Detailed Air Quality Assessment

Swanage Heritage Railway

Sulphur Dioxide Levels at the Northbrook Road Depot, Swanage

April 2009

Environmental Services
Westport House
Worgret Road
Wareham
Dorset

Summary

This report was completed to comply with the Council's duty under Part IV of the Environment Act 1995 and the Air Quality (England) Regulations 2000 (as amended).

In 2006 the Council's Updating and Screening Assessment identified the Swanage Railway Depot as requiring a detailed assessment for possible breaches of the air quality objectives for sulphur dioxide (SO_2). This report details the findings of that assessment incorporating monitoring between August 2008 and February 2009 using a real time UV fluorescence SO_2 analyser.

Elevated levels of SO_2 were noted over the 6 month period, attributed to steam locomotives in the depot area, however overall no actual breaches of the air quality objectives were recorded. This report concludes that the site complies with the air quality objectives for SO_2 and that no further monitoring is required.

Contents

Appendices

1. Introduction

Background

1.1 Swanage Heritage Steam Railway runs on a 6 mile stretch of line between Norden (near Corfe Castle) and the seaside resort of Swanage in the isle of Purbeck. The railway was completed to Swanage in 1885 and originally connected to the Wareham mainline. In 1972 British Rail closed the line and subsequently removed the entire track. From 1975 however members of the Swanage Railway Society have replaced and renovating the line, to the extent today that the line has been completely replaced, although the service currently provided is from Norden (Outside Corfe Castle) to Swanage.

1.2 The railway currently offers an extensive service (2008 time table Appendix I) from Norden Park and Ride to Swanage. The station at Swanage terminates adjacent to the towns high street and is located within a mixed residential / commercial environment. Tourism in the district is an important part of the local economy and it is fair to say that the Swanage heritage railway is an integral part of the local community and one of the most prominent tourist attractions in the area.

1.3 The railway operates a small depot area some 150m west of the main Swanage Railway Station (picture 1 Grid Ref: 402657 78926) which is subject to this investigation. The area is used to carry out maintenance of locomotives, storage and loading of coal, in addition to the stationing of engines over night.

Updating and Screening Assessment

1.4 The Swanage Railway Trust has a training policy for all firemen working on the railway which has the aim of reducing emissions from their engines; in addition they also operate a policy of using coal which has low sulphur content. The Council's Updating and Screening Assessment of 2006 however concluded that a detailed assessment was required as locomotives were regularly stationed in the depot for long periods of time, meaning the site met the criteria published in TGQM. TG(03) for a detailed air quality assessment to be carried out.

Table 1 below shows the air quality objectives for SO2 as prescribed in the Air Quality Regulations (ref TGQM.TG(09))

Concentration of SO_2	**Measured as**	**Date to be achieved**
350ug/m^3 not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
125ug/m^3 not to be exceeded more than 3 times	24 hour mean	31.12.2004

per year		
266ug/m^3 not to be exceeded more than 35 times per year	15 minutes mean	31.12.2005

1.5 Observations of the area confirmed that locomotives were regularly left partially in steam for long periods and also steamed up in the morning prior to the commencement of services. There are a number of residential premises in close proximity (within 40m) to the depot area on Northbrook Road and Court Road and it was reasonable to expect that there could be extended periods of public exposure to sulphur dioxide fumes.

Other Monitoring Data

1.6 The Council operates a nitrogen dioxide (NOx) tube survey in the district and has two sites near the depot area in Swanage. Raised levels of NOx could indicate that there was a potential problem, however in reality both sites show long term levels to be well below the national air quality objective (17 ug/m^3 and 23 ug/m^3 annual average).

1.7 There are no other significant sources of SO_2 in the area

Picture 1 Depot area, Swanage:

Re-siting of the Depot area

1.8 Swanage Railway Trust has considered re-siting the depot due to the close proximity of housing and its relatively small size. In 2006 the Council was aware of these proposals and decided to postpone the commencement of a detailed assessment whilst these plans were developed.

1.9 In early January 2008 however, no further progress had been made on relocation and it was decided to proceed with this detailed air quality assessment.

