

Environment Protection Licence Monitoring Data - Water



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|---------------------------|---|
| Project Name: | Coffs Harbour Bypass |
| Monitoring Period: | Feb-24 |
| EPL Number: | 21766 |
| Licencee: | Garnuda Berhad and Ferrovial Agroman (Australia) Pty. Ltd. |
| Premise Address: | Coffs Harbour NSW 2450 |
| Public Register: | https://epgs.epa.nsw.gov.au/epoecapp/Detail.aspx?instid=21766&id=21766&option=licence&searchrange=licence&range=POE%20licence&ppr=no&status=Issued |
| Relevant EPL Condition/s: | L2.4, M2.3, M2.4 |

Sediment Basins (Type D):

| Discharge Point | Monitoring Point | Date | Turbidity (NTU) | | TSS (mg/L) | | pH | | Oil & Grease | | Aluminium (mg/L) | Iron (mg/L) | Conductivity (µS/cm) | Comment |
|-----------------|------------------|------------|-----------------|---------|---------------|---------|---------------|---------|---------------|---------|------------------|-------------|----------------------|---------|
| | | | Licence Limit | Results | Licence Limit | Results | Licence Limit | Results | Licence Limit | Results | | | | |
| B16100R | 1 | 01/02/2024 | | 20 | | NA | | 7.45 | | nil | NA | NA | NA | |
| B14100L | 1 | 01/02/2024 | | 7.8 | | NA | | 7.51 | | nil | NA | NA | NA | |
| B11450R | 1 | 01/02/2024 | | 26.2 | | NA | | 7.8 | | nil | NA | NA | NA | |
| B12600L | 1 | 02/02/2024 | | 11 | | NA | | 7.3 | | nil | NA | NA | NA | |
| B10700R | 1 | 02/02/2024 | | 14 | | NA | | 8 | | nil | NA | NA | NA | |
| B11600R | 1 | 02/02/2024 | | 10 | | NA | | 7.2 | | nil | NA | NA | NA | |
| B14800R | 1 | 08/02/2024 | | 22.8 | | NA | | 7.08 | | nil | NA | NA | NA | |
| B14800R | 1 | 09/02/2024 | | 23.6 | | NA | | 7.29 | | nil | NA | NA | NA | |
| B14800R | 1 | 10/02/2024 | | 24 | | NA | | 7.5 | | nil | NA | NA | NA | |
| B14800R | 1 | 12/02/2024 | | 52.6 | | NA | | 7.6 | | nil | NA | NA | NA | |
| B21050R | 1 | 14/02/2024 | | 5.1 | | NA | | 7.28 | | nil | NA | NA | NA | |
| B11000R | 1 | 15/02/2024 | | 25 | | NA | | 8.5 | | nil | NA | NA | NA | |
| B14800R | 1 | 19/02/2024 | | 16.8 | | NA | | 7.33 | | nil | NA | NA | NA | |
| B15300R | 1 | 19/02/2024 | | 32.7 | | NA | | 7.43 | | nil | NA | NA | NA | |
| B21100L | 1 | 19/02/2024 | | 8.5 | | 9 | | 6.8 | | nil | NA | NA | NA | |
| B21050R | 1 | 19/02/2024 | | 8.7 | | 6 | | 6.6 | | nil | NA | NA | NA | |
| B12250R | 1 | 20/02/2024 | | 54 | | NA | | 7.57 | | nil | NA | NA | NA | |
| B12600L | 1 | 20/02/2024 | | 37.5 | | NA | | 7.28 | | nil | NA | NA | NA | |
| B14800R | 1 | 21/02/2024 | | 13.7 | | NA | | 6.9 | | nil | NA | NA | NA | |
| B18250R | 1 | 21/02/2024 | | 11 | | 8 | | 7.8 | | nil | NA | NA | NA | |
| B13950R | 1 | 22/02/2024 | | 18.6 | | NA | | 7 | | nil | NA | NA | NA | |
| B14100L | 1 | 22/02/2024 | | 56.6 | | NA | | 7.14 | | nil | NA | NA | NA | |
| B14200R | 1 | 22/02/2024 | | 30.4 | | NA | | 7.31 | | nil | NA | NA | NA | |
| B14500R | 1 | 22/02/2024 | | 16 | | NA | | 6.65 | | nil | NA | NA | NA | |
| B15300R | 1 | 22/02/2024 | | 37.7 | | NA | | 6.58 | | nil | NA | NA | NA | |
| B10700R | 1 | 23/02/2024 | | 45 | | NA | | 7.75 | | nil | NA | NA | NA | |
| B11000R | 1 | 23/02/2024 | | 7.3 | | NA | | 7.13 | | nil | NA | NA | NA | |
| B11450R | 1 | 23/02/2024 | | 5.9 | | NA | | 6.51 | | nil | NA | NA | NA | |
| B15300R | 1 | 26/02/2024 | | 6.7 | | NA | | 7.4 | | nil | NA | NA | NA | |
| B20750R | 1 | 27/02/2024 | | 24 | | NA | | 7.1 | | nil | NA | NA | NA | |
| B21050R | 1 | 27/02/2024 | | 15 | | NA | | 7 | | nil | NA | NA | NA | |
| B21100L | 1 | 27/02/2024 | | 31.9 | | NA | | 6.7 | | nil | NA | NA | NA | |

