

ABN: 13 609 422 791

Queensland

6 Mayneview Street, Milton Qld 4064
PO Box 1779, Milton BC, Qld 4064
P: +61 7 3871 0411 F: +61 7 3367 3317

South Australia

Shops 2 & 3, 16 Second Street, Nurioolpa SA 5355
PO Box 854, Nurioolpa SA 5355
P: +61 8 8562 4158

E: info@groundwork.com.au

Date: 5 October 2018
Ref: 1899 DA1 310 012
Council Ref: DA2018/0188

Cherie Smith
Development Assessment Planner
Richmond Valley Council
Locked Bag 10
Casino NSW 2470

Via email: council@richmondvalley.nsw.gov.au

Dear Cherie

Response to request for additional information – Development application DA2018/0188, 65 Broadwater Quarry Road, Broadwater being described as Lots 1 & 8 DP1216612.

Groundwork Plus continues to act on behalf of the applicant regarding the proposed extension of the existing Broadwater Gittos Quarry at the above address. We provide the following response to the request for additional information issued by Richmond Valley Council (Council) by letter dated 22 May 2018.

Council Request Item

1. *Please confirm if consent is being sought for the following ancillary components (as outlined EIS section 3.2.1), and if so please provide plans including an updated site plan, floor plan and elevations;*
 - *Temporary demountable site office and ablution block*
 - *Rainwater tanks*
 - *Temporary workshop*
 - *Shipping containers for secure storage of materials and equipment*
 - *Temporary weighbridge (note the EMP 2.2.4 indicates a weighbridge will not be utilised).*
 - *A 100,000lt self bunded above ground fuel tank and/or any other chemical storage area.*

Response

Consent is being sought for the ancillary components identified. The Conceptual Site Layout Plan has been revised (refer **Attachment 1 – Revised Conceptual Site Layout Plan**). Floor plans and elevations are provided for the proposed buildings including the Site Office, Toilets and Workshop (refer **Attachment 2 – Floor Plans and Elevations**). All those buildings and structures are temporary relocatable buildings. Shipping containers form part of the Workshop and any chemical storage area would be contained within the Workshop. Rainwater tanks are shown on the Conceptual Site Layout Plan. The Self Bunded Above Ground Fuel Tank is shown on the Conceptual Site Layout Plan, it is not a structure or a building and is also temporary and relocatable. It is confirmed that a weighbridge is not proposed and a weighbridge is no longer shown on the Conceptual Site Layout Plan.

Council Request Item

2. Confirm if any work or activity is proposed on the area zoned SP2 Infrastructure. If any activity is proposed in this zone outline how consent is being sought given the permissible land uses.

Response

No extraction, processing or stockpiling is proposed within the SP2 Zoned area. No buildings or structures are proposed within the SP2 Zoned area. The Zoning of SP2 Infrastructure reflects the alignment of the new Pacific Highway to the east of the quarry. The SP2 Zoned area is relied upon for the existing access road to the quarry until a new access is provided outside of the SP2 Zone.

We have been advised that arrangements have been made for Roads & Maritime Services (RMS) to construct a new access to the quarry as part of the construction of the Pacific Highway Upgrade Project outside of the SP2 Zoned area. We understand that the Richmond Valley Council Local Environmental Plan defines 'road' as follows, "means a public road or a private road within the meaning of the Roads Act 1993, and includes a classified road." We also note that RMS provided consent for the lodgement of the application.

For clarity, **Figure 1** below shows the current zoning of the land and the location of the existing access road within the SP2 zoned land (Lot 8 DP1216612). On this basis we understand the application is consistent with the zone.

Figure 1 – Zone Plan



Council Request Item

3. *Confirm if the proposed 100,000lt diesel tank is proposed to fuel haulage vehicles transporting quarried material from the site. Additionally given the number of heavy vehicles associated with the Highway upgrade project in the area, consideration of ancillary overnight parking area(s) at the site is encouraged.*

Response

The fuel tank is for private use only and not for commercial sale to the public. Overnight parking may occur at the site for haulage vehicles. However, the arrangements can't be confirmed at this time as the application is made on behalf of the land owner who leases the quarry to Quarry Solutions Pty Ltd which relies upon sub-contractors to haul material to the Pacific Highway Upgrade Project.

Council Request Item

4. *Confirm how the existing quarry consent and if approved a new consent could operate concurrently.*

Response

No objection is raised to surrender of the existing consent subject to suitable conditions of the new consent allowing the ongoing operation of the quarry at 70,000t per annum after completion of the Pacific Highway Upgrade Project. For clarity, it is confirmed that this application does not include the previously approved turf farm activities.

Council Request Item

5. *Clarify the proposed hours of operation. Section 3.2.8 is different to the Quarry EMP 2.3.13*

Response

The proposed hours of operation are as per Section 3.2.8 of the EIS being 7am to 6pm Monday to Friday and 8am to 12noon Saturday and blasting 9am to 3pm Monday to Friday. We anticipate Council will include a condition of approval requiring an amended Environmental Management Plan, reflecting various requirements either of Council or other State agencies, to be submitted prior to commencement of the activity. No objection is held to such a condition.

Council Request Item

6. *Confirm Attachment 1 the Secretary's Environmental Assessment Requirements issued 14 December 2016 is the current version of this document. Section 6.4 Environmental Assessment Requirements suggests updated SEARs were issued on 22 December 2016.*

Response

The documents contained within Attachment 1 of the EIS, being the Secretary's Environmental Assessment Requirements (SEARs) are the current and final version of each document. The SEARs were first issued on 14 December 2016. Then on 22 December 2016 the EPA provided amended comments. The Attachment 1 of the EIS correctly includes the 22 December 2016 version of the EPA comments.

Council Request Item

7. Provide the following plans/details;

Plan / Details	Response
a) An A3 survey of the existing quarry that shows the existing extent quarry levels.	Please refer to Attachment 3 – Existing Site Survey .
b) A cross section of the existing quarry and the proposed finished land form.	Please refer to Attachment 4 – Cross Sections .
c) The proposed quarry footprint is inconsistent on the Conceptual Site Layout Plan and Figure 4 – Adjoining Landowners. Confirm the proposed footprint.	Please refer to revised Conceptual Site Layout Plan.
d) Confirm the management procedures that would ensure extraction does not exceed 490,000 tonnes per annum.	<p>The application is made on behalf of the land owner who leases the operation of the quarry to Quarry Solutions Pty Ltd. That company operates the Petersons Quarry for the Council and the State Significant Development Coraki Quarry.</p> <p>If the operator continues to be Quarry Solutions Pty Ltd, the management procedures to ensure extraction does not exceed 490,000t per annum would be consistent with those implemented for the Petersons and Coraki Quarry which were deemed suitable by the Council.</p> <p>Those measures include for example reconciliation and confirmation of sales data by annual aerial survey of the site and further cross checking with payment of heavy haulage contributions to Council.</p>
e) Confirm the location of overburden/topsoil stockpiles to be utilised for the staged rehabilitation.	Please refer to the revised Conceptual Site Layout Plan.

Council Request Item

8. Clarification of the 2023 timeframe is requested as Council understand the Highway upgrade is due for completion 2020.

Response

Quarry Solutions has a contract to supply quarry materials to the Pacific Highway Upgrade Project. It is understood that the Pacific Highway Upgrade Project is forecast to be open to traffic by 2020. It is not unreasonable to anticipate that certain work will occur after that date. Potential works might for example include completion of maintenance access tracks or rectification of erosion and sediment control devices. On this basis and from an abundance of caution, the timeframe of 2023 was adopted for the EIS.

