

Figure K-84 Contour plot of maximum 24-hour mean PM_{10} concentrations (ventilation outlets only, 2033-DSC)

K.7 PM_{2.5} (annual mean)

Table K-43 Annual mean PM_{2.5} concentration at community receptors

Receptor	Annual mean PM _{2.5} concentration ($\mu\text{g}/\text{m}^3$)							Change relative to Do Minimum ($\mu\text{g}/\text{m}^3$)				Change relative to Do Minimum (%)			
	2015-BY	2023-DM	2023-DS	2023-DSC	2033-DM	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC
CR01	-	8.8	8.7	8.9	8.7	8.7	8.8	-0.07	0.09	-0.03	0.03	-0.8%	1.0%	-0.3%	0.3%
CR02	-	8.7	8.7	8.7	8.8	8.7	8.8	0.02	0.00	-0.05	0.06	0.2%	0.0%	-0.6%	0.7%
CR03	-	10.0	9.4	9.3	9.8	9.4	9.4	-0.60	-0.69	-0.33	-0.39	-6.0%	-6.9%	-3.4%	-4.0%
CR04	-	9.2	9.1	9.2	9.2	8.9	9.1	-0.10	-0.06	-0.27	-0.08	-1.1%	-0.7%	-2.9%	-0.9%
CR05	-	8.9	8.8	8.9	8.7	8.7	8.8	-0.12	-0.02	-0.01	0.08	-1.4%	-0.3%	-0.1%	0.9%
CR06	-	8.9	9.0	8.9	9.2	9.0	9.1	0.09	-0.01	-0.21	-0.04	1.0%	-0.1%	-2.3%	-0.4%
CR07	-	9.5	9.3	9.2	9.5	9.3	9.2	-0.16	-0.32	-0.21	-0.24	-1.7%	-3.3%	-2.2%	-2.6%
CR08	-	9.2	9.0	9.1	9.3	9.1	9.0	-0.23	-0.12	-0.26	-0.33	-2.5%	-1.4%	-2.8%	-3.5%
CR09	-	8.8	8.8	8.8	8.9	8.8	8.9	0.01	-0.01	-0.08	0.02	0.1%	-0.1%	-0.9%	0.2%
CR10	-	10.7	10.5	10.4	10.6	10.7	10.5	-0.22	-0.23	0.12	-0.13	-2.1%	-2.1%	1.2%	-1.2%
CR11	-	8.8	8.8	8.7	8.8	8.8	8.8	-0.03	-0.12	-0.02	-0.05	-0.4%	-1.4%	-0.2%	-0.5%
CR12	-	9.5	9.7	9.6	9.5	9.5	9.7	0.15	0.11	0.02	0.15	1.6%	1.1%	0.2%	1.5%
CR13	-	8.8	8.7	8.6	8.6	8.5	8.7	-0.09	-0.15	-0.08	0.03	-1.0%	-1.7%	-1.0%	0.3%
CR14	-	9.2	9.0	8.9	9.1	8.9	9.0	-0.19	-0.25	-0.20	-0.07	-2.0%	-2.7%	-2.2%	-0.7%
CR15	-	9.0	8.8	8.9	8.8	8.8	8.9	-0.20	-0.05	-0.04	0.12	-2.2%	-0.5%	-0.5%	1.3%
CR16	-	8.7	8.6	8.8	8.8	8.7	8.7	-0.06	0.08	-0.17	-0.19	-0.7%	1.0%	-1.9%	-2.2%
CR17	-	8.8	8.7	8.5	8.6	8.6	8.6	-0.11	-0.21	-0.08	-0.05	-1.2%	-2.4%	-0.9%	-0.6%
CR18	-	8.8	8.6	8.7	8.8	8.7	8.7	-0.15	-0.06	-0.09	-0.09	-1.8%	-0.7%	-1.0%	-1.0%
CR19	-	8.7	8.5	8.6	8.6	8.5	8.6	-0.12	-0.08	-0.07	0.00	-1.4%	-0.9%	-0.8%	0.1%
CR20	-	8.8	8.7	8.7	8.7	8.7	8.8	-0.03	-0.10	-0.03	0.09	-0.3%	-1.1%	-0.3%	1.0%
CR21	-	8.8	8.7	8.7	8.8	8.8	8.9	-0.09	-0.10	-0.05	0.07	-1.0%	-1.1%	-0.5%	0.8%
CR22	-	9.6	8.9	9.0	9.4	8.9	9.0	-0.77	-0.66	-0.42	-0.32	-8.0%	-6.9%	-4.5%	-3.5%
CR23	-	10.1	9.4	9.4	9.8	9.4	9.3	-0.70	-0.75	-0.41	-0.50	-7.0%	-7.4%	-4.1%	-5.1%
CR24	-	9.2	9.2	9.4	9.2	9.3	9.2	-0.05	0.13	0.13	0.07	-0.5%	1.4%	1.4%	0.7%
CR25	-	8.9	8.8	8.8	8.8	8.8	8.8	-0.06	-0.04	-0.03	-0.05	-0.7%	-0.5%	-0.3%	-0.6%
CR26	-	8.8	8.6	8.6	8.6	8.7	8.7	-0.16	-0.14	0.04	0.04	-1.9%	-1.6%	0.4%	0.4%
CR27	-	8.8	8.8	8.8	8.8	8.7	8.8	0.05	0.08	-0.04	0.04	0.6%	0.9%	-0.5%	0.5%
CR28	-	8.7	8.6	8.6	8.8	8.7	8.5	-0.07	-0.06	-0.14	-0.26	-0.8%	-0.7%	-1.6%	-2.9%
CR29	-	8.9	8.9	9.0	9.0	8.9	8.9	-0.01	0.09	0.00	-0.03	-0.1%	1.0%	0.0%	-0.4%
CR30	-	9.0	9.0	9.2	9.0	9.1	9.1	0.07	0.18	0.14	0.09	0.8%	2.0%	1.6%	1.0%
CR31	-	9.5	8.9	9.0	9.4	8.9	9.0	-0.64	-0.51	-0.55	-0.43	-6.7%	-5.3%	-5.8%	-4.6%
CR32	-	8.6	8.6	8.7	8.7	8.7	8.7	0.03	0.05	-0.05	0.02	0.3%	0.6%	-0.6%	0.2%
CR33	-	9.2	9.2	9.2	9.1	9.1	9.1	-0.06	-0.09	-0.02	-0.02	-0.6%	-1.0%	-0.3%	-0.3%
CR34	-	8.8	8.8	8.9	8.9	8.8	8.8	-0.06	0.07	-0.10	-0.05	-0.7%	0.8%	-1.1%	-0.6%
CR35	-	8.8	8.7	8.7	8.8	8.7	8.8	-0.04	-0.06	-0.04	0.03	-0.4%	-0.7%	-0.5%	0.3%
CR36	-	8.8	8.8	8.8	8.7	8.7	8.8	0.05	0.04	0.01	0.04	0.5%	0.4%	0.1%	0.4%
CR37	-	8.9	9.0	9.1	8.9	9.0	9.1	0.11	0.19	0.07	0.18	1.2%	2.2%	0.7%	2.0%
CR38	-	9.2	9.6	9.3	9.0	9.5	9.2	0.36	0.08	0.56	0.18	3.9%	0.9%	6.2%	2.0%
CR39	-	9.1	9.1	9.1	9.1	9.1	9.1	-0.01	0.04	0.02	-0.02	-0.1%	0.5%	0.2%	-0.2%
CR40	-	9.0	9.0	9.1	9.1	9.1	9.0	0.01	0.02	0.00	-0.04	0.2%	0.2%	0.0%	-0.4%