Detailed Assessment

1.10 The Council contracted the services of TRL Air Quality Monitoring Services in early 2008 to carrying out site monitoring and to contribute technical expertise to the selection of the most representative monitoring position. TRL carried out the monitoring using a kiosk containing an ultra-violet fluorescence continuous monitoring SO_2 analyser over the 6 month period August 2008 – February 2009. This period corresponded to the peak periods of activity in the summer on the railway, running into the autumn when services were reduced. The monitoring also aimed to cover the Christmas period when special services on the line were run.

2. Methodology

Site Characterisation:

2.1 Prior to carrying out monitoring, a site investigation and assessment was carried out considering the following:

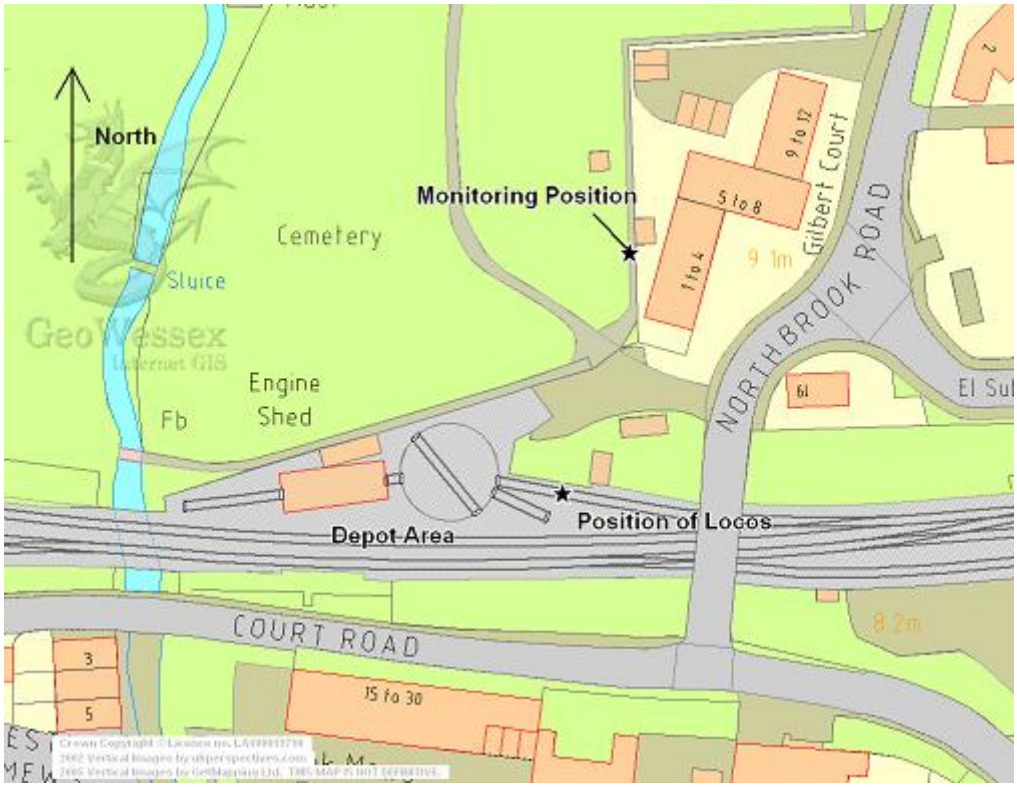
Table 2 Site Characterisation

Factor	Comments
Potential Sources of SO_2	Two or more steam locos steaming up and being left partially in steam for periods exceeding 1 hour, on occasions being left overnight in the depot.
Location of Potential Sources	Locos left in a secure area known as the depot which is close to Swanage Railway Station and company offices. Site is within the urban area of the town with residential property in close proximity.
Location of Potential Receptors	Nearest residential flats located on Court Road and Gilbert Court, nearest residential premises with open / garden areas Gilbert Court also lies down wind of site. (prevailing wind from the SW.)
Distance to potential receptors	Nearest residential façade is located at Court Road 35m from source, Gilbert Court residential flats and gardens located 37m from source
Potential Periods of Exposure	There is the potential for extended periods (over 12hours) of exposure in residential gardens and within residential premises.
Topography and layout of site	Land NE (downwind) of the source is raised to the extent that the emissions from steam locos in the depot are approximately at ground level comparatively to residential flats at Gilbert Court, Northbrook Road.
Prevailing Weather	Prevailing weather in Swanage is from the SW.