Council Request Item

9. *The traffic assessment is based upon averages allowing for only 2 weeks down time, in our experience it is unusual for similar developments to operate in this manner. Rather higher volume movements are concentrated over shorter timeframes due to product demand, weather influences, school holiday periods, activities at other quarries etc. Impacts of the proposal need to be based upon these higher demand periods (e.g. road safety and intersection suitability, road traffic noise etc). However if the estimates provided (12 vph in and 12 vph out) are appropriate for Gittoes operations it could be managed by way of a consent condition a limit upon the number of daily/hourly truck movements. Please confirm the proposed haulage is limited to 12 vph in and 12 vph out. Haul traffic direct to the highway upgrade corridor need not be counted in the vph onto local roads.*

Response

No objection is held to a condition of consent stating that the applicant must not dispatch more than 12 laden trucks per hour.

Council Request Item

10. *Road safety needs to consider the suitability of the Pacific Highway intersection during congested periods, e.g. school and public holidays. Clarification is requested to confirm the suitability of the existing arrangement during these periods, give the increased non quarry traffic on the intersection counts.*
11. *In relation to S94a heavy haulage contributions Council's adopted Plan shows that for Mines and Extractive Industries processing quarried/mined materials > 20,000 m3 per annum the adopted rate is \$1.08 per tonne (with an inbuilt standard for 15km distance adopted by Council in the Plan). Formal request to vary the adopted rate is to be made, justifying the assumptions made in the EIS. Please note that the final determination is at the discretion of the Council, and a resolution of Council may be required.*
12. *The existing consent DA123/95 is subject to a heavy haulage base rate of 3.5c/tonne/km for 12km = \$0.420 per tonne (1999) plus CPI. Therefore the current rate for 2018/2019 would be \$0.706 per tonne for the 70,000 tonne (if that consent remains valid).*
13. *The proposed averaging of contributions assumes the 4 haulage routes share tonnages equally. Confirmation is requested that this assumption is reflected in the Road Safety assessment. If 80% of the tonnages are via the north and south sections of the Pacific Highway then the majority of the contributions must be for the 1.3km haul. Thus the traffic assessment for the intersection and the apportionment of Heavy Haulage rates must be consistent.*
14. *Assessments based on perceived traffic impacts being only of a temporary nature of 5 years do not reflect the true actual safety related impacts during this time.*
15. *The use of the Rockhampton to determine the need for sealing of Broadwater Quarry Road is considered not comparable due to the very large concentration of heavy vehicles on the local roads. The Rockhampton Guideline only allows a 20% maximum for heavy vehicles. It is envisaged that > 90% heavy vehicles will be using Broadwater Quarry Road, and that the accelerated deterioration of a gravel road and the dust generated warrant sealing of the road.*
16. *RMS have raised the following matters to be further considered.*
- a. *The Traffic Impact Assessment (TIA) has only considered the impacts on road capacity for the existing and 5 year horizon scenarios. Austroads requirements for the intersection treatment to manage safety of turning traffic have not been considered.*
 - b. *A Level of Service (LOS) E is identified for the Right turn movement from MacDonald Street onto the Pacific Highway. Best practice identifies a LOS C is the acceptable level of capacity for intersection treatments.*
 - c. *The location of the pedestrian refuge island in the vicinity of the intersection would require consideration when considering proposed intersection treatments.*

Response

Traffic and Transport Plus have prepared a response to this matter (refer **Attachment 5 – Traffic Advice**).

If any further information is required, please do not hesitate to contact me.

Yours faithfully

Groundwork Plus



Jim Lawler

Project Director

Encs.

- **Attachment 1 – Revised Conceptual Site Layout Plan**
- **Attachment 2 – Floor Plans and Elevations**
- **Attachment 3 – Site Survey**
- **Attachment 4 – Cross Sections**
- **Attachment 5 – Traffic Advice**



DESIGN SPECIFICATION

BASEFRAME / REFER BASEFRAME LAYOUTS FOR DETAILS

BEARER	310 UB
OUTRIGGER/READER	100 x 50mm PFC
BRACING ANGLE	50 x 50 x 5mm EQUAL ANGLE
END MEMBER	100 x 50mm PFC
LIFTING MECHANISMS	EXTENSIBLE OUTRIGGERS
TOW/LUG	15mm PLATE / 100mm HOLE
STEELWORK TREATMENT	PRIMED WITH RED OXIDE / FINISHED WITH BLACK ENAMEL
FLOOR FRAME / REFER BASEFRAME LAYOUTS FOR DETAILS	
JOB SITE	C10015 @ 400 CENTRES
CAPPER	C10415
END JOIST	100 x 100 x 4mm SHS

FLOORING	15mm TONGUE AND GROOVE PLYWOOD F11
FLOOR COVERING	2.0mm NON-SLIP VINYL - POLYSAFE HYDRO EVOLVE TIGRIS #4537
SHITTING	100mm COVERED VINYL
COMPLEXING	-
WATERPROOFING	NO
OTHER	DRY FLOOR WASTES

WALLS	2400mm
INTERNAL LINING	4mm POLYPLY PRE-FINISHED EMBOSSED PLYWOOD - GREY
INTERNAL TRIM	PVC D MOULD - WHITE (3 ROWS OF GREY SCREWS)
WALL INSULATION	-
EXTERNAL CLADDING	COLORBOND PANELS LAID HORIZONTALLY - SURFMAT
EXTERNAL CORNER	HD 40x40x2.5mm D'GAL ANGLE

WALL FRAMES	
FRAMING	75 x 41 x 0.75mm G550 STEEL STUDS
STUD SPACING	400mm CTS

ROOF / CEILING	
CEILING TYPE	FLAT
CEILING LINING	4mm PRE-FINISHED PLYWOOD - MIRAGE PEARL
CEILING INSULATION	R1.8 (75mm)
ROOF PITCH	2° CENTRE PITCH
ROOF CLADDING	TRIMDECK (4-6) BMT - ZINCALUME
ROOF INSULATION	-
UNDER BARGE FLASHING	ZINC
BARGE	WOODLAND GREY
GUTTER	-
DOWNSPIPE	-

STEPPED FLASHING	30 x 80 STEP DOWN - WOODLAND GREY
ROOF / CEILING FRAMES	
FRAMING	75 x 41 x 0.75mm G550 STEEL STUDS
STUD SPACING	400mm CTS

ELECTRICS	
TO AS3000, 3001, 3012, TO COATES HIRE PURCHASE SPECIFICATIONS	
P.O.E. LOCATED BEHIND SWITCHBOARD, POLY PLASTIC	
INTERNALLY MOUNTED SWITCHBOARD, 1800mm AFL(TO CTR)	

SW BOARD	
----------	--



132 WARREN RD, SMITHFIELD
TEL: 1800 217 131
FAX: (02) 8718 2599

NSW 2164
D: (02) 8718 2500

CLIENT APPROVAL

SIGNATURE
NAME: _____
DATE: _____

PROJECT:

COATES - CAPEX
3.0 x 6.0m M/F TOILET

TITLE:

GENERAL ARRANGEMENT

DATE: 09.10.2015
DRAWN BY: ML
CHECKED BY: DT
SCALE: SHOWN
QUOTATION NUMBER: 200305
REV: E
SHEET A3

DRAWING NUMBER: MS-200305-B20-101
BUILDING NUMBER: #0000

© COPYRIGHT - THE INFORMATION, IDEAS AND CONCEPTS CONTAINED IN THIS DOCUMENT ARE SOLELY THE PROPERTY OF MBS MODULAR BUILDING SYSTEMS PTY LTD. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE PRIOR WRITTEN CONSENT OF MBS MODULAR BUILDING SYSTEMS PTY LTD.