Table K-44 Annual mean PM_{2.5} concentration at community receptors, ranked by concentration

Rank	Ranking by concentration ($\mu\text{g}/\text{m}^3$)						
	2015-BY	2023-DM	2023 DS	2023-DSC	2033-DM	2033-DS	2033-DSC
1	-	10.7	10.5	10.4	10.6	10.7	10.5
2		10.1	9.7	9.6	9.8	9.5	9.7
3		10.0	9.6	9.4	9.8	9.5	9.4
4		9.6	9.4	9.4	9.5	9.4	9.3
5		9.5	9.4	9.3	9.5	9.4	9.2
6		9.5	9.3	9.3	9.4	9.3	9.2
7		9.5	9.2	9.2	9.4	9.3	9.2
8		9.2	9.2	9.2	9.3	9.1	9.1
9		9.2	9.1	9.2	9.2	9.1	9.1
10		9.2	9.1	9.2	9.2	9.1	9.1

Table K-45 Annual mean PM_{2.5} concentration at community receptors, ranked by increase and by decrease in concentration

Rank	Ranking by increase in concentration relative to Do Minimum ($\mu\text{g}/\text{m}^3$)				Ranking by decrease in concentration relative to Do Minimum ($\mu\text{g}/\text{m}^3$)				
	2023-DS	2023-DSC	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC	
1	0.36	0.19	0.56	0.18	-0.77	-0.75	-0.55	-0.50	
2		0.15	0.18	0.14		-0.70	-0.69	-0.42	-0.43
3		0.11	0.13	0.13		-0.64	-0.66	-0.41	-0.39
4		0.09	0.11	0.12		-0.60	-0.51	-0.33	-0.33
5		0.07	0.09	0.07		-0.23	-0.32	-0.27	-0.32
6		0.05	0.09	0.04		-0.22	-0.25	-0.26	-0.26
7		0.05	0.08	0.02		-0.20	-0.23	-0.21	-0.24
8		0.03	0.08	0.02		-0.19	-0.21	-0.21	-0.19
9		0.02	0.08	0.01		-0.16	-0.15	-0.20	-0.13
10		0.01	0.07	0.00		-0.16	-0.14	-0.17	-0.09

Table K-46 Annual mean PM_{2.5} concentration at community receptors, ranked by percentage increase and by decrease in concentration

Rank	Ranking by % increase in concentration relative to Do Minimum				Ranking by % decrease in concentration relative to Do Minimum				
	2023-DS	2023-DSC	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC	
1	3.9%	2.2%	6.2%	2.0%	-8.0%	-7.4%	-5.8%	-5.1%	
2		1.6%	2.0%	1.6%		-7.0%	-6.9%	-4.5%	-4.6%
3		1.2%	1.4%	1.4%		-6.7%	-6.9%	-4.1%	-4.0%
4		1.0%	1.1%	1.2%		-6.0%	-5.3%	-3.4%	-3.5%
5		0.8%	1.0%	0.7%		-2.5%	-3.3%	-2.9%	-3.5%
6		0.6%	1.0%	0.4%		-2.2%	-2.7%	-2.8%	-2.9%
7		0.5%	1.0%	0.2%		-2.1%	-2.4%	-2.3%	-2.6%
8		0.3%	0.9%	0.2%		-2.0%	-2.1%	-2.2%	-2.2%
9		0.2%	0.9%	0.1%		-1.9%	-1.7%	-2.2%	-1.2%
10		0.2%	0.8%	0.0%		-1.8%	-1.6%	-1.9%	-1.0%

Table K-47 Annual mean PM_{2.5} concentration at RWR receptors, ranked by concentration

Rank	Ranking by concentration ($\mu\text{g}/\text{m}^3$)						
	2015-BY	2023-DM	2023 DS	2023-DSC	2033-DM	2033-DS	2033-DSC
1	-	13.16	14.07	13.61	13.20	14.20	13.45
2		13.12	13.81	13.60	12.82	13.79	13.30
3		12.81	13.74	13.50	12.49	13.72	13.10
4		12.74	13.56	13.27	12.48	13.24	12.99
5		12.72	13.08	12.82	12.46	13.08	12.76
6		12.69	13.01	12.82	12.45	13.07	12.74
7		12.69	12.94	12.74	12.42	12.86	12.47
8		12.68	12.92	12.71	12.40	12.73	12.38
9		12.64	12.73	12.58	12.39	12.66	12.34
10		12.63	12.65	12.56	12.38	12.42	12.31

Table K-48 Annual mean PM_{2.5} concentration at RWR receptors, ranked by increase and by decrease in concentration

Rank	Ranking by increase in concentration relative to Do Minimum ($\mu\text{g}/\text{m}^3$)				Ranking by decrease in concentration relative to Do Minimum ($\mu\text{g}/\text{m}^3$)			
	2023-DS	2023-DSC	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC
1	1.16	2.25	1.43	2.33	-2.32	-2.20	-2.31	-2.24
2		1.05	1.63	1.37		-1.79	-1.58	-1.54
3		0.99	1.44	1.15		-1.69	-1.58	-1.49
4		0.96	1.39	1.02		-1.64	-1.54	-1.45
5		0.91	1.38	1.00		-1.63	-1.52	-1.40
6		0.89	1.36	0.98		-1.62	-1.52	-1.33
7		0.88	1.34	0.97		-1.54	-1.48	-1.26
8		0.81	1.34	0.83		-1.45	-1.48	-1.24
9		0.78	1.25	0.83		-1.45	-1.44	-1.22
10		0.75	1.15	0.82		-1.38	-1.43	-1.22

Table K-49 Annual mean PM_{2.5} concentration at RWR receptors, ranked by percentage increase and by decrease in concentration

Rank	Ranking by % increase in concentration relative to Do Minimum				Ranking by % decrease in concentration relative to Do Minimum			
	2023-DS	2023-DSC	2033-DS	2033-DSC	2023-DS	2023-DSC	2033-DS	2033-DSC
1	12.3%	25.4%	15.3%	26.4%	-18.6%	-17.7%	-18.7%	-18.1%
2		11.3%	17.5%	12.4%		-15.8%	-13.9%	-13.8%
3		10.2%	16.3%	11.1%		-15.0%	-13.6%	-13.4%
4		7.9%	15.4%	10.8%		-14.6%	-13.6%	-13.0%
5		7.8%	15.1%	8.6%		-14.5%	-13.5%	-12.8%
6		7.7%	15.1%	8.4%		-14.4%	-13.4%	-12.2%
7		7.7%	15.0%	8.1%		-13.3%	-13.3%	-11.6%
8		7.7%	14.6%	8.1%		-12.6%	-13.2%	-11.5%
9		7.6%	14.0%	7.9%		-12.6%	-12.9%	-11.2%
10		7.5%	13.0%	7.8%		-12.4%	-12.1%	-10.8%