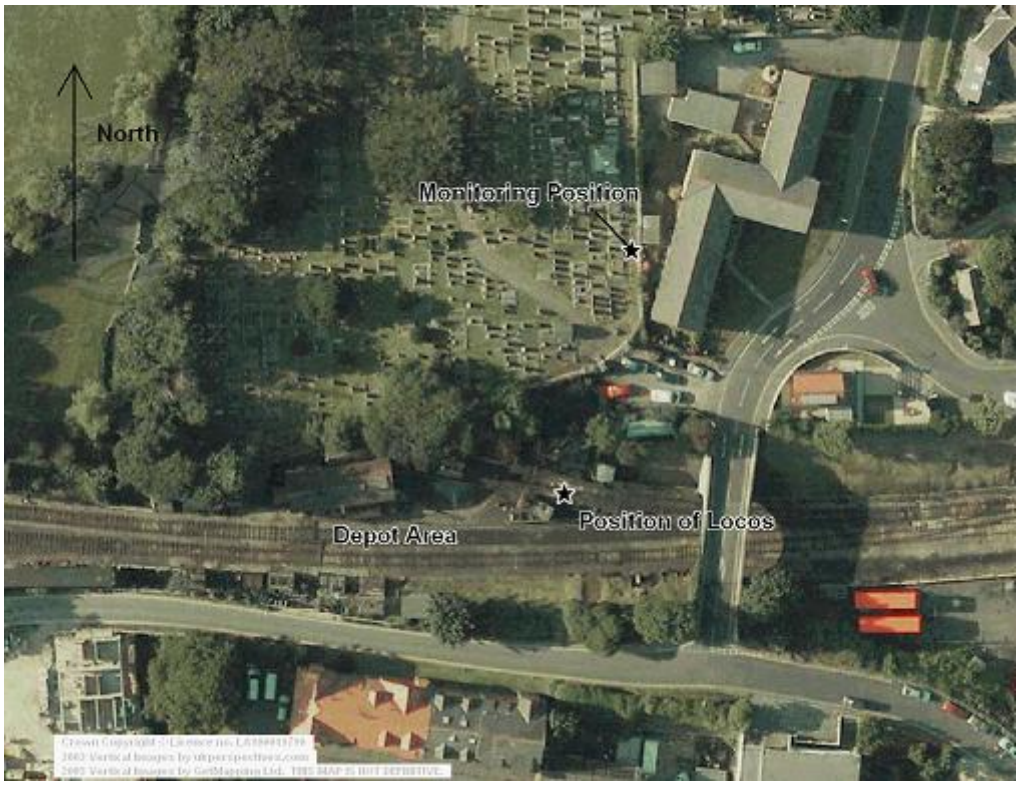
Monitoring Location

2.2 It was concluded that the monitoring position needed to be located NE of the source bearing in mind topography and prevailing weather and to represent the maximum potential public exposure. Following the site visit with TRL staff, Gilbert Court was identified as representing the most appropriate monitoring location. The position chosen was adjacent to the residential gardens of Gilbert Court, 5m from the façade of the property, 39m downwind (NE) of the source.

Figure 1 Site Plan showing monitoring position and source



Picture 2 Overhead photograph of site



Monitoring Kiosk

2.3 A kiosk was installed by TRL Ltd on 7th August 2008 containing:

- ultra violet fluorescence SO_2 continuous monitoring analyser.
- Weather station including temperature and wind direction.
- Remote data access capability.

