

AIR QUALITY SURVEY

Location: St Pancras Station, London NW1

Client: London & Continental Stations & Properties Ltd, Barlow House,
St Pancras Station, Euston Road, London NW1 2QP

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Date of Survey: 28 October - 5 November 2002

Summary:

Baseline data have been collected for inhalable dust concentrations at St Pancras station prior to the start of demolition work. Samples were collected over 3 days, 8am - 6pm.

The dust concentrations were in the range 100 - 340 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

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Date: 11 November 2002

AIR QUALITY SURVEY - ST PANCRAS STATION

1. INTRODUCTION

Industrial Health Control has been asked by London & Continental Stations & Properties to measure baseline dust levels before the major building/demolition work starts at St Pancras station, and to measure dust levels during the building/demolition work, in order to ascertain whether there has been a significant increase.

The main part of the building/demolition work is going to be carried out along platform 7, and is due to start in late November 2002. Some work is also being carried out at the north end of platform 1, and this had already started.

Six sampling locations were agreed upon, and are shown in the attached sketch:

1. Behind hoarding close to entrance roadway, southern end of station
2. Northern end of platform 6
3. Southern end of platform 6
4. Northern end of platform 2
5. Behind the buffers between platforms 4&5
6. Behind the buffers between platforms 2&3.

The baseline levels were collected on three days, between 28 October and 5 November 2002. Observations have also been made regarding the conditions during sampling.

2. RESULTS

The dust monitoring results for each day are shown below.

TABLE 1 - 28 October 2002

Sample No.	Location of sample	Time	Sample volume (litres)	Inhalable dust conc ⁿ (mg/m ³)
89	Behind hoarding close to entrance roadway, southern end of station	0950 - 1815	1010	190
90	Northern end of platform 6	1000 - 1820	1000	250
91	Southern end of platform 6	0955 - 1820	1010	210
92	Northern end of platform 2	1015 - 1830	1000	230
93	Behind the buffers between platforms 4&5	1005 - 1825	1000	290
94	Behind the buffers between platforms 2&3.	1010 - 1830	1000	190

TABLE 2 - 1 November 2002

Sample No.	Location of sample	Time	Sample volume (litres)	Inhalable dust conc ⁿ (mg/m ³)
95	Behind hoarding close to entrance roadway, southern end of station	0735 - 1805	1270	100
96	Northern end of platform 6	0745 - 1815	1260	200
97	Southern end of platform 6	0740 - 1720	1160	210
98	Northern end of platform 2	0755 - 1820	1250	220
99	Behind the buffers between platforms 4&5	0750 - 1815	1250	140
100	Behind the buffers between platforms 2&3.	0750 - 1820	1250	150

TABLE 3 - 5 November 2002

Sample No.	Location of sample	Time	Sample volume (litres)	Inhalable dust conc ⁿ (mg/m ³)
102	Behind hoarding close to entrance roadway, southern end of station	0745 - 1805	1240	340
103	Northern end of platform 6	0755 - 1820	1250	140
104	Southern end of platform 6	0750 - 1605 1635 - 1825	1230	110
105	Northern end of platform 2	0740 - 1810	1260	170
106	Behind the buffers between platforms 4&5	0800 - 1815	1230	160
107	Behind the buffers between platforms 2&3.	0800 - 1815	1220	100

OBSERVATIONS

Date	Weather Conditions	Other Observations
28 Oct 02	Dry; 14 °C; Relative Humidity (RH) 50%	Emergency timetable in operation due to very high winds and track damage on the previous day. There were fewer trains than normal, and the concourse was very crowded throughout the day. Some construction work was carried out near sample 92, but no demolition.
1 Nov 02	Dry in the morning; light rain after 12pm. 15°C; RH 80-90%	Normal operations. Some construction work was carried out near sample 98 in the morning, but no demolition.
5 Nov 02	Dry at first; some drizzle in the middle of the day. 14-15°C, RH 80%	Normal operations. No construction work was carried out.

APPENDIX 2

Sampling and Analysis Methods

Static samples were collected and analysed for inhalable dust in accordance with HSE method MDHS 14/3 “General methods for the gravimetric determination of respirable and total inhalable dust” (2000). Casella AFC 123 and 124 pumps, JD Technical JDP pumps, 7-hole sampling heads, 25mm GF/A filters and a sampling rate of 2 litres/minute were used. All the sampling heads were positioned at head height.

The samples were collected over periods of about 10 hours from 8 am - 6 pm. This covered both the morning and the evening peaks.