ITEM	DESCRIPTION	HEIGHT	QTY
EF	ELECTRICAL DISTRIBUTION BOARD	*	1
W1	ELECTRICAL SUPPLY POINT OF ENTRY	1800 AFL	1
W2	2x28W FLUORO LIGHT DIFFUSED - SURFACE MOUNT	CNMTD	3
W3	SINGLE LIGHT SWITCH	1300 AFL	2
W4	SINGLE GPO - 10 AMP	1550 AFL	2
EF	EXHAUST FAN	*	2

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE







ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

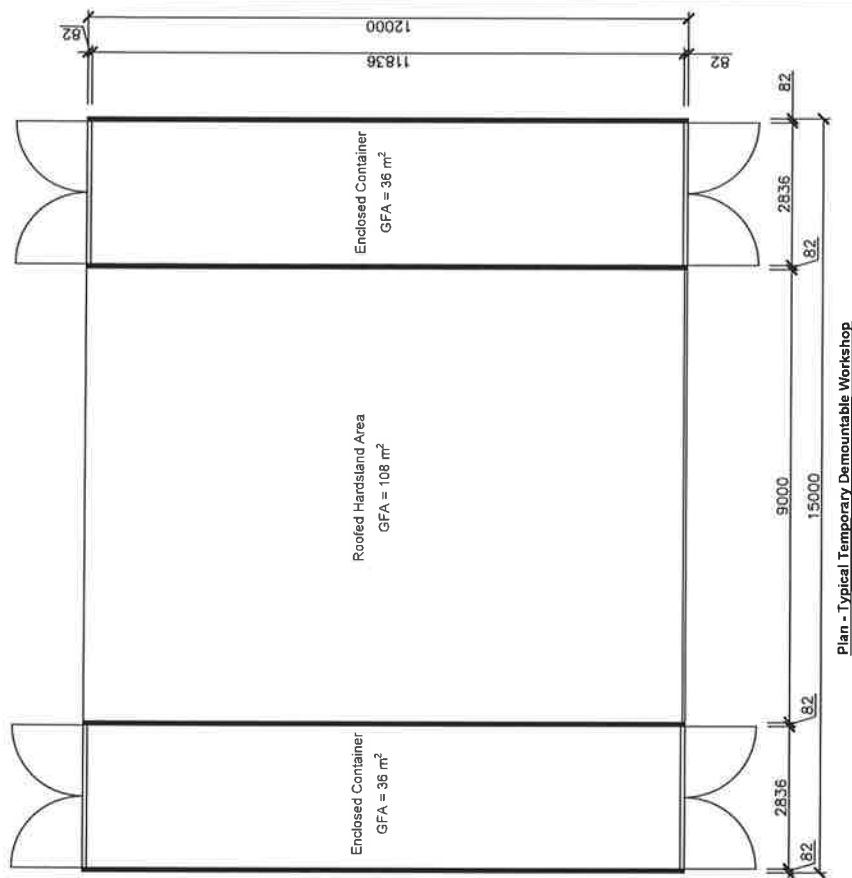
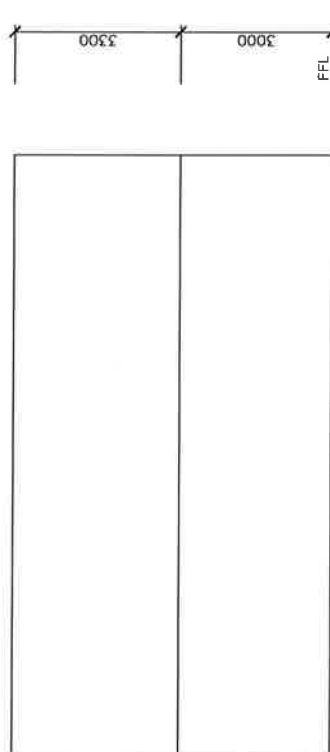
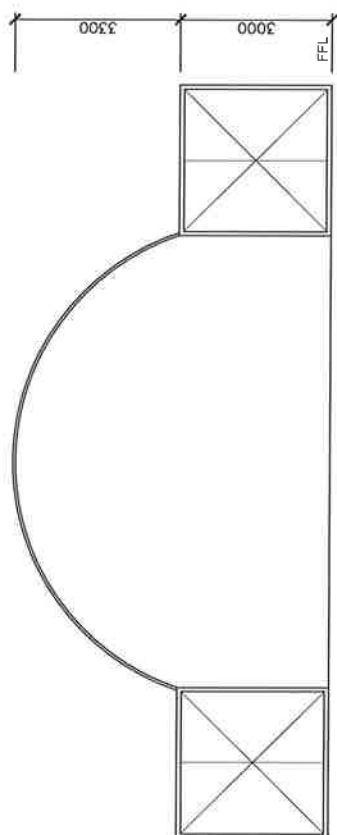
ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

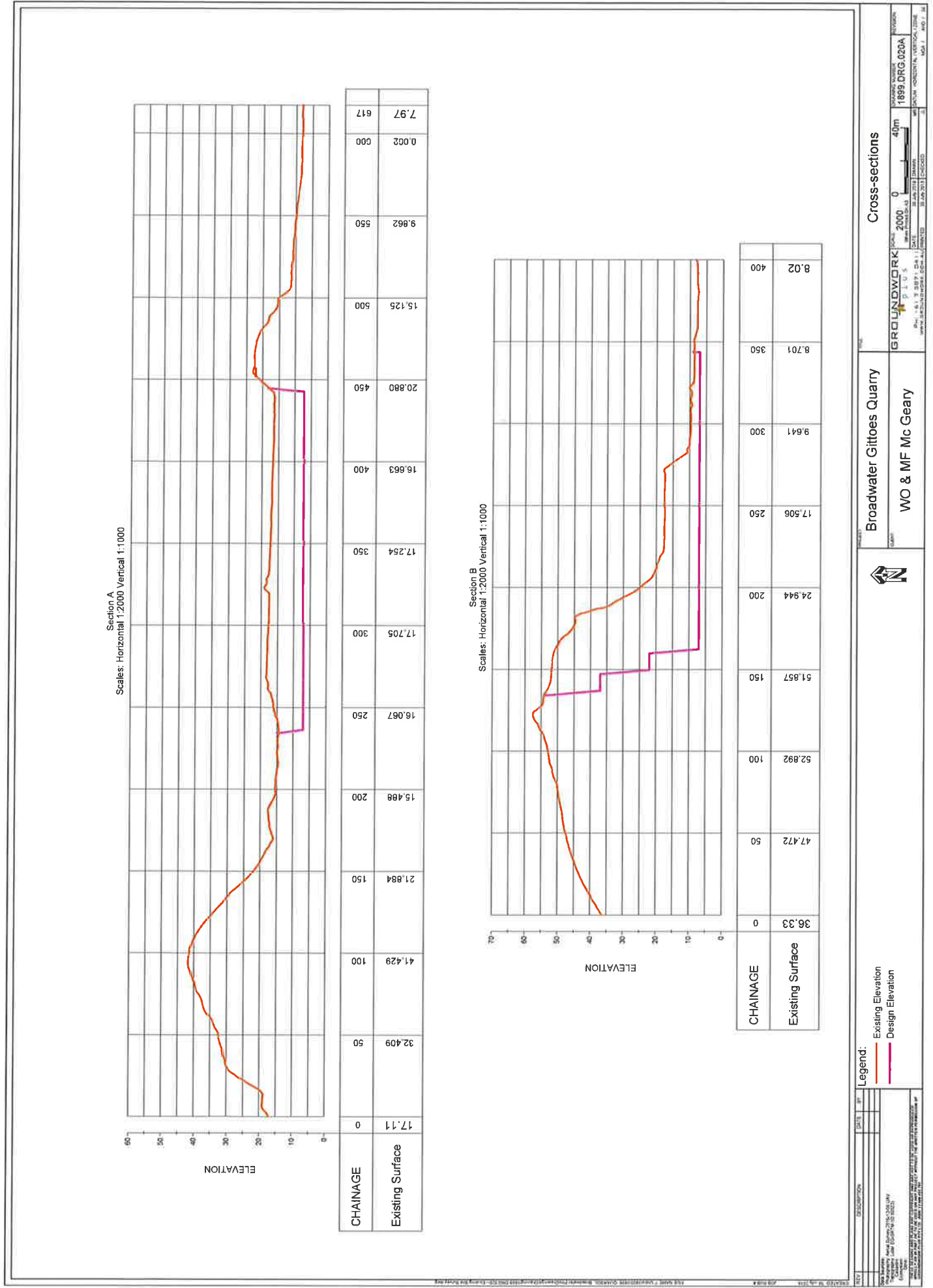
ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ITEMS & EQUIPMENT SCHEDULE	QTY	DESCRIPTION
A	5	TOILET SUITE DUAL FLUSH W/HA SP & STAPLE
B	4	850 HAND BUSH (HAC) PUSHBUTTON TYPE W/ MIRROR OVER
C	2	PAPER TOWEL DISPENSER (ROLL TYPE)
E	1	550 URINAL - 1500
NOTES:		
		COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS
		COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK
		WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID
5		TOILET CUBICLES IN WHITE