Picture 3 Kiosk at monitoring point to the rear of Gilbert Court

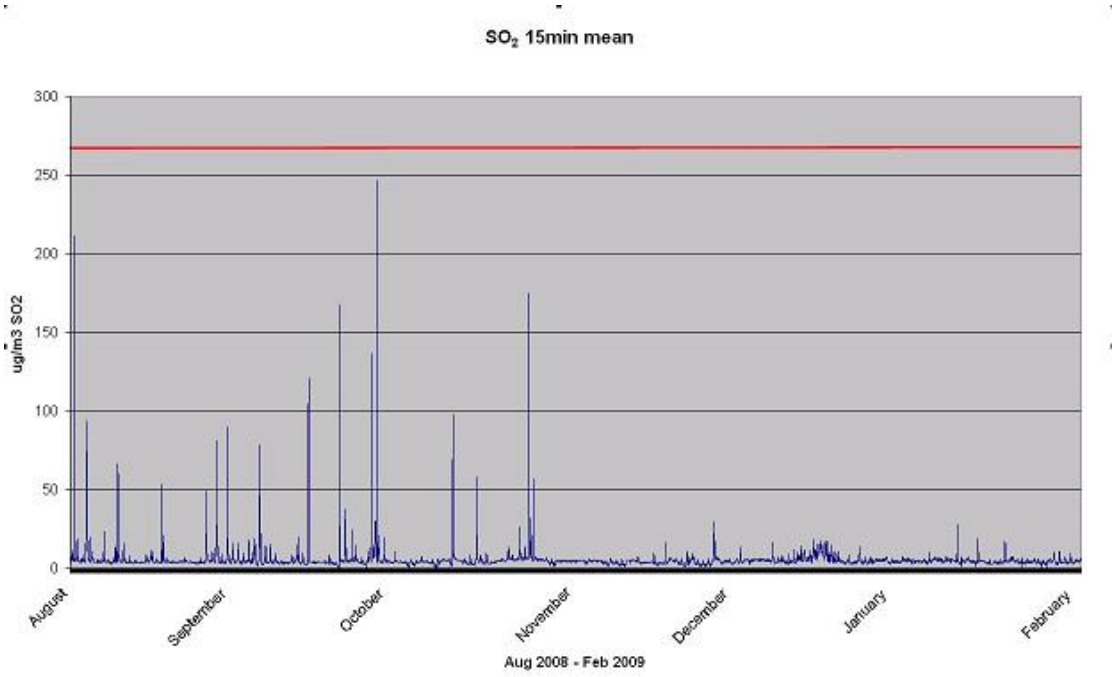
Monitoring was carried out continuously over a 6 month period between 15th August 2008 and 18th February 2009. The period was representative of the various services offered by the railway. (Railway Time Table 2008 Appendix I.)

Calibration, Data Ratification and Capture.

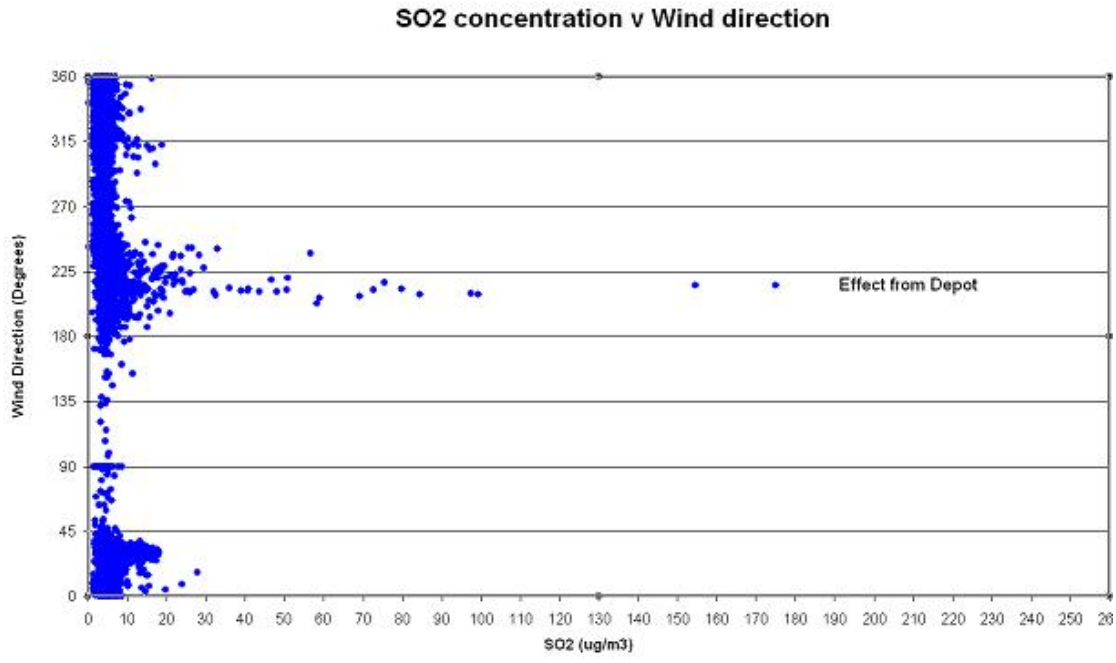
2.4 Calibration of zero and span to traceable gases occurred ever 4 weeks including pre and post installation with data ratified accordingly. (Calibration Data shown in Appendix III) Data capture throughout the monitoring period was exceptionally good exceeding 99.5% for the total period the instrument was installed.