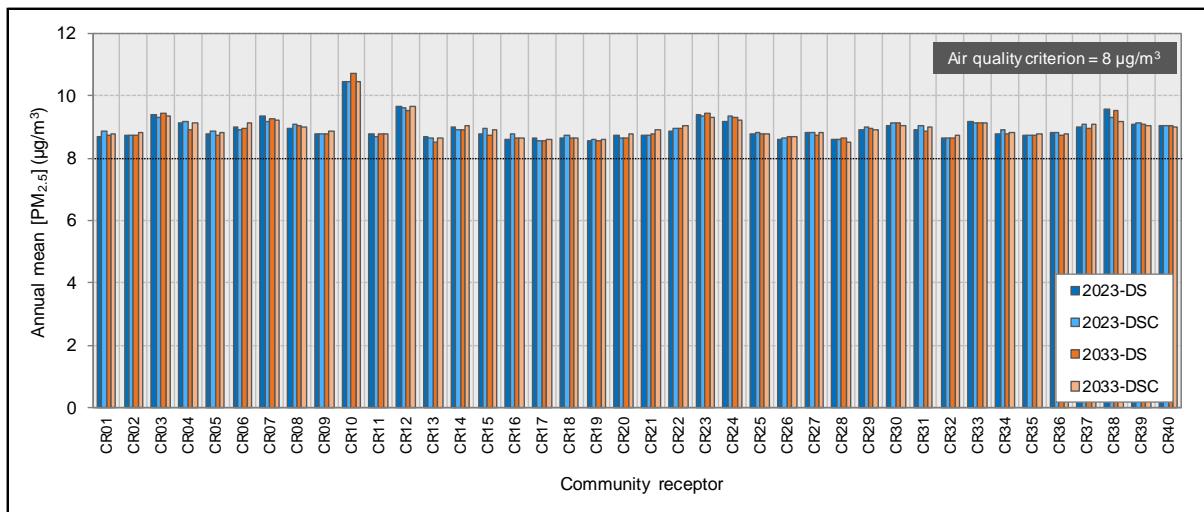


Figure K-85 Annual mean PM_{2.5} concentration at community receptors (with-project and cumulative scenarios)

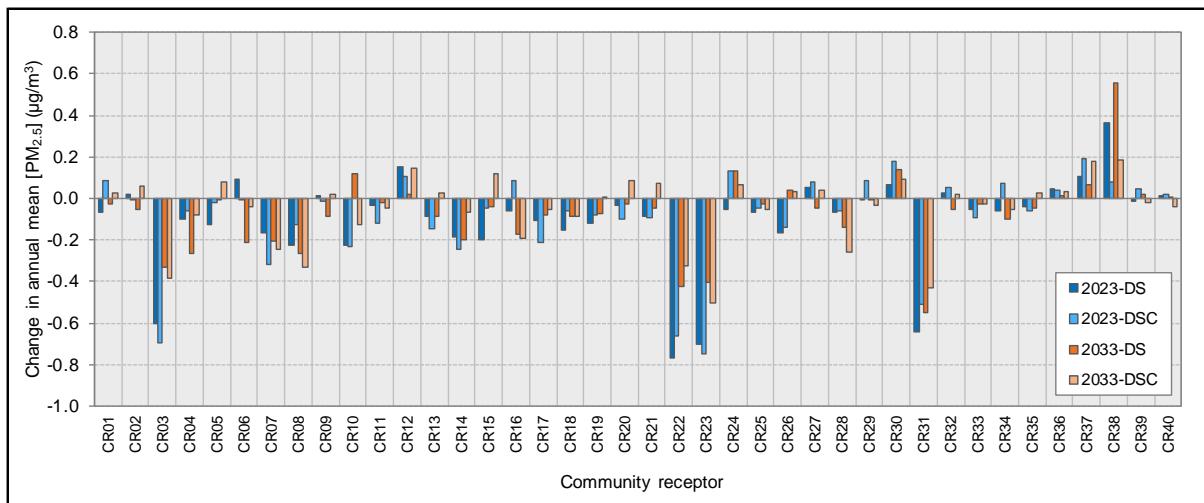


Figure K-86 Change in annual mean PM_{2.5} concentration at community receptors (with-project and cumulative scenarios, relative to Do Minimum scenarios)

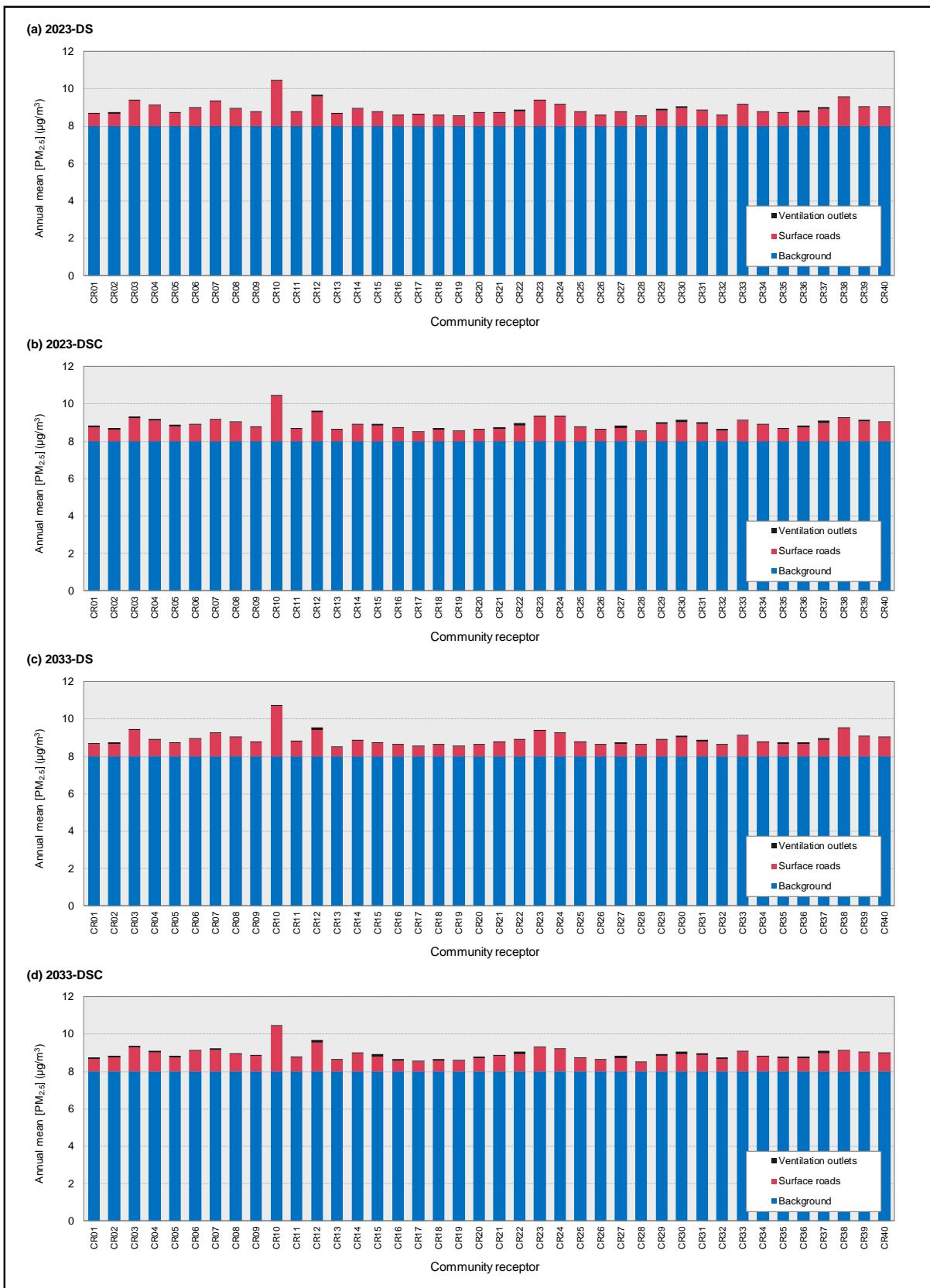


Figure K-87 Source contributions to annual mean PM_{2.5} concentration at community receptors (with-project and cumulative scenarios)