ELECTRICAL LEGEND			
ITEM	DESCRIPTION	HEIGHT	QTY
	ELECTRICAL DISTRIBUTION BOARD	*	1
	ELECTRICAL SUPPLY POINT OF ENTRY	1800 AFFL	1
	2x20MM FLUORO LIGHT DIFFUSED - SURFACE MOUNT	CNMTD	3
	SINGLE LIGHT SWITCH	1300 AFFL	2
	SINGLE GPO - 10 AMP	1550 AFFL	2
	EXHAUST FAN	*	2

ITEMS & EQUIPMENT SCHEDULE	
TAG	DESCRIPTION
A	5 TOILET SUITE, DUAL FLUSH W/HA SP & STAPLE
B	4 850 HAND BUSH (HAC) PUSHBUTTON TYPE w/ MIRROR OVER
C	2 PAPER TOWEL DISPENSER (ROLL TYPE)
*	*
E	5/6 URINAL - 1500
NOTES:	
COATES SIGNS - 4 PER BUILDING @ TOP RIGHT CORNERS	
COATES ASSET TAGS - FIT BESIDE ENTRY DOOR @ LOCK	
WASTE OUTLET TO BE MIN. 70mm HIGHER THAN BOTTOM OF SKID	
5	TOILET CUBICLES IN WHITE





Department Principal:
Bryce Trevilyan
Project Contact:
Bryce Trevilyan

ABN: 54 619 700 239

Queensland
6 Mayneview Street, Milton Qld 4064
PO Box 1779, Milton BC, Qld 4064
P: +61 7 3871 0411 F: +61 7 3367 3317

E: enquiry@ttplus.com.au

Ref: 10007:730
17 August 2018

WO & MF McGeary
c/- Jim Lawler
Groundwork Plus

Dear Jim

**Re: Broadwater Gittoes Quarry, Broadwater
Response to Council's Information Request**

We refer to your request to provide traffic engineering advice in relation to the traffic-related items of Richmond Valley Council's (Council) information request related to the proposed production increase of the Broadwater Gittoes Quarry, dated 22 May 2018.

Traffic-related information request items and responses prepared by Traffic and Transport Plus (TTPlus) are provided below:

Information Request Item No. 9

"9. The traffic assessment is based upon averages allowing for only 2 weeks down time, in our experience it is unusual for similar developments to operate in this manner. Rather higher volume movements are concentrated over shorter timeframes due to product demand, weather influences, school holiday periods, activities at other quarries etc. Impacts of the proposal need to be based upon these higher demand periods (e.g. road safety and intersection suitability, road traffic noise etc). However if the estimates provided (12 vph in and 12 vph out) are appropriate for Gittoes operations it could be managed by way of a consent condition a limit upon the number of daily/hourly truck movements. Please confirm the proposed haulage is limited to 12 vph in and 12 vph out. Haul traffic direct to the highway upgrade corridor need not be counted in the vph onto local roads."

Response to Information Request Item No. 9

It is noted that in the traffic and pavement impact assessment report prepared for the proposed production increase of Broadwater Gittoes Quarry (Ref.1), a conservative analysis approach has been adopted. In order to ensure impacts are fully considered and that sufficient infrastructure is in place to cater for the 'worst-case' operational scenario, the analysis in Ref.1 has conservatively assumed that the site would generate more than the typical hourly traffic volumes during the peak hour periods, by introducing the concept of a peak hour factor. In the traffic report (Ref.1), a peak hour factor of 3 has been adopted; that is to say, the analysis allows for peak

¹ "Broadwater Gittoes Quarry, Traffic and Pavement Impact Assessment Report", Traffic and Transport Plus, 02 November 2017.

production of triple that of average conditions – in the experience of TTPlus, this typically more than caters for real-life fluctuations in haulage.

Even in the event the actual down time is more than 2 weeks and / or there are periods of more intense activity, the adoption of the peak hour factor provides sufficient contingency within the analysis to cover the likely 'worst-case' operational scenario. The applicant has confirmed that the proposed haulage would have no need to exceed the modelled volumes and would not object to a condition limiting movement to 12 trucks per hour (IN) and 12 trucks per hour OUT onto the external road network (as noted, understanding that the haulage traffic internally and directly to the highway upgrade corridor would not be counted in the vph limit onto local roads).

Information Request Item No. 10

"10. Road safety needs to consider the suitability of the Pacific Highway intersection during congested periods, e.g. school and public holidays. Clarification is requested to confirm the suitability of the existing arrangement during these periods, give [sic.] the increased non quarry traffic on the intersection counts."

Response to Information Request Item No. 10

As identified in the traffic report (Ref.1), no haulage activities will occur on Sunday or public holidays. If there are specific days during school holiday periods (unable to be currently foreseen) identified with significant increase in base traffic, it is recommended that the applicant manage / minimise the haulage vehicles during these periods if possible. Such a management strategy could be formulated in conjunction with Council.

The performance of the Pacific Highway / MacDonald Street intersection has been assessed during normal Weekday AM and PM peak hour periods in the traffic report (Ref.1), noting the allowance for triple the normal haulage volumes during these periods in the analysis.

Notwithstanding the highly conservative assumptions adopted in the performance analysis, the impacts associated with the proposed production increase on the operation of the intersection are quite modest. The intersection would continue to operate within satisfactory operational parameters with the proposed production increase (DOS<0.8). In addition, it is noted that the site is not a permanent proposal as it is only sought to operate for five years, therefore, the proposal would not create any long-term traffic impacts on the Pacific Highway / MacDonald Street intersection.

Information Request Item No. 11

"11. In relation to S94a heavy haulage contributions Council's adopted Plan shows that for Mines and Extractive Industries processing quarried/mined materials > 20,000 m³ per annum the adopted rate is \$1.08 per tonne (with an inbuilt standard for 15km distance adopted by Council in the Plan). Formal request to vary the adopted rate is to be made, justifying the assumptions made in the EIS. Please note that the final determination is at the discretion of the Council, and a resolution of Council may be required."

Response to Information Request Item No. 11

Whilst the haul length is less than 15km, no specific variation from the adopted rate is sought.

Information Request Item No. 12

"12. The existing consent DA123/95 is subject to a heavy haulage base rate of 3.5c/tonne/km for 12km = \$0.420 per tonne (1999) plus CPI. Therefore the current rate for 2018/2019 would be \$0.706 per tonne for the 70,000 tonne (if that consent remains valid)."

Response to Information Request Item No. 12

Refer to the response to information request item no.11.

Information Request Item No. 13

"13. The proposed averaging of contributions assumes the 4 haulage routes share tonnages equally. Confirmation is requested that this assumption is reflected in the Road Safety assessment. If 80% of the tonnages are via the north and south sections of the Pacific Highway then the majority of the contributions must be for the 1.3km haul. Thus the traffic assessment for the intersection and the apportionment of Heavy Haulage rates must be consistent."

Response to Information Request Item No. 13

In the traffic report (Ref.1), when calculating the pavement contribution, it was proposed to average contributions by assuming the 4 haulage routes share tonnages equally. However, when preparing the road safety assessment (or road capacity assessment), all 4 haulage routes were assessed individually, and it was assumed 100% of haulage vehicles would use one haulage route in each haulage route assessment scenario. Therefore, all different 'worst-case' operational scenarios have been assessed in the traffic report (Ref.1).

Information Request Item No. 14

"14. Assessments based on perceived traffic impacts being only of a temporary nature of 5 years do not reflect the true actual safety related impacts during this time."