3. Results

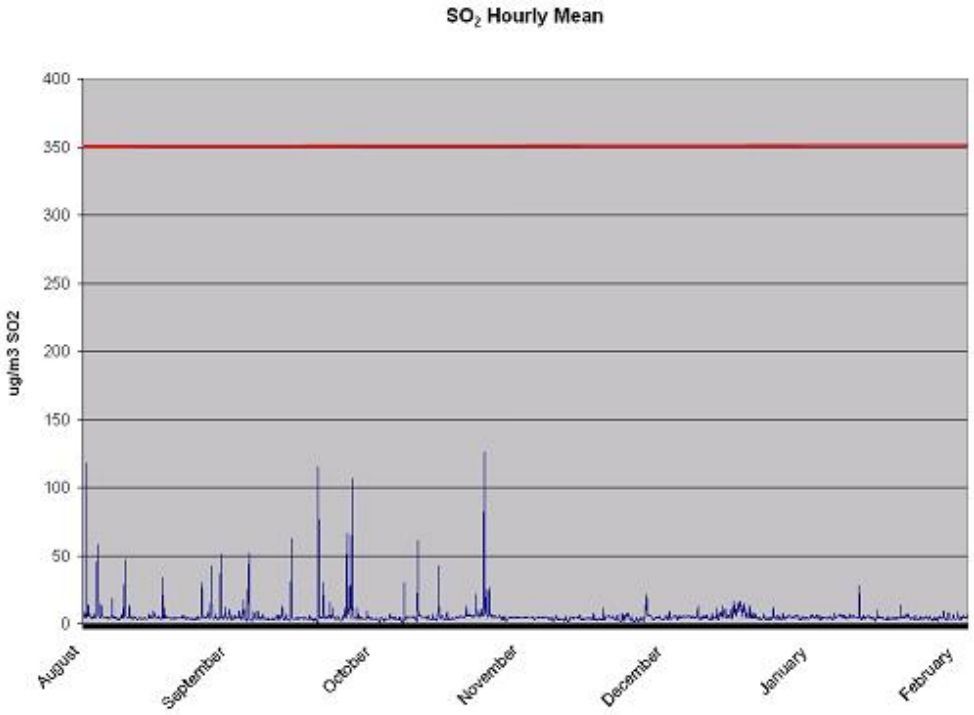
3.1 Graph 1: Complete results of SO_2 levels: 15 minute average short term exposure: The air quality objective is 266ug/m^3 not to be exceeded more than 35 times. No exceedances recorded