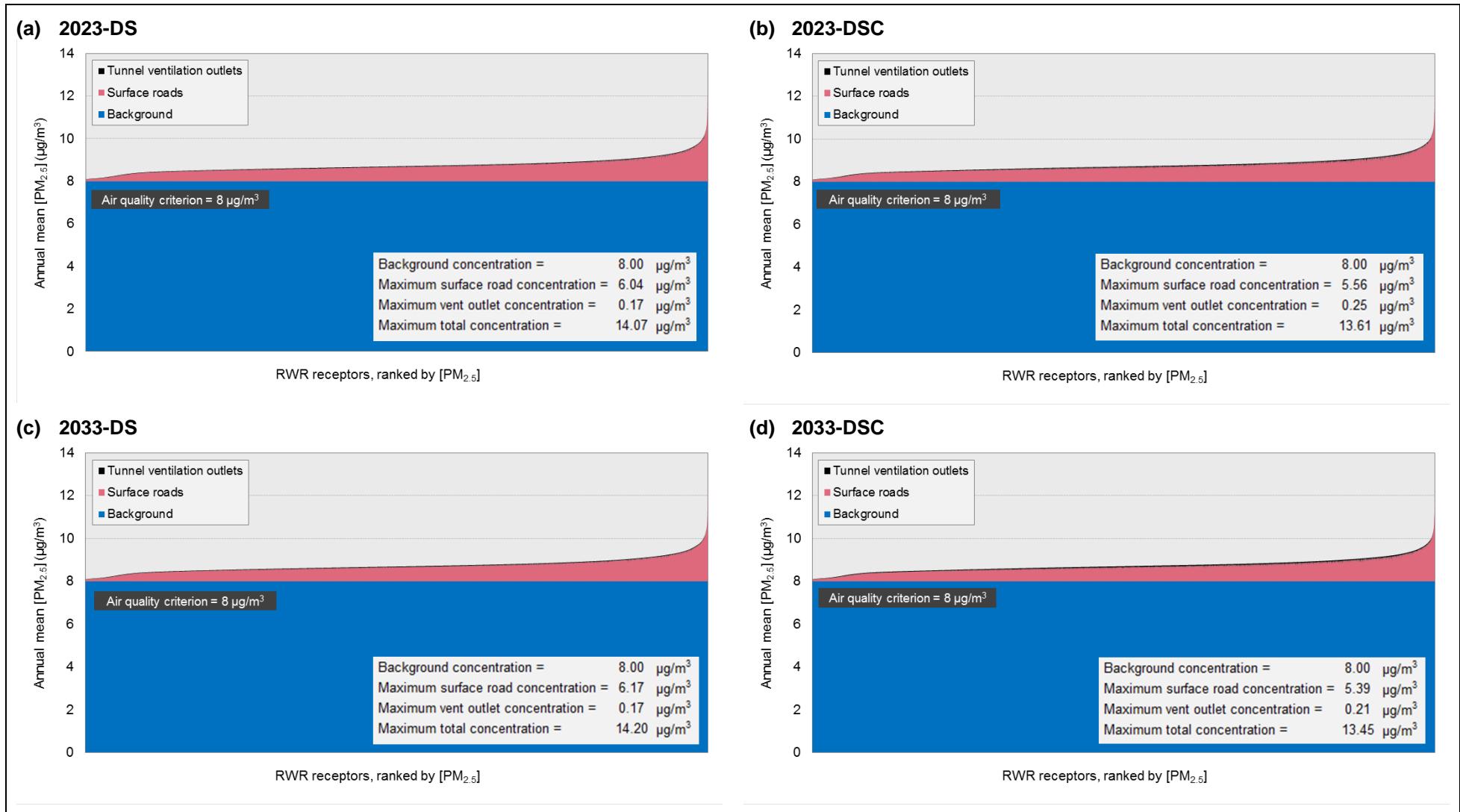


Figure K-88 Source contributions to annual mean $PM_{2.5}$ concentration at RWR receptors (with-project and cumulative scenarios)

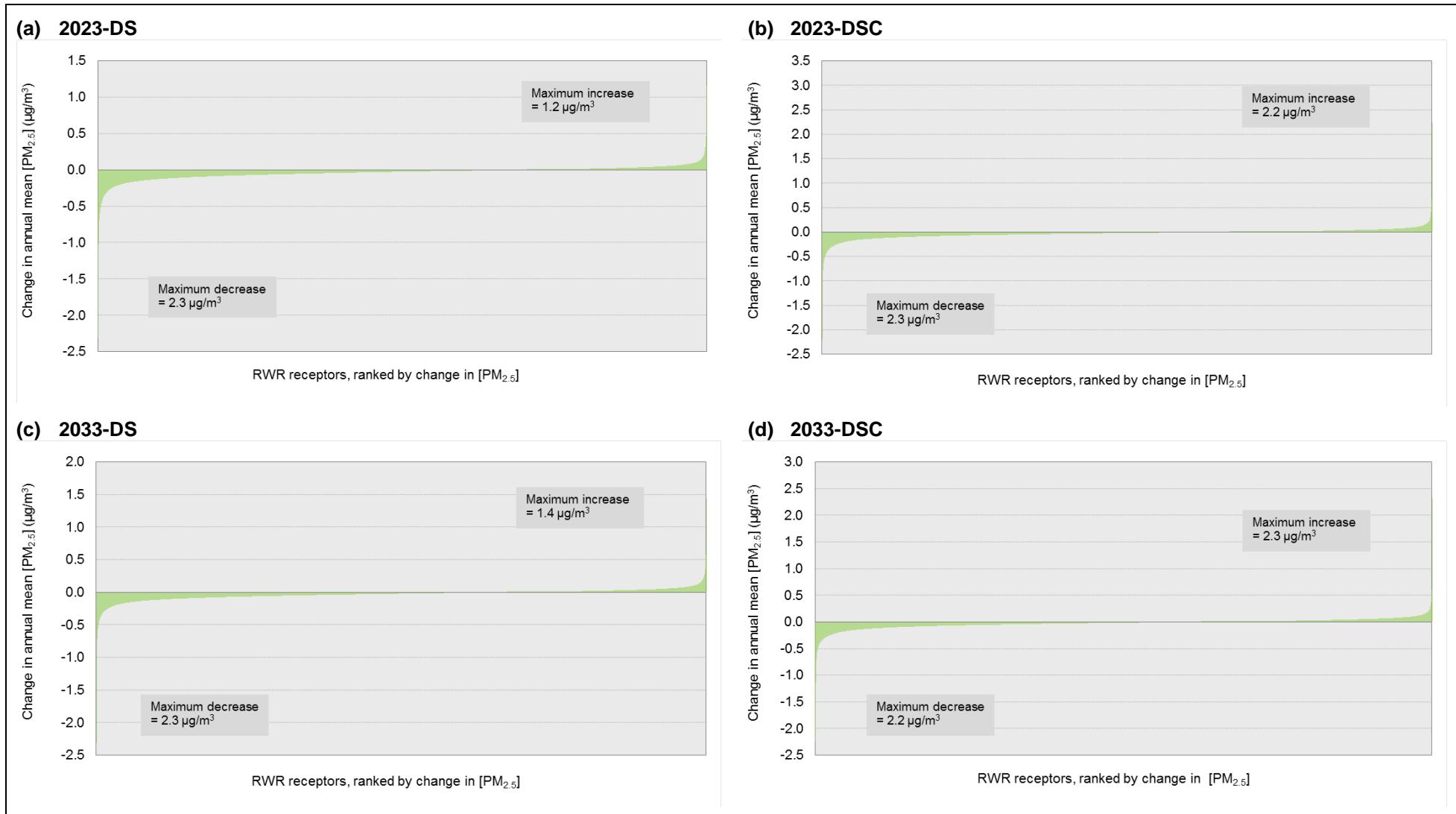


Figure K-89 Change in annual mean PM_{2.5} concentration at RWR receptors (with-project and cumulative scenarios, relative to Do Minimum scenarios)