Response to Information Request Item No. 14

The proposed additional production of the Broadwater Gittoes Quarry would predominately be hauled to the highway upgrade project. The expected operating life of the proposed production increase of the quarry is approximately five years, subject to the duration of the highway upgrade project. It has simply been noted within the reporting that the subject application (the proposed production increase) would cease after five years.

It is considered to be reasonable only to assess the road capacity and safety until the last year of the operation of the subject application. After that time, there would be no changes to operation on the road network as a

consequence of the application. The assessment methodology considers the actual forecast traffic loadings that would occur (in a conservatively high fashion) for the 'worst-case' operational scenarios.

Information Request Item No. 15

"15. The use of the Rockhampton (sic.) to determine the need for sealing of Broadwater Quarry Road is considered not comparable due to the very large concentration of heavy vehicles on the local roads. The Rockhampton Guideline only allows a 20% maximum for heavy vehicles. It is envisaged that > 90% heavy vehicles will be using Broadwater Quarry Road, and that the accelerated deterioration of a gravel road and the dust generated warrant sealing of the road."

Response to Information Request Item No. 15

Although the Rockhampton Guideline only makes allowance for a 20% maximum of heavy vehicles, it suggests that "... An unsealed rural road must be in the range of 150-500 AADT (Annual Average Daily Traffic). A road will not be considered for a minimum standard seal if there is less than 150 AADT unless there are significant issues shown in assessment score. A road that has an AADT greater than 500 will qualify for a full road design".

Although the percentage of heavy vehicles is larger than 20% on Broadwater Quarry Road with the subject application, the traffic volumes on Broadwater Quarry Road would be generally approximately 109vpd, which is much less than 500vpd or even 150vpd. Of the identified 109vpd, the likely estimate of heavy vehicles is 75vpd which represents 15% of the 500vpd threshold. This represents less than 20% of the identified 500vpd trigger, there are simply less light vehicles on the road. Consequently, it should still be considered an appropriate conclusion to allow retention of the unsealed pavement. Additionally, given that the proposed production increase is only for five years, retaining the unsealed carriageway on Broadwater Quarry Road is considered to be further justified.

This is not to say that appropriate management strategies to manage impacts on the road should not be put in place (such as drivers' code of conduct and dust suppression), however it simply identifies that sealing of the road is not reasonably justified.

Traffic and Transport Plus has been advised that apart from the quarry, the other common users of Broadwater Quarry Road are trucks transporting material to the sugar mill stockpiles to the east of the quarry and related vehicles. After the construction of the Pacific Highway Upgrade Project, those vehicles will be diverted and would no longer need to use Broadwater Quarry Road. This would mean that post the Pacific Highway Upgrade Project there would be even less traffic on Broadwater Quarry Road compared to the current situation. The decision to upgrade a specific road should be cognisant of the possible temporary nature of use and future conditions, and based on the information above, it is considered that sealing of the road is not warranted.

Additionally, whilst the sealing is not reasonably required as noted above, given that proposed production increase would only operate for five years, it would not be financially viable for the subject proposal to seal Broadwater Quarry Road.

Information Request Item No. 16

"16. RMS have raised the following matters to be further considered.

- a) The Traffic Impact Assessment (TIA) has only considered the impacts on road capacity for the existing and 5 year horizon scenarios. Austroads requirements for the intersection treatment to manage safety of turning traffic have not been considered.*
- b) A Level of Service (LOS) E is identified for the Right turn movement from MacDonald Street onto the Pacific Highway. Best practice identifies a LOS C is the acceptable level of capacity for intersection treatments.*
- c) The location of the pedestrian refuge island in the vicinity of the intersection would require consideration when considering proposed intersection treatments."*

Response to Information Request Item No. 16

As discussed previously, this subject application (the proposed production increase) would only operate temporarily for five years. It is therefore considered to be reasonable only to assess the road capacity and safety until the last year of the operation of the subject application.

Other than the performance measurement of Level of Service (LOS), the primary performance indicator utilised in assessing traffic operation is Degree of Saturation (DOS – ratio of traffic demand to capacity). The practical maximum DOS for a priority intersection is 0.80. Although a Level of Service (LOS) E is identified for the right turn movement from MacDonald Street onto the Pacific Highway, the maximum DOS of the right turn movement from MacDonald Street would only be 0.38 in the last operational year of the proposed production increase. This is generally considered to be acceptable operation and there would be ample capacity for vehicles to turn right from MacDonald Street onto the Pacific Highway. Drivers from MacDonald Street would naturally experience some delays at times, which is considered to be reasonable for vehicles from a minor road.

It is reiterated that the analysis approach is quite conservative and operation would generally be superior to the findings of the analyses outlined in Ref.1.

Based on a review of the existing geometry of the Pacific Highway / MacDonald Street intersection, the existing right turn lane treatment is generally consistent with a Channelised Right Turn (Short) lane (CHR(S)). In addition, reviewing the base traffic volumes (without the proposed production increase) against the Austroads recommendations, Auxiliary Left Turn (Short) / Channelised Right Turn (Short) (AUL(S) / CHR(S)) lane treatments are already identified as being required; AUL(S) / CHR turn lane treatments are identified as being required with the proposed production increase.

Therefore, typically some improvement works would be identified as being required to be provided even without the proposed production increase of the quarry, however, engineering judgement can be applied in any specific circumstance.

Taking a more holistic view, a number of other aspects of the matter should be taken into consideration.

Firstly, according to the crash and casualty statistics sourced from Transport for NSW's website, no crashes have been recorded at the Pacific Highway / MacDonald Street intersection from 2013 to now. The crash data is illustrated in Figure 1.

Figure 1 - Crash and Casualty Statistics



Secondly, the reality is that the theoretical impacts foreshadowed by the above assessment are highly conservative, and unlikely to actually occur, with the majority of trips likely to be directly associated with the immediately adjacent highway upgrade project. As discussed in the traffic report (Ref.1), there are four possible haul routes (Route 1 to Route 4) due to different construction stages of the highway upgrade project. Only Route 1 and Route 4 need to use the Pacific Highway / MacDonald Street intersection; accordingly the site-related volumes modelled at the Pacific Highway / MacDonald Street intersection simply would not occur continuously during the five-year operational period, perhaps for approximately half of the operational period. With a fuller understanding of the construction stages of the highway upgrade project and logistics management, it is likely to be less than one-third of the quarried material that is required to be hauled via the Pacific Highway / MacDonald Street intersection given that many trips would take other routes.

Thirdly, notwithstanding those highly conservative assumptions, the impact on the operation of the intersection under these theoretical conditions is quite modest, the intersection would continue to operate with satisfactory operational conditions with the proposed production increase ($DOS < 0.8$). In addition, as the site is not a permanent proposal, it would only operate for five years and thereafter traffic volumes would decrease. Therefore, the proposal would not create any long-term traffic impacts on the Pacific Highway / MacDonald Street intersection.

Fourthly, in the medium term, after completion of the immediately adjacent section of the highway upgrade project, that section of the highway would become open to traffic and accordingly through volumes on the (Old)

existing Pacific Highway would reduce significantly, thereby yielding improved operation of the intersection at that time.

Notwithstanding the above observations, traffic safety is of course important, and whilst an intersection upgrade is neither necessary or warranted, to ensure safe operation of the Pacific Highway / MacDonald Street intersection and persons using the pedestrian refuge island, it is recommended that during the relevant periods of use, the applicant provides some signage at / near the intersection to increase drivers' and pedestrians' awareness of heavy vehicles in the locality. With provision of these signs, operation would be considered to be acceptable.

It is also recommended that all haulage truck drivers to / from the site be required to strictly follow a drivers' code of conduct to be prepared and issued by the operator of the site to ensure the safety of road users along the proposed haulage route.

Information Request Item No. 17

"17. Council has referred the application to relevant public authorities and placed the application on public exhibition. Please find attached a copy of submissions received Council requests you respond to the issues raised."