High Efficiency

Sediment Basins

(Type B):

| Discharge Point | Monitoring Point | Date | Turbidity (NTU) | Total Suspended Solids (mg/L) | pH | Oil & Grease | Monitoring Frequency | Comment |
|-----------------|------------------|------------|-----------------|-------------------------------|-------|--------------|----------------------|---------|
| HEB 15000 | 4 | 16/02/2024 | 35 | 6 | 7.87 | nil | Special Frequency 2 | |
| HEB 17700R | 4 | 16/02/2024 | 10.6 | 7 | 7.039 | nil | Special Frequency 2 | |
| HEB 21750L | 4 | 16/02/2024 | 16.1 | 24 | 6.289 | nil | Special Frequency 2 | |
| HEB 15000 | 4 | 20/02/2024 | 15.7 | 10 | 7.006 | nil | Special Frequency 2 | |
| HEB 17700R | 4 | 20/02/2024 | 64.6 | 45 | 8.464 | nil | Special Frequency 2 | |
| HEB 18100R | 4 | 20/02/2024 | 65.7 | 20 | 8.519 | nil | Special Frequency 2 | |
| HEB 18250R | 4 | 20/02/2024 | 17 | 11 | 6.992 | nil | Special Frequency 2 | |
| HEB 21750L | 4 | 20/02/2024 | 32.6 | 16 | 6.197 | nil | Special Frequency 2 | |

Environment Protection Licence Monitoring Data - Air



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Public Register: <https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=21766&id=21766&option=licence&searchrange=licence&range=POEO%20licence&prp=no&status=Issued>
Relevant EPL Condition/s: M2.2

| Monitoring Point | Start Date | End Date | Date Data Obtained | Solid Particles (g/m ³ /month) | Monitoring Frequency | Rolling Average Criteria | Annual Rolling Average | Comment |
|------------------|------------|------------|--------------------|---|----------------------|--------------------------|------------------------|---|
| DDG1 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 2.3 | Monthly | 3.06 | 1.4 | |
| DDG2 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 1.6 | Monthly | 3.59 | 4.1 | |
| DDG3 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.5 | Monthly | 2.68 | 0.9 | |
| DDG4 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.7 | Monthly | 3.25 | 2.1 | |
| DDG5 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.4 | Monthly | 2.91 | 0.6 | |
| DDG6 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.1 | Monthly | 2.84 | 0.6 | |
| DDG7 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.1 | Monthly | 2.68 | 1.3 | |
| DDG8 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.8 | Monthly | 2.87 | 2.4 | |
| DDG9 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.5 | Monthly | 2.19 | 0.9 | |
| DDG10 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 1 | Monthly | 2.28 | 1.9 | |
| DDG10.5 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.1 | Monthly | 2.28 | 2.1 | |
| DDG11 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.9 | Monthly | 2.22 | 1.9 | |
| DDG11.5 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 1.4 | Monthly | 2.22 | 1.8 | |
| DDG12 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.1 | Monthly | 2.43 | 1.1 | |
| DDG13 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.6 | Monthly | 2.26 | 1.8 | |
| DDG14 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 1.2 | Monthly | 2.45 | 0.8 | |
| DDG15 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 0.7 | Monthly | 2.83 | 0.7 | |
| DDG16 | 23/01/2024 | 26/02/2024 | 1/03/2024 | 3.1 | Monthly | 2.68 | 1.4 | FGJV driveway works occurring at Handybin (adjacent to the DDG), potentially contributing to the high result. |