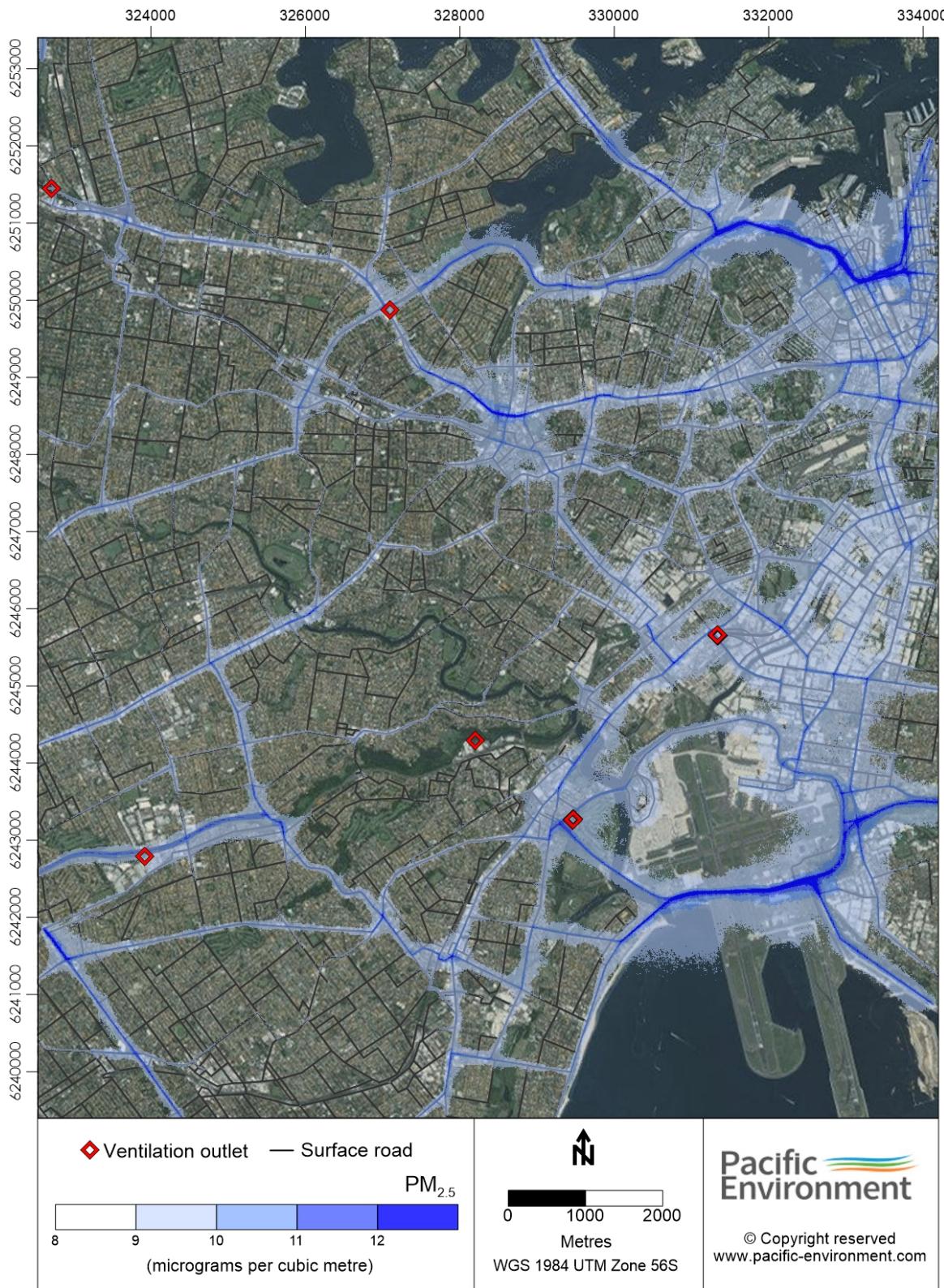


Figure K-90 Contour plot of annual mean PM_{2.5} concentration in 2023 Do Minimum scenario (all sources, 2023-DM)