Response to Information Request Item No. 17

The responses in relation to traffic-related issues in submissions is included in Attachment A of this advice.

We trust that this information is of assistance. If you require any additional assistance in relation to this matter, please do not hesitate to contact me.

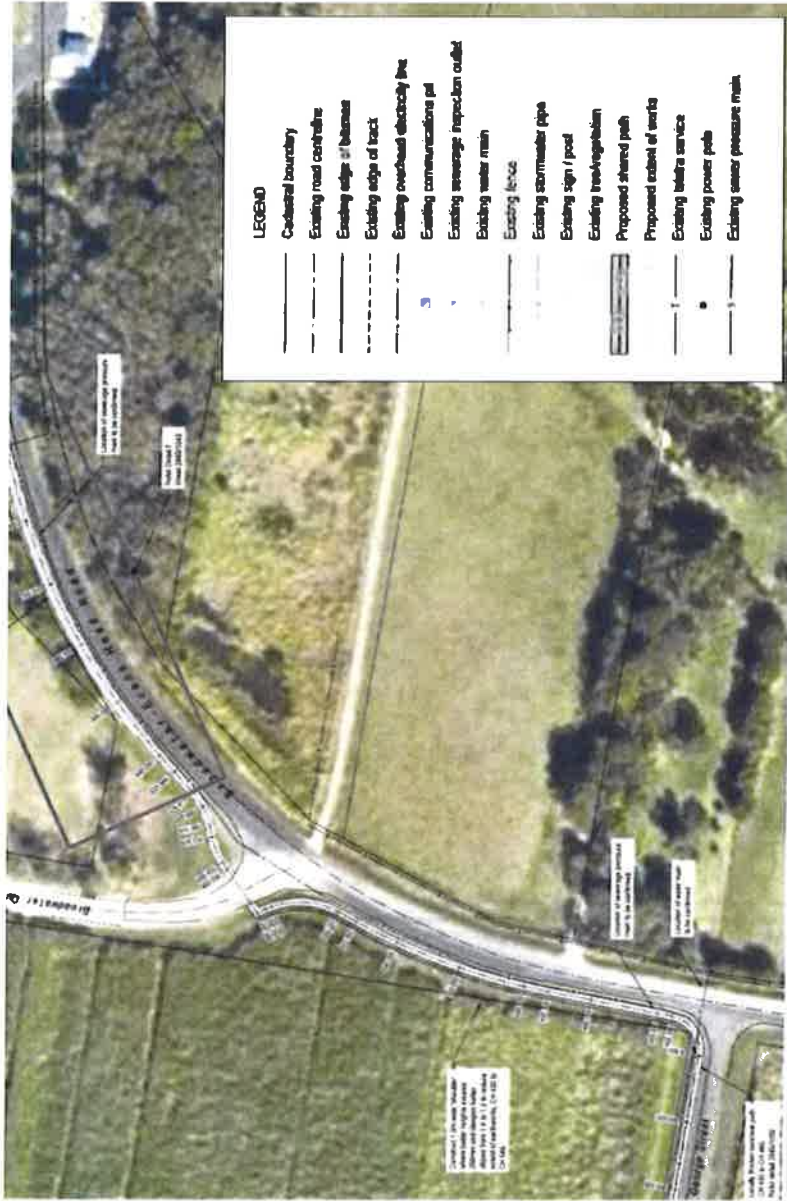
Yours faithfully



Bryce Trevilyan – RPEQ #7745
Traffic and Transport Plus

Attachment A

Responses to Traffic-related Submissions

Submission (Traffic-related issues)	Response to Submission (prepared by Traffic and Transport Plus)
Submission 1	
<p>Object...on the following grounds:</p> <p>Safety issues particularly around the intersection of Quarry Road with the Broadwater / Evans Head Road and adjacent footpath and cycle way;</p>	<p>Based on a review of the Broadwater cycle path plan, the haul route associated with the site crosses with the Broadwater cycle path. The relevant section of Broadwater cycle path is duplicated below.</p>  <p>As noted, the intersection point of the haul route and the Broadwater cycle path is at the cycle path's crossing point of Broadwater Quarry Road. Whilst this is an existing crossing point, the increased haul vehicle volumes warrant further consideration and it is recommended to install appropriate signage at the crossing point to enhance to the awareness of cyclists and truck drivers in relation to the crossing point. It is also recommended to use a special pavement / pavement colouring for the cycle path prior to Broadwater Quarry Road to clearly pre-warn riders.</p>
Damage to our roads and infrastructure;	<p>The results of intersection performance assessment, included in the initial traffic report (Ref:1), identifies that the proposed production increase would not create any capacity concerns with respect to road infrastructure. In addition, Council will impose reasonable and relevant conditions in the development consent. It is expected Council will condition the applicant to pay contributions for the impacts associated with the subject proposal on the road infrastructure.</p>

Submission (Traffic-related Issues)	Response to Submission (prepared by Traffic and Transport Plus)
Submission 2	
Object... on the following grounds:	
<i>Traffic – extra trucks. George Street is used as a thorough fare for all traffic and is not designed for heavy vehicles.</i>	George Street would not form a part of the proposed haul route and therefore would not be used by heavy vehicles associated with the site.
Submission 3	
No traffic-related issues.	
Submission 4	
Object... on the following grounds:	
<i>Traffic and Pavement Assessment – concern whether the 44 daily movements stated means 44 movements per day total, or 44 in 44 out of the quarry.</i>	As identified in the traffic report (Ref.1), the proposed production increase would generate 44 trucks IN and 44 trucks OUT per day. However, as noted in Ref.1, because of the different destinations for the different stages of the highway upgrade project, it is likely to be less than one-third of the quarried material that is required to be hauled via the Pacific Highway / MacDonald Street intersection as some quarried material would be hauled internally to the construction site of the highway upgrade project. The results of intersection performance assessment, included in the traffic report (Ref.1) along with the additional discussion herein, indicates that the proposed production increase would not create any capacity concerns on road infrastructure.
<i>Concern as to who is going to be responsible for the upkeep of Broadwater Quarry Road. The responsibility of ongoing maintenance of the road needs to be confirmed.</i>	Council is responsible for the maintenance of Broadwater Quarry Road. However, Council will impose reasonable and relevant conditions in the development consent. It is expected Council will condition the applicant to pay contributions for the impacts associated with the subject proposal on the road infrastructure. In addition, it is reiterated that the proposed production increase would only operate for five years. Traffic and Transport Plus has been advised that apart from quarry related vehicles, other common users of Broadwater Quarry Road are trucks transporting material to the sugar mill stockpiles to the east of the quarry and related vehicles. After the construction of the Pacific Highway Upgrade Project, those vehicles will be diverted and would not need to use Broadwater Quarry Road. This would mean that post the Pacific Highway Upgrade Project there would be even less traffic on Broadwater Quarry Road compared to the current situation.
Submission 5	
Object... on the following grounds:	
<i>1. Road safety in the area, particularly intersection of Quarry Road and Broadwater/Evans Head Road and adjacent footpath and cycleway;</i>	As per the discussion in the response to submission 1, it is recommended to install appropriate signage at the crossing point of the Broadwater cycle path to enhance the awareness of cyclists and truck drivers in relation to the crossing point. It is also recommended to use a special pavement / pavement colouring for the cycle path prior to Broadwater Quarry Road to clearly pre-warn riders.
Submission 6	
Object... on the following grounds:	
<i>1. Safety – pedestrians and children catching the school bus already navigate speeding contractors with the number set to increase with quarry extension. Roads currently are not equipped to handle truck and dog traffic and upgrading the road or bypassing the town entirely should be investigated.</i>	The results of the intersection performance assessment, included in the initial traffic report (Ref.1), shows that the proposed production increase would not create any capacity concerns on the road infrastructure. It is also recommended that all haulage truck drivers associated with the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route, including consideration of the safe operation of school buses and to ensure the safety of school children. It is recommended that a component of the drivers' code of conduct includes that if any truck driver is ever recorded to be speeding whilst hauling, the driver would not be permitted access to the site again. Such controls have been found to be very effective in managing driver behaviour. There are no plausible alternatives for hauling material from the site.