Environment Protection Licence Monitoring Data - Noise



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Relevant EPL Condition/s: M4.1 - M4.4

| Monitoring Location | NCA | Purpose | Relevant EPL Clause | Works Monitored | Date | Time | Attended or Unattended | Parameter | Goal / Target (dBA) | Measured (dBA) | Esimated Construction Contribution (dBA) | Comment |
|--|---------|---------------------------------------|---------------------|--|------------|--------------------|------------------------|------------------------|----------------------|----------------|---|---|
| Gatleys Northern Portal | 19 | Verification Monitoring | P1.2 | Canopy tube installation | 2/02/2024 | 11:35 AM | Attended | L _{Aeq} 15min | NA | 51 | 51 | L _{Aeq} of 50dBA at the source calculated to be 39dBA at 172 West Korora Road. Canopy tube installation below NML. |
| 663m representative distance on alignment | 7 | OOH Verification Monitoring | L6.2 | BR03 abutment pour | 3/02/2024 | 6.15AM | Unattended | L _{Aeq} 15min | 39 | 55 | Unable to be determined due to presence of extraneous noise | Extraneous noise from non-construction related influences are the main contributors to the recorded noise levels. Construction noise unable to be determined. |
| Gatleys-N Portal Compound (various distances from generator) | NA | Spot Check | P1.2 | Generator for tunnelling activities | 9/02/2024 | 5:00 PM | Attended | L _{Aeq} | 88 at 7m | 77 | 82 at 7m | Sound Power Level of 107dBA calculated based on spot check for 1250KVA generator. |
| Gatleys-N Portal Compound (various distances from generator) | NA | Spot Check | P1.2 | Generator for tunnelling crib facilities | 11/02/2024 | 10:10 AM | Attended | L _{Aeq} | 75 at 7m | 65 | 62 at 7m | Sound Power Level of 87dBA calculated based on spot check for 415V generator. |
| Russ Hammond Close Cuddeasac | 26 | OOH Verification Monitoring | L6.2 | Guard Rail installation with post driver | 15/02/2024 | 9:00 PM 9:27 PM | Attended | L _{Aeq} | 58 @ 10 Russ Hammond | 73 71 | 74@ resident 72@ resident | Recorded noise level of post driver far above prediction. Post driver SPL in model updated to 116dBA to reflect L _{Aeq} of 74dBA at the receiver and is to be used in all future models. |
| 77 Spagnolos Road | 14 | Verification Monitoring | P1.2 | Crusher | 23/02/2024 | 10:57 AM | Attended | L _{Aeq} | 57 | 56 | 56 | Noise levels compliant with prediction. |
| Gatleys-N Portal (approx. 45 m from works) | 18 / 19 | New Activity / Veficiation Monitoring | P1.2 | Tunnel excavation - blast hole drilling SB, | 27/02/2024 | 11:12 AM | Attended | L _{Aeq} | 79 | 76 | 74 | Noise levels sitting around 73-74 dBA when drilling is dominant. |
| | 18 / 19 | | P1.2 | Tunnel excavation - Jumbo drill rig pulling back from tunnel face & parkign | | 12:07 PM | Attended | L _{Aeq} | 67 | 64 | 64 | Noise from Jumbo Drill Rig pulling back from tunnel face is minimal. Squawker alarm dominant and no engine noise really audible. Not worth including in tunnel noise assessment. |
| Gatleys-N Portal Compound (various distances from generator) | N/A | Spot Check | P1.2 | Generator for tunnelling activities after exhaust treatment | 27/02/2024 | 12:00 PM | Attended | L _{Aeq} | 82 at 7m | 75 | 80 at 7m | Sound Power Level of 105 dBA calculated based on spot check for 1250KVA generator after exhaust treatment. |
| Gatleys-N Portal (approx. 40-45 m from works) | 18 / 19 | New Activity / Veficiation Monitoring | P1.2 | Tunnel excavation - scaling tights with rock hammers on SB, Shotcreting on NB. | 29/02/2024 | 8:18 AM | Attended | L _{Aeq} 15min | 88 | 80 | 80 | Difficult to determine noise contribution of shotcreting as hammering and spoil haulage activities were the dominant noise source. |
| | 18 / 19 | | P1.2 | Spoil haulage from tunnel also occurring (50t excavator loading 2 x moxies) | | 8:38 AM | Attended | L _{Aeq} 15min | 88 | 78 | 78 | |
| | 18 / 19 | | P1.2 | | | 8:57 AM | Attended | L _{Aeq} 15min | 88 | 73 | 73 | |
| | 18 / 19 | | P1.2 | | | 9:15 AM | Attended | L _{Aeq} 15min | 88 | 72 | 72 | |
| 498 Pacific Highway | 2 | Response to Community Complaint | M7.1 | Dozer pushing fill material | 29/02/2024 | 9.46am | Attended | L _{Aeq} 15min | 66 | 59 | Unable to determine to proximity to Pacific Highway | Noise levels from Pacific Highway main influence on record |

