

Bowral Waste Centre 8 Kiama Street, Bowral

Landfill Gas Monitoring Report

EPL 13366

July 2025



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Prepared for:

Bowral Waste Centre Pty Ltd

ABN: 47 629 389 519

A: 8 Kiama Street, Bowral, NSW 2576

E: alycia@benedict.com.au

Prepared by:

4Pillars Environmental Consulting Pty Ltd

ABN: 73 616 670 994

Lead author: Manikshya Shrestha, Consultant

Report approved by: Rhys Thompson CEnvP, General Manager

E: hello@4Pillars.com.au

P: 02 8313 7054

A: Level 1, 5 George Street, North Strathfield, NSW, 2137

W: www.4Pillars.com.au

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Acknowledgement of Country

4Pillars acknowledges the Traditional Owners of the land on which this site is located, the people of the Gundungurra and Tharawal Nation. We acknowledge their continuing connection to land and sea Country, and we pay our respects to their Elders past, present and emerging.



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Document control

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Document prepared by					
Manikshya Shrestha Consultant MEnvSci, BScBotany manikshya@4Pillars.com.au					
Document approved by					
Rhys Thompson General Manager MEnvSci, MScAg, BEnvSys (USYD) rhys@4Pillars.com.au CEnvP Seal: 1718	31 July 2025	ENVIROL 1718	MENTAL A	Phyl houps	



1. Introduction and background

1.1 Objectives and scope of work

4Pillars Environmental Consulting Pty Ltd (4Pillars) was engaged by Bowral Waste Centre Pty Ltd (BWC or the Licensee) to conduct landfill gas monitoring for the property located at 8 Kiama Street, Bowral, NSW 2576 (the Site) to ensure compliance with Environment Protection Licence (EPL) 13366 issued by the NSW Environment Protection Authority (NSW EPA).

4Pillars' scope of work was as follows:

- measure landfill gas accumulation, in accordance with licence requirements;
- assess data against relevant licence limits (where they exist); and
- prepare the monitoring report (this report).

1.2 Site details and monitoring requirements

The subject Site is 8 Kiama Street, Bowral, NSW, 2576 – part lots 13 and 14 DP1022146. The landfill site is located within the Wingecarribee Shire local government area (LGA) and falls within the E4 (General Industrial) development zone under the Wingecarribee Local Environmental Plan 2010. Surrounding land zoning includes E4 (General Industrial), SP2 (Rail Infrastructure), R3 and R2 (Medium and Low Density Residential), RU4 (primary production small lots) and RE1 (Public Recreation). The majority of the surrounding land uses are residential, agricultural or industrial (including horticulture, landscaping supply, self-contained storage, car repairs, etc.). The nearest residential area is medium density and occurs immediately to the east of the Site, along Railway Parade. Residential and business receivers are located to the east and west of the Site (refer Figure 1).

The landfill licence was transferred to Bowral Waste Centre Pty Ltd (the Licensee) in July 2019. The Site was not operational under the Licensee until November 2019. Since the commencement of operations under the current Licensee, the Site progressively reached full scale of operations in February 2020.

As noted above, the Site is subject to EPL 13366 (the EPL). Conditions P1.1 and M2.2 of the EPL require landfill gas (methane- CH₄) to be monitored every six months in two locations;

- 1. anywhere intermediate or final cover has been placed (EPL point 9); and
- 2. inside all buildings within 250 m of deposited waste (EPL point 10).

Conditions R2.3 and R2.4 of the EPL detail notification requirements if methane is detected above 500 ppm (v/v) (surface gas monitoring), or above 1% (v/v) (gas accumulation monitoring).

1.3 Licence year

The monitoring undertaken in July 2025 falls into the 2025-26 reporting period, from 11 May 2025 to 10 May 2026.

2. Monitoring methodology

Where relevant, the sampling and analysis program was undertaken in accordance with the NSW EPA *Environmental Guidelines: Solid Waste Landfills (2016)* and in accordance with the Site Landfill Environmental Management Plan (LEMP).

2.1 Monitoring

Neither intermediate nor final cover was placed in the landfill on the day of monitoring; therefore, landfill gas measurements were not taken on the active cell. As per the Site's EPL, the measurement of methane in buildings within 250 m of deposited waste (see Figure 1) was undertaken.