Submission (Traffic-related Issues)		Response to Submission (prepared by Traffic and Transport Plus)
Submission 7		
Object... on the following grounds:		
1. Road safety in the area, particularly intersection of Quarry Road and Broadwater/Evans Head Road and adjacent footpath and cycleway;		It is recommended to install appropriate signage at the crossing point of the Broadwater cycle path to enhance to the awareness of cyclists and truck drivers in relation to the crossing point. It is also recommended to use a special pavement / pavement colouring for the cycle path prior to Broadwater Quarry Road to clearly pre-warn riders. It is also recommended that all haulage truck drivers associated with the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route. It is recommended that a component of the drivers' code of conduct includes that if any truck driver is ever recorded to be speeding whilst hauling, the driver would not be permitted access to the site again. Such controls have been found to be very effective in managing driver behaviour.
2. Safety issues at school bus stop in McDonald Street due to increased truck movements.		To ensure the safe operation of the school bus stop in McDonald Street, it is recommended to install additional signage to increase drivers' and pedestrians' awareness at the school bus stop and at the Pacific Highway / MacDonald Street intersection. It is also recommended that all haulage truck drivers associated with the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route. It is recommended that a component of the drivers' code of conduct includes that if any truck driver is ever recorded to be speeding whilst hauling, the driver would not be permitted access to the site again. Such controls have been found to be very effective in managing driver behaviour.
Submission 8		
Not against the expansion if the following issues are addressed:		
1. The intersection of Broadwater Quarry Road and Broadwater Evans Head Road needs to be upgraded to accommodate the heavy traffic proposed;		The results of the intersection performance assessment, included in the initial traffic report (Ref.1), shows that the proposed production increase would not create any capacity concern on road infrastructure. It is also noted that the proposed production increase would only operate for five years. It is further noted that after completion of the immediately adjacent section of the highway upgrade project, that section of the highway would become open to traffic and accordingly through volumes on the (Old) existing Pacific Highway would reduce significantly, thereby yielding improved operation of the intersection at that time.
2. The road from the abovementioned intersection to the Pacific Highway needs to be upgraded;		To ensure the safe operation of the Pacific Highway / MacDonald Street intersection and McDonald Street, it is recommended the applicant install additional signage to increase drivers' and pedestrians' awareness at the school bus stop on McDonald Street and at the Pacific Highway / MacDonald Street intersection. It is also recommended that all haulage truck drivers to / from the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route.
3. McDonald Street needs to be upgraded at intersection with current Pacific Highway;		In addition, Council will impose reasonable and relevant conditions in the development consent. It is expected Council will condition the applicant to pay contributions for the impacts associated with the subject proposal on the road infrastructure; these contributions would be appropriately assigned by Council.
Submission 9		
No traffic-related issues.		
Submission 10		
No traffic-related issues.		
Submission 11		
Object... on the following grounds:		
Additional trucks using Broadwater Quarry Road directly behind submitters property;		Whilst not all haul trips associated with the use will use Broadwater Quarry Road, use of the road by quarry-related vehicles is entirely expected. The pavement contributions and maintenance of the road will ensure operation of the road remains satisfactory. The volume of vehicles utilising the road remains within the traffic carrying capacity of the road. Dust will be controlled by the implementation of appropriate duct control measures.

Submission (Traffic-related Issues)	Response to Submission (prepared by Traffic and Transport Plus)
Submission 12	
Object... on the following grounds:	
<i>Public safety using footpath/bikeway due to increased traffic;</i>	It is recommended to install appropriate signage at the crossing point of the Broadwater cycle path to enhance to the awareness of cyclists and truck drivers in relation to the crossing point. It is also recommended to use a special pavement / pavement colouring for the cycle path prior to Broadwater Quarry Road to clearly pre-warn riders.
	It is also recommended that all haulage truck drivers associated with the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route. It is recommended that a component of the drivers' code of conduct includes that if any truck driver is ever recorded to be speeding whilst hauling, the driver would not be permitted access to the site again. Such controls have been found to be very effective in managing driver behaviour.
Submission 13	
Object... on the following grounds:	
<i>Safety – conflict between quarry traffic and footpath and cycleway currently under construction;</i>	It is recommended to install appropriate signage at the crossing point of the Broadwater cycle path to enhance to the awareness of cyclists and truck drivers in relation to the crossing point. It is also recommended to use a special pavement / pavement colouring for the cycle path prior to Broadwater Quarry Road to clearly pre-warn riders.
	It is also recommended that all haulage truck drivers associated with the site are required to strictly follow the drivers' code of conduct issued by the operator to ensure the safety of road users along the proposed haulage route. It is recommended that a component of the drivers' code of conduct includes that if any truck driver is ever recorded to be speeding whilst hauling, the driver would not be permitted access to the site again. Such controls have been found to be very effective in managing driver behaviour.
Submission 14	
No traffic-related issues.	
Submission 15	
No traffic-related issues.	
Submission 16	
Failure of operator to comply with current DA conditions as identified below:	
<ul style="list-style-type: none"> No "Trucks Turning" signs erected (as specified in DA conditions); Bitumen area that was to be sealed hasn't gone the length requested by Council (as specified in DA conditions); Trashing of submitters access and tourist road to Evans Head (general comment on road condition). 	Refer to separate response prepared by Groundwork Plus.

Department Principal:
Tegan Smith
Project Contact:
Jim Lawler

ABN: 13 609 422 791

Queensland
6 Mayneview Street, Milton Qld 4064
PO Box 1779, Milton BC, Qld 4064
P: +61 7 3871 0411 F: +61 7 3367 3317

South Australia
Shops 2 & 3, 16 Second Street, Nurioolpa SA 5355
PO Box 854, Nurioolpa SA 5355
P: +61 8 8562 4158

E: info@groundwork.com.au

Date: 5 October 2018
Ref: 1899 DA1
Council Ref: DA2018/0188

Cherie Smith
Development Assessment Planner
Richmond Valley Council
Locked Bag 10
Casino NSW 2470

Via email: council@richmondvalley.nsw.gov.au

Dear Cherie

Response to submissions – Development application DA2018/0188, 65 Broadwater Quarry Road, Broadwater being described as Lots 1 & 8 DP1216612.

Groundwork Plus continues to act on behalf of the applicant regarding the application for the proposed extension of the existing Broadwater Gittos Quarry at the above address. We provide the following response to matters raised by submissions relating to the abovementioned development application.

We have been advised that a total of sixteen (16) properly made submissions were received with fifteen (15) in objection to the overmentioned development application. We have summarised the matters raised by submissions.

The key matters in our opinion are as follows:

1. *Noise caused by trucks and the operation of the quarry will cause nuisance to surrounding land uses.*
2. *Dust caused by trucks and the operation of the quarry will cause nuisance on surrounding land uses.*
3. *Potential safety impacts from increased truck movements on local roads and the proposed cycleway.*
4. *Visual impacts from the quarry and effects on the local landscape.*
5. *Potential damage to roads and local infrastructure caused by the proposed development.*
6. *Concerns that the proposed extraction limit of 490,000 tonnes per year is not enforceable.*
7. *Potential for fly rock and blast impacts and what can be done to manage and monitor the blasts?*
8. *Potential traffic impacts due to the increase in truck movements.*
9. *Clarification on how site access will be obtained.*
10. *Potential impacts on the local residents and amenity of the area from extended hours of operation.*
11. *Concerns about the hazardous chemicals to be stored on site.*
12. *Substantial rehabilitation is required to support native animals and biodiversity.*
13. *Concerns regarding compliance with the existing approval conditions.*
14. *Concerns that the intersection of Broadwater Quarry Road and Broadwater Evans Head Road intersection needs upgrading along with some of the local roads.*
15. *The monetary contribution for pavement impacts is too low.*
16. *Inadequate documentation provided in the application.*

A response to each of the key matters is provided in the following pages.