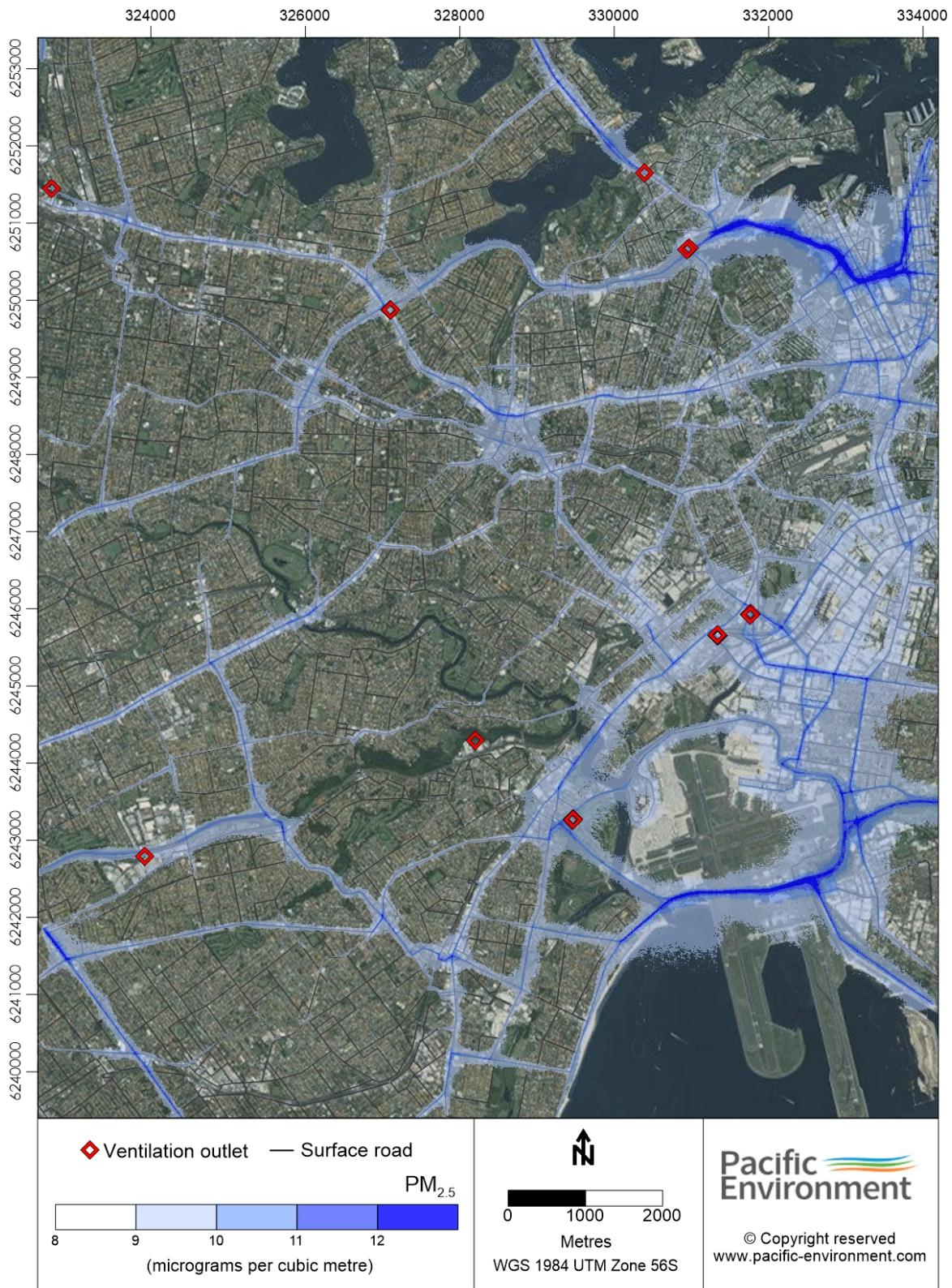


Figure K-91 Contour plot of annual mean PM_{2.5} concentration in 2023 Do Something scenario (all sources, 2023-DS)

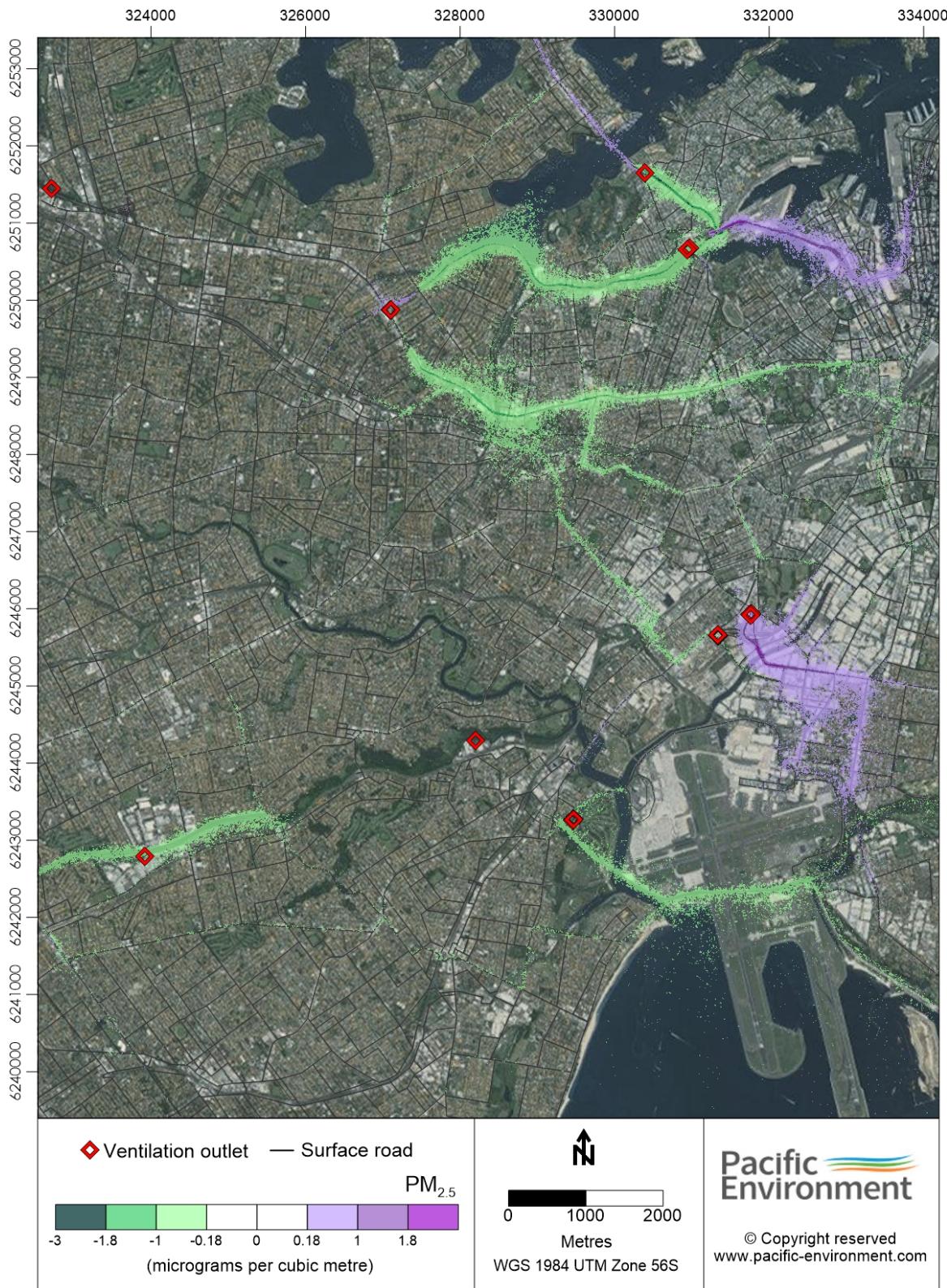


Figure K-92 Contour plot of change in annual mean PM_{2.5} concentration in 2023 Do Something scenario (all sources, 2023-DS minus 2023-DM)