Attended landfill gas monitoring was carried out on 29 July 2025 by two competent and experienced personnel of 4Pillars (Ms. M Shrestha and Ms. L Kent) using a portable gas analyser (see details below). Accumulated landfill gas measurements were taken inside residences and businesses on Alcorn Street, Belmore Street, Carrington Street, Funston Street, Kiama Street, Loftus Street, Moss Vale Road, Oxley Hill Road, and Railway Parade. All buildings were approached, but not all were accessible on the day of sampling, either because the occupant did not allow access, or was not present. Where measurements were possible, they were taken within the first enclosed space encountered inside the door of the property (generally the living room or hallway). A total of 63 individual readings were obtained.



2.2 Description of Gas Analyser

A calibrated Geotech GA5000 portable landfill and contaminated land gas analyser was used for the monitoring. The GA5000 unit measures methane gas and has a range of 0%-100% (v/v) with typical accuracy of $\pm 0.5\%$ (vol) at 0-70% methane and $\pm 1.5\%$ (vol) at 70-100% methane. The GA5000 unit is suitable for the monitoring requirements of the EPL.

3. Results and discussion

3.1 Landfill gas

Tabulated accumulated landfill gas measurements for each of the accessible residences are provided in Appendix 2. Measurements in all buildings returned a value of 0.0-0.1 % v/v methane. Therefore, no or little methane accumulation was identified in any structures within 250 m of the landfill, indicating that the Site was below the threshold specified in Condition R2.4 of EPL 13366. As such, no notifications were required.

4. Conclusion

4.1 Compliance

The result of the attended landfill gas monitoring indicate that the Site is compliant with its legal obligations related to landfill gas management.

4.2 Limitations of this assessment

To the best of our knowledge and based on information provided to us by the client or their representatives, the information contained in this report is accurate at the date of issue. 4Pillars has used a degree of care and skill ordinarily exercised in similar investigations by reputable members of the environmental sector in Australia. No other warranty, expressed or implied, is made or intended. The opinions and judgements expressed in this report should not be construed as legal opinions or advice. 4Pillars is also not responsible or liable for any third-Party use or reliance on this report.

5. List of appendices

Appendix 1. Figures

Appendix 2. Gas Accumulation Monitoring



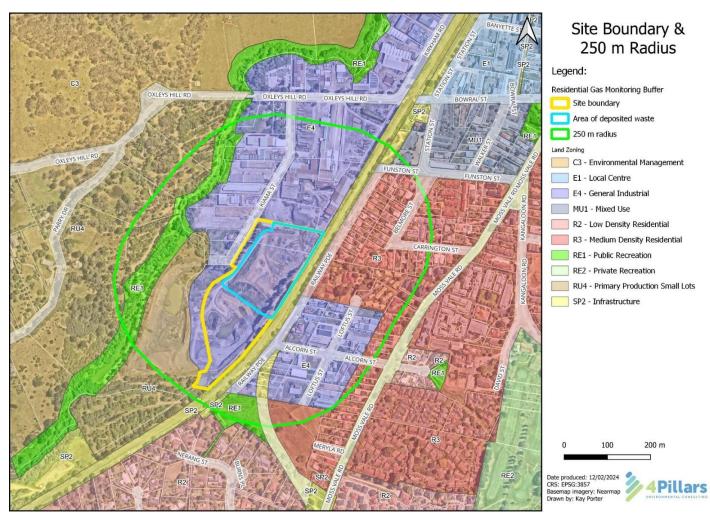


Figure 1: Site boundary, surrounding land zoning and 250 m radius from the approximate area of deposited waste.

Appendix 2 Gas Accumulation Monitoring

Table 1: Accumulated gas monitoring results obtained from buildings within 250 m of the area of deposited waste.

Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
1	29/07/2025	1-3 Alcorn Street Bowral NSW 2576	Υ	0.0
2	29/07/2025	5 Alcorn Street Bowral NSW 2576 N		
3	29/07/2025	6A Alcorn Street Bowral NSW 2576	N	
4	29/07/2025	6B Alcorn Street Bowral NSW 2576	N	
5	29/07/2025	8 Alcorn Street Bowral NSW 2576	Υ	0.0
6	29/07/2025	9 Alcorn Street Bowral NSW 2576	Υ	0.0
7	29/07/2025	10 Alcorn Street Bowral NSW 2576	Υ	0.0
8	29/07/2025	11 Alcorn Street Bowral NSW 2576	N	
9	29/07/2025	13 Alcorn Street Bowral NSW 2576	Υ	0.0
10	29/07/2025	15 Alcorn Street Bowral NSW 2576	Υ	0.0
11	29/07/2025	5 Belmore Street Bowral NSW 2576	Υ	0.0
12	29/07/2025	6 Belmore Street Bowral NSW 2576	N	
13	29/07/2025	7 Belmore Street Bowral NSW 2576	Υ	0.0
14	29/07/2025	8 Belmore Street Bowral NSW 2576	N	
15	29/07/2025	9 Belmore Street Bowral NSW 2576	N	
16	29/07/2025	11 Belmore Street Bowral NSW 2576	Υ	0.0
17	29/07/2025	13 Belmore Street Bowral NSW 2576	Υ	0.0
18	29/07/2025	15 Belmore Street Bowral NSW 2576	N	
19	29/07/2025	17 Belmore Street Bowral NSW 2576	Υ	0.0
20	29/07/2025	19 Belmore Street Bowral NSW 2576	N	
21	29/07/2025	21 Belmore Street Bowral NSW 2576	N	
22	29/07/2025	1/2-4 Carrington Street Bowral NSW 2576	N	
23	29/07/2025	2/2-4 Carrington Street Bowral NSW 2576	Υ	0.0
24	29/07/2025	3/2-4 Carrington Street Bowral NSW 2576	Y	0.0
25	29/07/2025	4/2-4 Carrington Street Bowral NSW 2576	Y	0.0



Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
26	29/07/2025	5/2-4 Carrington Street Bowral NSW 2576	N	
27	29/07/2025	6/2-4 Carrington Street Bowral NSW 2576	Υ	0.0
28	29/07/2025	7/2-4 Carrington Street Bowral NSW 2576	N	
29	29/07/2025	8/2-4 Carrington Street Bowral NSW 2576	N	
30	29/07/2025	9/2-4 Carrington Street Bowral NSW 2576	N	
31	29/07/2025	10/2-4 Carrington Street Bowral NSW 2576	N	
32	29/07/2025	11/2-4 Carrington Street Bowral NSW 2576	Υ	0.0
33	29/07/2025	12/2-4 Carrington Street Bowral NSW 2576	N	
34	29/07/2025	1/3 Carrington Street Bowral NSW 2576	N	
35	29/07/2025	2/3 Carrington Street Bowral NSW 2576	Υ	0.0
36	29/07/2025	3/3 Carrington Street Bowral NSW 2576	N	
37	29/07/2025	4/3 Carrington Street Bowral NSW 2576	Υ	0.0
38	29/07/2025	5/3 Carrington Street Bowral NSW 2576	Υ	0.0
39	29/07/2025	6/3 Carrington Street Bowral NSW 2576	Υ	0.0
40	29/07/2025	7/3 Carrington Street Bowral NSW 2576	N	
41	29/07/2025	8/3 Carrington Street Bowral NSW 2576	Υ	0.0
42	29/07/2025	9/3 Carrington Street Bowral NSW 2576	N	
43	29/07/2025	6 Carrington Street Bowral NSW 2576	Υ	0.0
44	29/07/2025	8 Carrington Street Bowral NSW 2576	N	
45	29/07/2025	10 Carrington Street Bowral NSW 2576	Υ	0.0
46	29/07/2025	12 Carrington Street Bowral NSW 2576	N	
47	29/07/2025	14 Carrington Street Bowral NSW 2576	N	
48	29/07/2025	1 Funston Street Bowral NSW 2576	Υ	0.0
49	29/07/2025	3 Funston Street Bowral NSW 2576	Υ	0.0
50	29/07/2025	3A Funston Street Bowral NSW 2576	Υ	0.0
51	29/07/2025	4-10 Funston Street Bowral NSW 2576	Υ	0.0
52	29/07/2025	5 Funston Street Bowral NSW 2576	N	
53	29/07/2025	7 Funston Street Bowral NSW 2576	Υ	0.0



Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
54	29/07/2025	1 Kiama Street Bowral NSW 2576	Υ	0.0
55	29/07/2025	3 Kiama Street Bowral NSW 2576 Y		0.0
56	29/07/2025	5 Kiama Street Bowral NSW 2576	N	
57	29/07/2025	1/9-11 Kiama Street Bowral NSW 2576	N	
58	29/07/2025	2/9-11 Kiama Street Bowral NSW 2576	Υ	0.0
59	29/07/2025	3/9-11 Kiama Street Bowral NSW 2576	Υ	0.1
60	29/07/2025	4/9-11 Kiama Street Bowral NSW 2576	N	
61	29/07/2025	5/9-11 Kiama Street Bowral NSW 2576	Υ	0.0
62	29/07/2025	6/9-11 Kiama Street Bowral NSW 2576	Υ	0.1
63	29/07/2025	7/9-11 Kiama Street Bowral NSW 2576	N	
64	29/07/2025	8/9-11 Kiama Street Bowral NSW 2576	N	
65	29/07/2025	9/9-11 Kiama Street Bowral NSW 2576	Υ	0.1
66	29/07/2025	10/9-11 Kiama Street Bowral NSW 2576	Υ	0.1
67	29/07/2025	15 Kiama Street Bowral NSW 2576	N	
68	29/07/2025	21 Kiama Street Bowral NSW 2576	N	
69	29/07/2025	29 Kiama Street Bowral NSW 2576	N	
70	29/07/2025	4 Loftus Street Bowral NSW 2576	N	
71	29/07/2025	1/6 Loftus Street Bowral NSW 2576	N	
72	29/07/2025	2/6 Loftus Street Bowral NSW 2576	N	
73	29/07/2025	3/6 Loftus Street Bowral NSW 2576	N	
74	29/07/2025	4/6 Loftus Street Bowral NSW 2576	Υ	0.0
75	29/07/2025	5/6 Loftus Street Bowral NSW 2576	N	
76	29/07/2025	8 Loftus Street Bowral NSW 2576	N	
77	29/07/2025	10A Loftus Street Bowral NSW 2576	N	
78	29/07/2025	10B Loftus Street Bowral NSW 2576	Υ	0.0
79	29/07/2025	1/12 Loftus Street Bowral NSW 2576	N	
80	29/07/2025	2/12 Loftus Street Bowral NSW 2576	N	
81	29/07/2025	3/12 Loftus Street Bowral NSW 2576	N	



Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
82	29/07/2025	4/12 Loftus Street Bowral NSW 2576	Υ	0.0
83	29/07/2025	5/12 Loftus Street Bowral NSW 2576	5/12 Loftus Street Bowral NSW 2576 N	
84	29/07/2025	6/12 Loftus Street Bowral NSW 2576	N	
85	29/07/2025	13 Loftus Street Bowral NSW 2576	Υ	0.0
86	29/07/2025	14-16 Loftus Street Bowral NSW 2576	Υ	0.0
87	29/07/2025	15 Loftus Street Bowral NSW 2576	N	
88	29/07/2025	18 Loftus Street Bowral NSW 2576	N	
89	29/07/2025	21 Loftus Street Bowral NSW 2576	Υ	0.0
90	29/07/2025	23 Loftus Street Bowral NSW 2576	N	
91	29/07/2025	25 Loftus Street Bowral NSW 2576	Υ	0.0
92	29/07/2025	1/26 Loftus Street Bowral NSW 2576	Υ	0.0
93	29/07/2025	2/26 Loftus Street Bowral NSW 2576	Υ	0.0
94	29/07/2025	3/26 Loftus Street Bowral NSW 2576	Υ	0.0
95	29/07/2025	4/26 Loftus Street Bowral NSW 2576	N	
96	29/07/2025	5/26 Loftus Street Bowral NSW 2576	N	
97	29/07/2025	6/26 Loftus Street Bowral NSW 2576	N	
98	29/07/2025	7/26 Loftus Street Bowral NSW 2576	Υ	0.0
99	29/07/2025	8/26 Loftus Street Bowral NSW 2576	Υ	0.0
100	29/07/2025	9/26 Loftus Street Bowral NSW 2576	N	
101	29/07/2025	10/26 Loftus Street Bowral NSW 2576	Υ	0.0
102	29/07/2025	11/26 Loftus Street Bowral NSW 2576	N	
103	29/07/2025	12/26 Loftus Street Bowral NSW 2576	N	
104	29/07/2025	13/26 Loftus Street Bowral NSW 2576	N	
105	29/07/2025	14/26 Loftus Street Bowral NSW 2576	Υ	0.0
106	29/07/2025	15/26 Loftus Street Bowral NSW 2576	N	
107	29/07/2025	16/26 Loftus Street Bowral NSW 2576	N	
108	29/07/2025	17/26 Loftus Street Bowral NSW 2576	Υ	0.0
109	29/07/2025	18/26 Loftus Street Bowral NSW 2576	Υ	0.0



Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
110	29/07/2025	19/26 Loftus Street Bowral NSW 2576	N	
111	29/07/2025	20/26 Loftus Street Bowral NSW 2576	N	
112	29/07/2025	27-29 Loftus Street Bowral NSW 2576	N	
113	29/07/2025	31 Loftus Street Bowral NSW 2576	N	
114	29/07/2025	33 Loftus Street Bowral NSW 2576	N	
115	29/07/2025	471 Moss Vale Road, Bowral NSW 2576	N	
116	29/07/2025	1/475 Moss Vale Road, Bowral NSW 2576	Υ	0.0
117	29/07/2025	2/475 Moss Vale Road, Bowral NSW 2576	N	
118	29/07/2025	3/475 Moss Vale Road, Bowral NSW 2576	N	
119	29/07/2025	4/475 Moss Vale Road, Bowral NSW 2576	N	
120	29/07/2025	5/475 Moss Vale Road, Bowral NSW 2576	N	
121	29/07/2025	6/475 Moss Vale Road, Bowral NSW 2576	N	
122	29/07/2025	7/475 Moss Vale Road, Bowral NSW 2576	N	
123	29/07/2025	8/475 Moss Vale Road, Bowral NSW 2576	N	
124	29/07/2025	9/475 Moss Vale Road, Bowral NSW 2576	N	
125	29/07/2025	1/481 Moss Vale Road, Bowral NSW 2576	N	
126	29/07/2025	2/481 Moss Vale Road, Bowral NSW 2576	N	
127	29/07/2025	3/481 Moss Vale Road, Bowral NSW 2576	N	
128	29/07/2025	4/481 Moss Vale Road, Bowral NSW 2576	Υ	0.0
129	29/07/2025	5/481 Moss Vale Road, Bowral NSW 2576	N	
130	29/07/2025	6/481 Moss Vale Road, Bowral NSW 2576	N	
131	29/07/2025	1/483 Moss Vale Road, Bowral NSW 2576	N	
132	29/07/2025	2/483 Moss Vale Road, Bowral NSW 2576	N	
133	29/07/2025	3/483 Moss Vale Road, Bowral NSW 2576	N	
134	29/07/2025	4/483 Moss Vale Road, Bowral NSW 2576	N	
135	29/07/2025	5/483 Moss Vale Road, Bowral NSW 2576	N	
136	29/07/2025	6/483 Moss Vale Road, Bowral NSW 2576	N	
137	29/07/2025	489 Moss Vale Road, Bowral NSW 2576	N	



Sample ID	Date sampled	Address	Access (Y/N)	Methane (CH ₄ % v/v)
138	29/07/2025	491 Moss Vale Road, Bowral NSW 2576	Υ	0.0
139	29/07/2025	1 Oxleys Hill Road, Bowral NSW 2576 Y		0.0
140	29/07/2025	7 Oxleys Hill Road, Bowral NSW 2576	Υ	0.0
141	29/07/2025	9 Oxleys Hill Road, Bowral NSW 2576	Υ	0.0
142	29/07/2025	32 Oxleys Hill Road, Bowral NSW 2576	Υ	0.0
143	29/07/2025	41 Oxleys Hill Road, Bowral NSW 2576	N	
144	29/07/2025	4 Railway Parade, Bowral NSW 2576	N	
145	29/07/2025	5-15 Railway Parade, Bowral NSW 2576	N	
146	29/07/2025	6 Railway Parade, Bowral NSW 2576	N	
147	29/07/2025	8 Railway Parade, Bowral NSW 2576	N	
148	29/07/2025	10 Railway Parade, Bowral NSW 2576	N	
149	29/07/2025	12 Railway Parade, Bowral NSW 2576	N	
150	29/07/2025	14 Railway Parade, Bowral NSW 2576	N	
151	29/07/2025	16 Railway Parade, Bowral NSW 2576	Υ	0.0
152	29/07/2025	18 Railway Parade, Bowral NSW 2576	N	
153	29/07/2025	20 Railway Parade, Bowral NSW 2576	Υ	0.0
154	29/07/2025	22 Railway Parade, Bowral NSW 2576	N	
155	29/07/2025	1/24 Railway Parade, Bowral NSW 2576	Υ	0.0
156	29/07/2025	2/24 Railway Parade, Bowral NSW 2576	N	
157	29/07/2025	3/24 Railway Parade, Bowral NSW 2576	N	
158	29/07/2025	4/24 Railway Parade, Bowral NSW 2576	N	
159	29/07/2025	34 Railway Parade, Bowral NSW 2576	N	
160	29/07/2025	36 Railway Parade, Bowral NSW 2576	N	
161	29/07/2025	38 Railway Parade, Bowral NSW 2576	N	
162	29/07/2025	40 Railway Parade, Bowral NSW 2576	Υ	0.0