1. Noise caused by trucks and the operation of the quarry will cause nuisance to surrounding land uses.

Comments:

A Noise Impact Assessment for the proposed extension of the existing Broadwater Gittoes quarry has been undertaken for the application. This assessment evaluated the potential noise impacts of the proposed activities upon existing residential properties in the locale with reference to the following policy documents and standards.

- NSW Industrial Noise Policy (2000)
- NSW Road Noise Policy (2011)
- NSW Interim Construction Noise Guideline (2009)
- Secretary's Environmental Assessment Requirements (EAR 1109, dated 13th December 2016)
- Australian Standards AS1055 – Acoustics: Description and measurement of environmental noise

The assessment concluded that the noise limits from operational activities have been calculated in accordance with the NSW Industrial Policy to be more than 10dB(A) below the criteria for the existing activity. This represents a substantially higher degree of regulatory oversight. Noise from operational activities is forecast to be generally below the nominated criteria. The proposed activities are therefore not considered an undue risk to the acoustic amenity at surrounding land uses. Noise from additional traffic generated by the proposal is predicted to meet NSW Road Noise Policy criteria at all potentially affected residences. A noise management plan has been developed and included as Section 8.2 of the Quarry Environmental Management Plan submitted as part of the application, which details strategies and mitigation measures for potential noise impacts on surrounding land uses. It is anticipated that the Environment Protection Authority (EPA) will impose reasonable and relevant conditions on the operation through the Environment Protection Licence (EPL) which will regulate noise emissions.

2. Dust caused by trucks and the operation of the quarry will cause nuisance to surrounding land uses.

Comments:

An Air Quality Assessment and Management Plan was prepared for the application. That assessment concluded that sources of dust emissions can be managed and known mitigation measures will be effective in controlling dust. Ongoing monitoring of performance is recommended and it is anticipated that the EPA will impose reasonable and relevant conditions on the operation through the EPL which will regulate dust emissions.

3. Potential safety impacts from increased truck movements on local roads and the proposed cycleway.

Comments:

The Traffic Impact Assessment prepared by Traffic and Transport Plus analysed the calculated traffic volumes and determined that the existing road infrastructure would continue to operate safely and efficiently into the future, particularly being mindful of the short lifespan of the proposal. Traffic and Transport Plus have prepared a response to the information request from Richmond Valley Council which further addresses this matter.

4. Visual impacts of quarry and effects on the local landscape.

Comments:

The quarry has been in operation since the 1990s and forms part of the existing landscape. As all quarrying activities are proposed to occur within the existing disturbance area, there will be no change to the visual appearance of the quarry from nearby residences and the road network. Figure 30 of the Environmental Impact Statement, forming part of the development application material, identifies six (6) representative viewpoints of the hill for analysis of potential visual impacts of the operation on surrounding land. This analysis confirms that the visual amenity of the surrounding land uses are not anticipated to be altered by the proposed development. Cross sections of the existing and proposed land form have been prepared in response to the information request from Richmond Valley Council providing further evidence that there will be no significant change to the visual impacts of the quarry.

5. *Potential damage to roads and local infrastructure caused by the proposed development.*

Comments:

The Traffic Impact Assessment prepared by Traffic and Transport Plus as part of the application addressed this matter. Traffic and Transport Plus have prepared a response to the information request from Richmond Valley Council which further addresses this matter.

6. *Concerns that the proposed extraction limit of 490,000 tonnes per year is not enforceable.*

Comments:

Management procedures to ensure extraction does not exceed annual and total limits have been accepted by Richmond Valley Council in other development applications for quarries, including for example the Coraki Quarry. Those measures include for example reconciliation and confirmation of sales data by annual aerial survey and cross checking with payment of heavy haulage contributions to Richmond Valley Council. Those measures should continue provide sufficient comfort to Richmond Valley Council and the community that the extraction limit is enforceable through a reasonable and relevant condition of approval.

7. *Potential for fly rock and blast impacts and what can be done to manage and monitor the blasts?*

Comments:

The Noise Assessment Report prepared for the application assessed potential blast impacts and a Blast Management Plan is included in the Quarry Environmental Management Plan. The existing operation of the quarry requires blasting and is regulated by the EPA through conditions of the EPL. It is understood that compliance with the conditions of the EPL has occurred to date providing confidence that compliance can continue to be achieved. The conditions of the EPL and the contents of the Blast Management Plan make it clear that it is the responsibility of the operator to manage and monitor blasting and notify the relevant authorities in the event of an exceedance. It is anticipated that Richmond Valley Council would impose a condition requiring the operation of the quarry to be undertaken in accordance with the Quarry Environmental Management Plan and to comply with the conditions of the EPL issued by the EPA.

8. *Potential traffic impacts due to the increase in truck movements.*

Comments:

The Traffic Impact Assessment prepared by Traffic and Transport Plus as part of the application addressed this matter. Traffic and Transport Plus have prepared a response to the information request from Richmond Valley Council which further addresses this matter.

9. *Clarification on how site access will be obtained?*

Comments:

Roads and Maritime Services own the land described as Lot 8 DP1216612 (Lot 8) over which access is currently provided to Lot 1. Roads and Maritime Services has provided written consent for this application to be made. The land owner and applicant has advised us that Roads and Maritime Services are required to provide a new access to the quarry as part of the construction works for the Pacific Highway Upgrade Project. It is understood that the new access will be located entirely within Lot 1.

10. *Potential impacts on the local residents and amenity of the area from extended hours of operation.*

Comments:

The proposed hours of operation are as per Section 3.2.8 of the EIS being 7am to 6pm Monday to Friday and 8am to 12noon Saturday and blasting 9am to 3pm Monday to Friday. This is consistent with the approved hours of operation for the existing quarry as stated in development consent 123/95 and EPL 20770. As such there is no change or increase in hours of operation as part of this application.

11. Concerns about the hazardous chemicals to be stored on site?

Comments:

Storage of oils and chemicals is a standard procedure and will occur in containers and devices complying with relevant Australia Standards. The operator is responsible for storage facilities complying with the relevant Australian Standards. Conditions of the EPL from the EPA will regulate this matter.

12. Substantial rehabilitation is required to support native animals and biodiversity.

Comments:

A Rehabilitation Management Plan has been prepared as part of the application. It is envisaged that the bulk of the rehabilitation will occur as one campaign at the cessation of the quarrying activity. Where possible, early rehabilitation in some areas may be able to be undertaken. The post extraction land use is not determinable due to the remaining life of the operation and the impact of the Pacific Highway Upgrade on the quarry. As such it is proposed to ensure that the landform created is safe, stable and non-polluting and is connected into the surrounding landscape to then enable the land owner to investigate suitable post extraction land uses.

13. Concerns regarding compliance with the existing approval conditions.

Comments:

Richmond Valley Council provided a letter dated 6 September 2016 confirming that at that date the development consent DA123/95 was current and active and in compliance with the conditions of consent. The current operator of the quarry relied upon that correspondence to continue operation of the quarry.

14. Concerns that the intersection of Broadwater Quarry Road and Broadwater Evans Head Road intersection needs upgrading along with some of the local roads.

Comments:

The Traffic Impact Assessment prepared by Traffic and Transport Plus as part of the application addressed this matter. Traffic and Transport Plus have prepared a response to the information request from Richmond Valley Council which further addresses this matter.

15. The monetary contribution for pavement impacts is too low.

Comments:

The Traffic Impact Assessment prepared by Traffic and Transport Plus as part of the application addressed this matter. Traffic and Transport Plus have prepared a response to the information request from Richmond Valley Council which further addresses this matter.

16. Inadequate documentation provided in the application.

Comments:

The development application material addressed all aspects of the environmental assessment requirements. It appears a submitter was unable to locate certain drawings and information. That material, including scaled drawings of the proposed quarry, did form part of the Environmental Impact Statement.

If you have any questions regarding the above information, please don't hesitate to contact me.

Yours faithfully

Groundwork Plus



Jim Lawler
Project Director