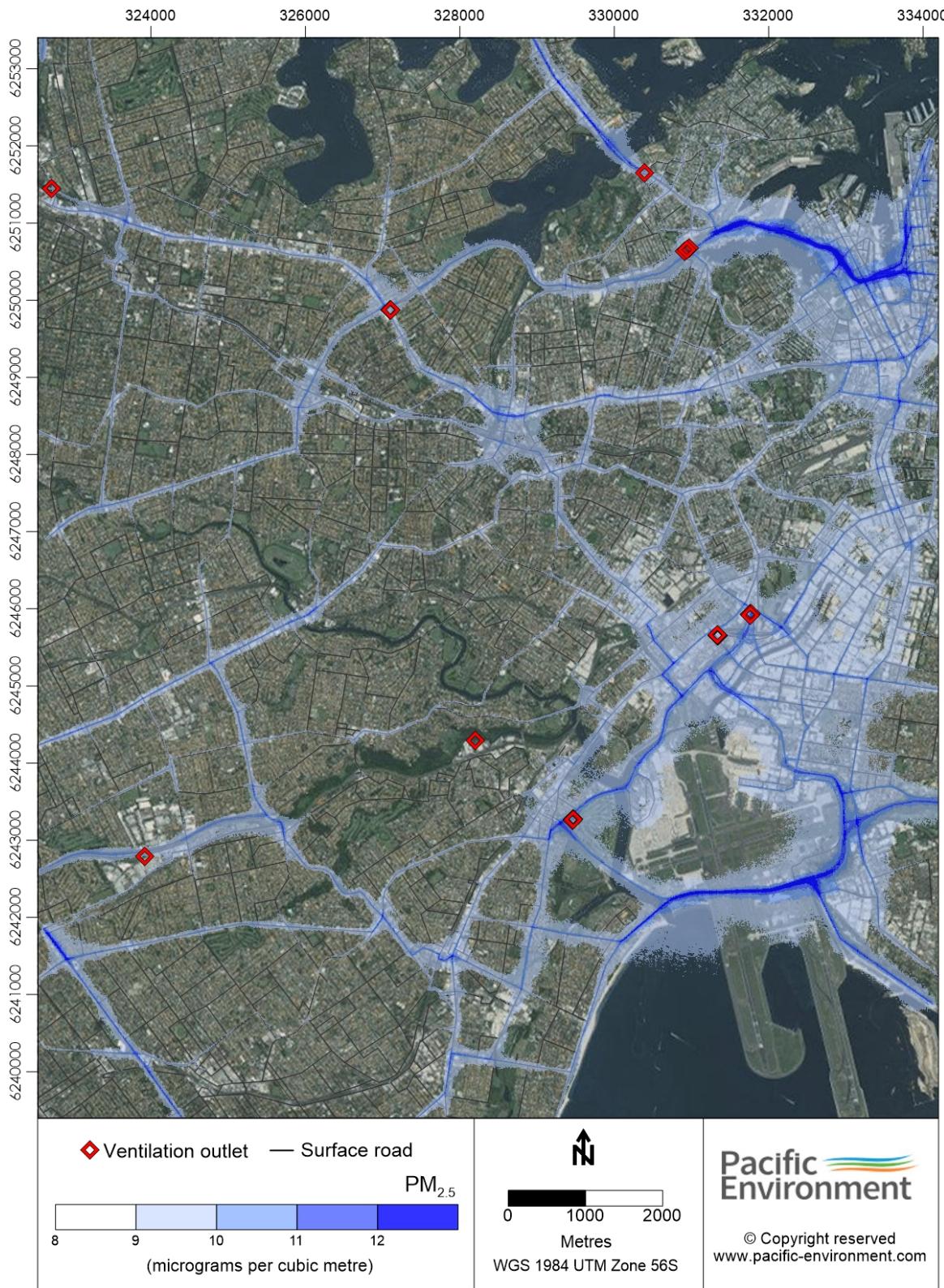


Figure K-93 Contour plot of annual mean PM_{2.5} concentration in 2023 cumulative scenario (all sources, 2023-DSC)



Figure K-94 Contour plot of change in annual mean PM_{2.5} concentration in 2023 cumulative scenario (all sources, 2023-DSC minus 2023-DM)

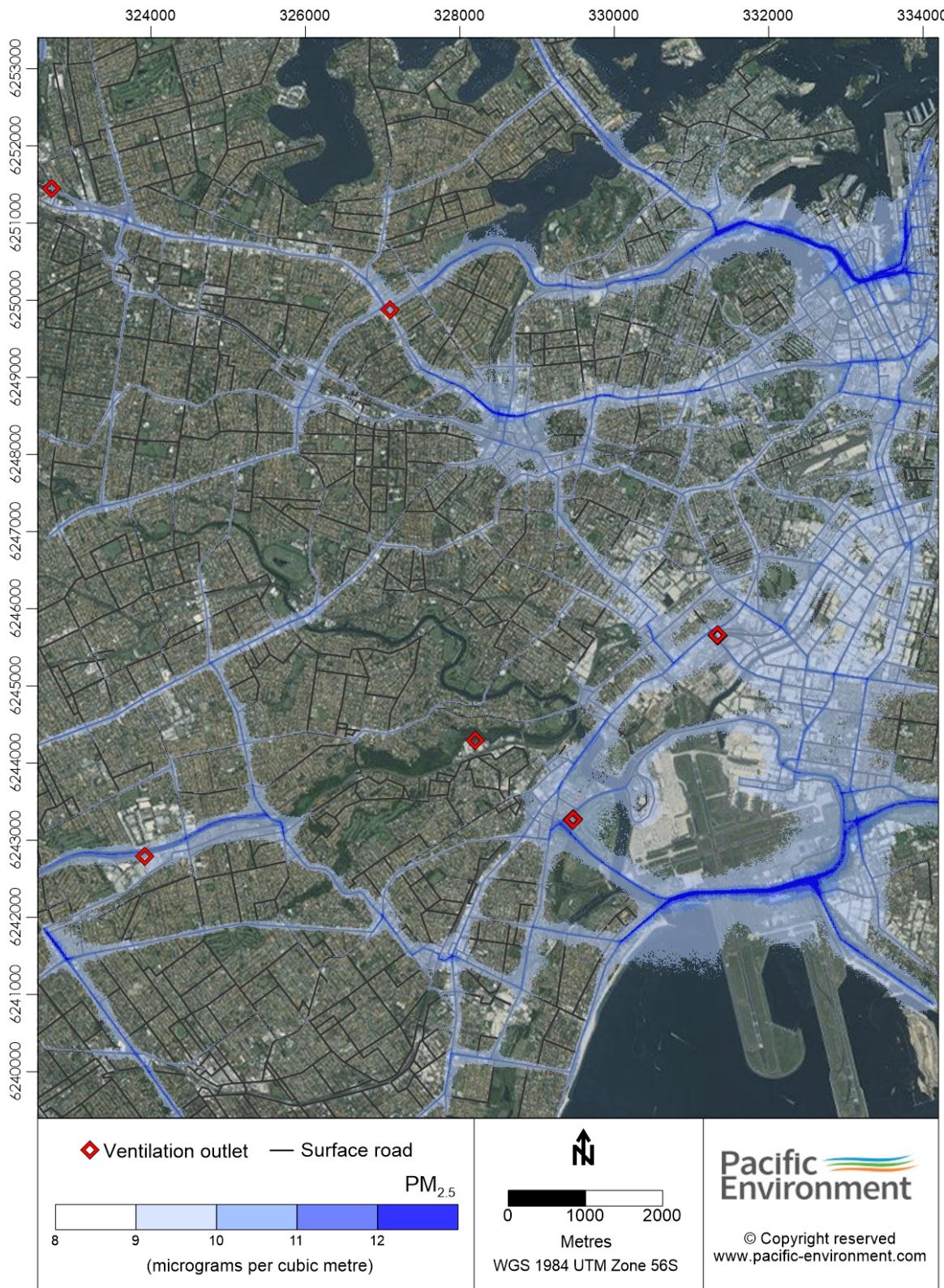


Figure K-95 Contour plot of annual mean PM_{2.5} concentration in 2033 Do Minimum scenario (all sources, 2033-DM)

