

Hollicombe remediation air quality update

Date	From 1 October 2016 to 31 October 2016.
Description of works	Removal of concrete hardstanding and underground storage tank. Reinstating excavations with remediated soil and site levelling.
Air quality summary	<p>Daily average concentrations of particulate matter (PM) fraction PM10 exceeded the threshold of 50 µg m⁻³ on 5 and 31 October at A8 Torbay Road. Daily average concentrations of PM2.5 at A8 were less than the threshold of 25 µg m⁻³ on all days. Daily average concentrations of PM10 and PM2.5 were less than threshold concentrations at A1 and A4 on all days.</p> <p>The two exceedance events detected at A8 were caused by ambient conditions / other sources coming on to site from Torbay Road / the sea (south /south easterly wind). Works were not performed on these days.</p>

Particulate concentrations (24 h mean µg m ⁻³)						
Date	A1 School		A4 Site West		A8 Torbay Road	
	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
01/10/2016 Sat	7.59	2.63	9.95	2.62	9.39	2.96
02/10/2016 Sun	8.17	2.14	8.09	2.18	10.27	2.92
03/10/2016 Mon	19.44	3.47	12.46	4.48	20.98	6.2
04/10/2016 Tue	43.27	10.10	33.26	15.16	48.95	19.56
05/10/2016 Wed	33.73	9.28	33.18	14.74	51.84	20.75
06/10/2016 Thu	27.86	6.42	22.34	8.84	45.89	13.21
07/10/2016 Fri	21.28	4.80	17.04	6.47	30.18	9.6
08/10/2016 Sat	15.64	4.00	11.9	5.26	16.03	6.11
09/10/2016 Sun	11.53	3.08	8.07	3.69	11.93	4.53
10/10/2016 Mon	10.12	2.45	7.45	3.09	16.11	4.24
11/10/2016 Tue	11.02	2.26	9.03	3.28	20.8	5.03
12/10/2016 Wed	15.04	3.35	12.54	5.22	35.23	8.16
13/10/2016 Thu	11.86	2.86	8.69	3.89	26.26	6.38
14/10/2016 Fri	14.93	4.14	14.07	5.77	20.25	7.35
15/10/2016 Sat	18.11	3.05	15.81	3.07	17.53	4.35
16/10/2016 Sun	21.72	6.83	20.5	8.04	32.36	9.83
17/10/2016 Mon	23.75	7.14	26.02	7.54	23.69	9.26
18/10/2016 Tue	15.43	5.11	14.67	5.22	15.09	6.6
19/10/2016 Wed	13.06	3.64	10.49	3.44	18.29	7.16
20/10/2016 Thu	12.03	3.85	10.02	4.27	18.76	9.81
21/10/2016 Fri	11.43	3.68	10.5	4.43	14.82	5.8
22/10/2016 Sat	12.49	4.09	10.31	4.67	16.76	6.19
23/10/2016 Sun	20.03	6.37	19.27	7.72	30.29	11.83
24/10/2016 Mon	25.35	7.54	23.07	9.27	32.48	12.59
25/10/2016 Tue	16.44	3.65	17.09	3.31	21.22	4.82
26/10/2016 Wed	16.42	3.39	16.64	3.32	19.01	4.68
27/10/2016 Thu	12.78	2.67	15.24	2.87	19.98	5.1
28/10/2016 Fri	11.61	2.23	12.55	2.27	13.48	3.12
29/10/2016 Sat	10.88	2.78	13.8	2.98	18.55	4.52
30/10/2016 Sun	19.85	5.48	20.55	6.75	28.57	9.73
31/10/2016 Mon	42.01	11.70	43.73	13.72	56.49	18.39

All data are 24 h mean concentrations determined with laser nephelometer direct read particle samplers. Thresholds for PM10 and PM2.5 concentrations are 50 and 25 µg m⁻³ respectively. PM10 = particulate matter of diameter less than or equal to 10 micrometres. PM2.5 = particulate matter of diameter less than or equal to 2.5 micrometres. ND = no data available. As a guide, the particulate concentrations have been assigned coloured air quality index bands as used in the Daily Air Quality Index to provide detail about air pollution levels in a simple way. The colours are divided into four pollution bands: low, moderate, high and very high. For example, low levels of particulate pollution are shown in green colours and very high pollution shown in purple. See table at bottom of page for further information.

Have any thresholds been exceeded during the period	Y
<i>If yes, describe below</i>	
The daily average concentration of PM10 exceeded the threshold of 50 µg m ⁻³ on 5 and 31 October at location A8 (Torbay Road).	
The deposition gauge samples collected during October from A2 and A8 (Torbay Road) did not exceed the threshold for deposition rate but the collected material did contain detectable concentrations of polycyclic aromatic hydrocarbons (PAHs). There are currently no statutory Environmental Quality Standards in the UK for releases to land of PAH by deposition. The concentration of benzo(a)pyrene in A2 was less than the concentrations permitted within soil for use as clean cover at the site. The concentration of benzo(a)pyrene in A8 was more than the concentrations permitted within soil for use as clean cover at the site. However, the deposition rate of benzo(a)pyrene identified would not result in an exceedance of soil criteria for residential with plant uptake land use scenario if sustained over a period of 50 years. The concentration of naphthalene in the collected material was less than the concentrations permitted within soil for use as clean cover at the site. The method does not attribute a source to the deposited material but it should be noted that the deposition gauge at A8 was remains at a location close to the road during this sampling period to allow gas mains work. The road and traffic are also a potential source of the contaminants of concern.	
The concentration of benzene at location A7 during October was 5.12 µg m ⁻³ and this month's average concentration was greater than the annual average threshold of 5 µg m ⁻³ . However, the current running average concentration to date at location A7 is 2.4 µg m ⁻³ (based on 11 month samples) and this does not exceed the annual average threshold.	
The concentration of naphthalene at location A8 during October was 1.79 µg m ⁻³ and this month's average concentration was greater than the annual average threshold of 1.72 µg m ⁻³ . However, the current running average concentration to date at location A8 is 0.48 µg m ⁻³ (based on 12 month samples) and this does not exceed the annual average threshold.	

Key to banding of particulate concentrations

Pollution Band	Colour	Concentrations	
		PM10* µg m ⁻³	PM2.5* µg m ⁻³
Low		0 - 16	0 - 11
		17 - 33	12 - 23
		34 - 50	24 - 35
Moderate		51 - 58	36 - 41
		59 - 66	42 - 47
		67 - 75	48 - 53
High		76 - 83	54 - 58
		84 - 91	59 - 64
		92 - 100	65 - 70
V High		101>	71>

*24 h mean EU ref equivalent