Environment Protection Licence Monitoring Data - Blasting (Civil)

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Relevant EPL Condition: L5.1-L5.4

| Blast Location | Date | Time | Monitoring Location | Vibration Limit (mm/s) | Ground Vibration Result (mm/s) | Airblast Overpressure Limit (dBL) | Airblast Overpressure Result (dBL) | Comments |
|----------------|------------|---------|---------------------|------------------------|--------------------------------|-----------------------------------|------------------------------------|------------|
| Cut 4 | 13/02/2024 | 2:30 PM | 52 Buchanans Road | 10 | 3.30 | 125 | 110.70 | Compliant. |
| | | | 56 Buchanans Road | 10 | 3.84 | 125 | 115.30 | Compliant. |
| | | | 60 Buchanans Road | 10 | 3.03 | 125 | 107.80 | Compliant. |
| Cut 4 | 22/02/2024 | 2:30 PM | 52 Buchanans Road | 10 | 3.04 | 125 | 110.00 | Compliant. |
| | | | 56 Buchanans Road | 10 | 3.91 | 125 | 117.80 | Compliant. |
| | | | 60 Buchanans Road | 10 | 2.31 | 125 | 109.00 | Compliant. |

Environment Protection Licence Monitoring Data - Blasting (Tunnels)

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Relevant EPL Condition: L5.1-L5.4

| Blast Location | Date | Time | Monitoring Location | Vibration Limit (mm/s) | Ground Vibration Result (mm/s) | Airblast Overpressure Limit (dB) | Airblast Overpressure Result (dB) | Comments |
|---------------------------|------------|---------|--------------------------------------|------------------------|--------------------------------|----------------------------------|-----------------------------------|---|
| Gatelys North Portal - NB | 22/02/2024 | 2:12 PM | 94 Gatelys Road | 5 | 0.61 | 115 | 101 | Airblast exceedances recorded at 84 Gatelys Road and 172 West Korora Road. Results reported as non-compliant with limits. |
| | | | 84 Gatelys Road | 5 | 0.42 | 115 | 119.3 | |
| | | | 172 West Korora Road (approximated)* | 5 | 0.16 | 115 | 116.8 | |
| Gatelys North Portal - SB | 27/02/2024 | 5:38 PM | 94 Gatelys Road | 5 | 0.09 | 115 | 104.1 | Airblast exceedance recorded at 172 West Korora Road. Results reported at non-compliant with limits. |
| | | | 84 Gatelys Road | 5 | 0.47 | 115 | 115 | |
| | | | 172 West Korora Road (approximated)* | 5 | 0.19 | 115 | 116.1 | |

*Note: monitor located at nearby Banana Sheds on West Korora Road. Results are extrapolated from this monitor for the resident at 172 West Korora Road.