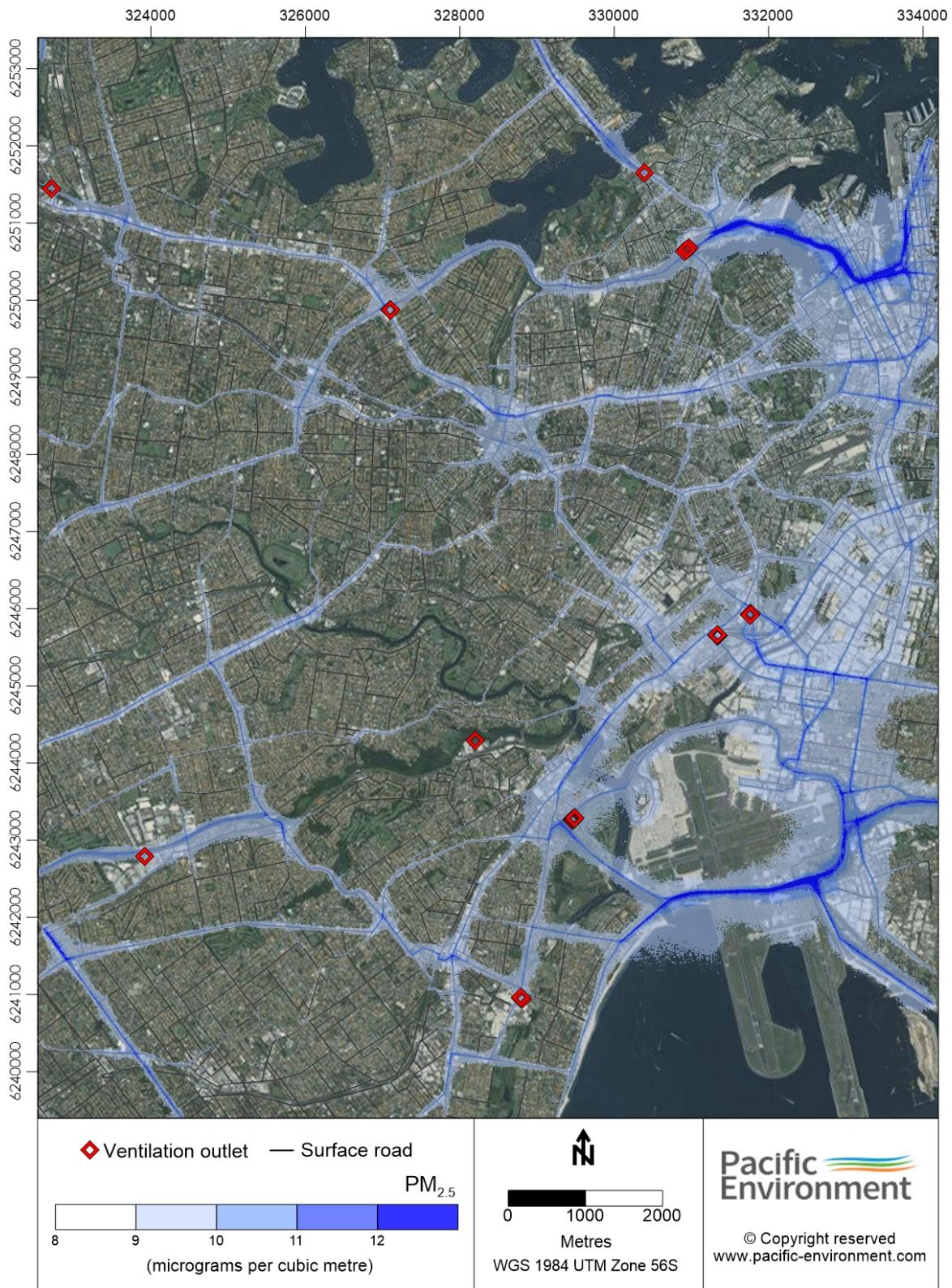


Figure K-96 Contour plot of annual mean PM_{2.5} concentration in 2033 Do Something scenario (all sources, 2033-DS)



Figure K-97 Contour plot of change in annual mean PM_{2.5} concentration in 2033 Do Something scenario (all sources, 2033-DS minus 2033-DM)

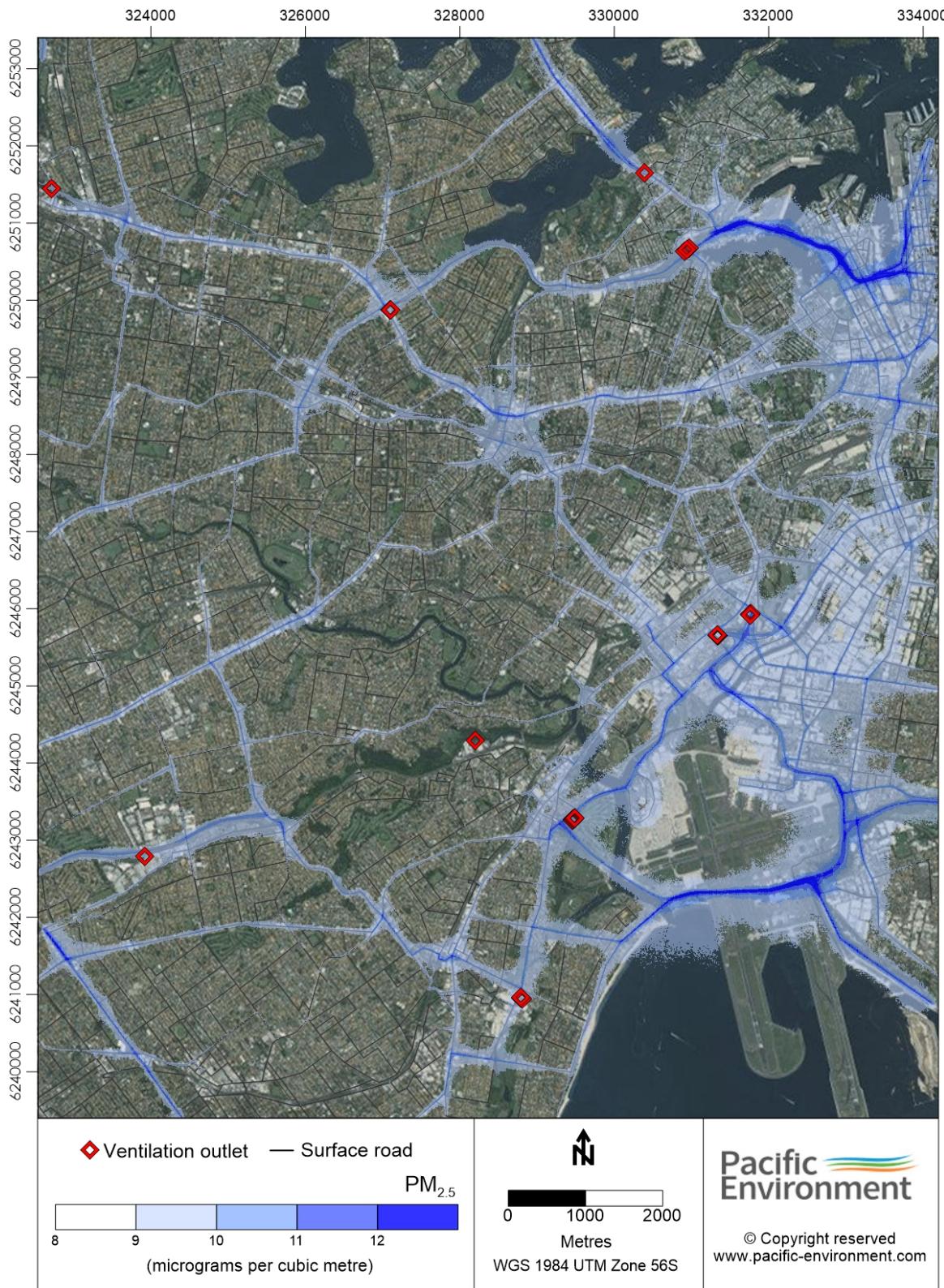


Figure K-98 Contour plot of annual mean $\text{PM}_{2.5}$ concentration in 2033 cumulative scenario (all sources, 2033-DSC)



Figure K-99 Contour plot of change in annual mean PM_{2.5} concentration in 2033 cumulative scenario (all sources, 2033-DSC minus 2033-DM)