vehicle movements).
- The KEQ EA Report (January 2013) made the 'cumulative' consideration of an average 72 laden trips per day (e.g. 144 vehicle movements per day) and average 7 laden trips per hour (e.g. 14 vehicle movements) at KHRQ.

- c) As outlined in the TTIS, the peak hour traffic movements (vehicle trips per hour (vtp)) based on traffic classifier counts undertaken in the week of Monday 24 November 2025, demonstrate general consistency with the average rates considered above in earlier investigations and are:
- Andersite Road – AM peak – 32 vtp (7 am – 8 am) & PM peak – 35 vtp (12 pm – 1 pm).
 - Blue Rock Close – AM peak – 50 vtp (8 am – 9 am) & PM peak – 46 vtp (2 pm – 3 pm).

Based on weighbridge data for the first six months of 2025 for the existing KEQ indicates a maximum dispatch capacity of 35 vehicles. This indicates that the peak hour traffic generation would be a worst-case scenario of approximately 80 vtp at KEQ based on weighbridge capacity, local delivery and light vehicle traffic from the sites.

Therefore, as a highly conservative assumption assuming both the KEQ and KHRQ are operating together at capacity (and also assuming that KHRQ can operate at the same dispatch capacity as KEQ), the peak hour traffic volumes on the adjacent local road network providing access to the quarries is as follows:

- Andersite Road – 160 vtp (i.e. KEQ and KHRQ combined); and
- Blue Rock Close – 80 vtp (KHRQ does not require use of Blue Rock Close).

Noting comments provided in 2(a) above, there is significant capacity in the surrounding external road network (some 1,800 vtp compared to a conservatively calculated peak hour traffic

number of 160vtp/h) to accommodate existing peak hour truck movements which will not change as part of the proposed development.

- d) As mentioned in BRS comments 3 above, as there is no increase in peak hour traffic generated by the proposed modifications it is not warranted in this instance to undertake additional traffic counts.
- e) See BRS comments 2(b) above.
- f) This is currently addressed via existing conditions of consent (refer to commentary relevant to item 2(b) above) and form part of the current ongoing road contributions to Council to cover the proportionate maintenance and potential damage costs caused by heavy vehicle haulage on local roads.

It is considered that the contents of this submission adequately responds to the matters raised in the TfNSW correspondence dated 11 March 2026. The proposed modification applications will not generate any additional peak hour traffic and the surrounding road network is suitable to cater for ongoing operations.

If you have any queries regarding this letter or any other traffic related matter associated the Karuah Hard Rock Quarry (KHRQ) (DA265-10-2004) and the Karuah East Quarry (KEQ) (MP09_0175) modification proposals, please do not hesitate to contact me.

We would also welcome the opportunity to meet and discuss the items raised by TfNSW.

Yours faithfully



Glenn Barker | Director | Senior Traffic Engineer
Barker Ryan Stewart Pty Ltd