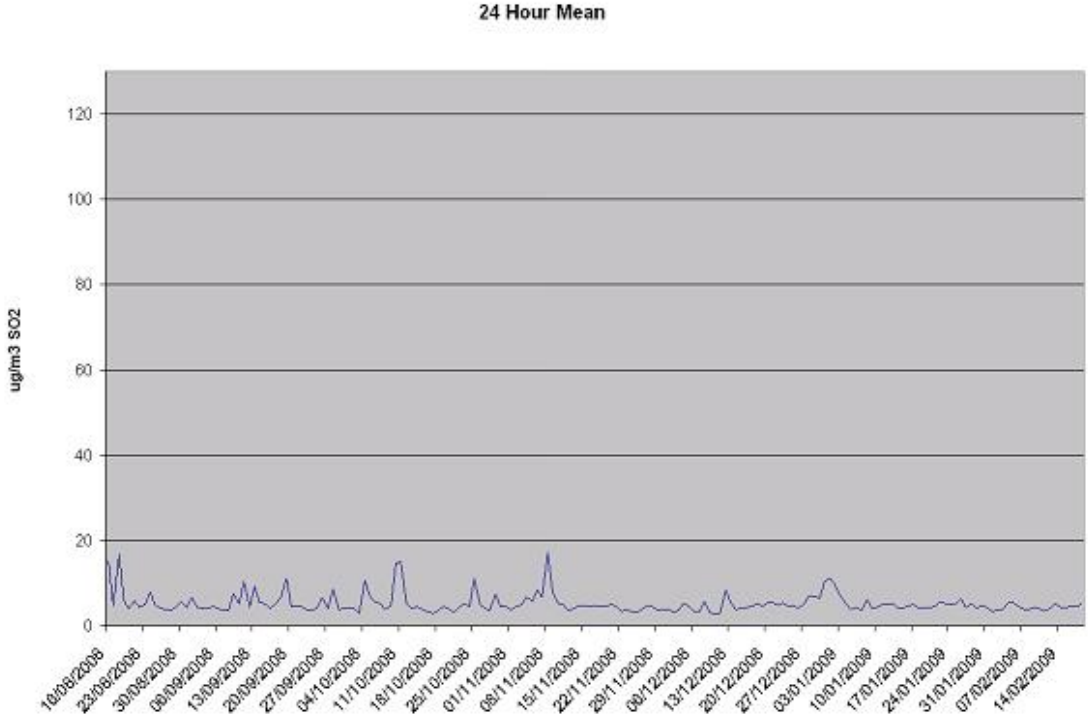
3.2 Graph 2: Levels of SO_2 (15 minute average) vs wind direction August 2008 – February 2009.



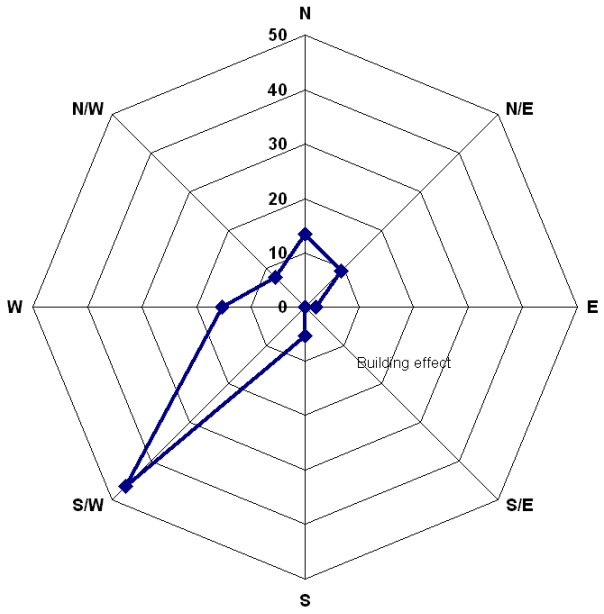
3.3 Graph 4: Complete results of SO_2 levels: Hourly Mean: The air quality objective is 350ug/m^3 not to be exceeded more than 24 times per year. No exceedances recorded.



3.4 Graph 5: Complete results of SO_2 levels: 24 Hour Mean: The air quality objective is 125 ug/m^3 not to be exceeded more than 3 times per year. No exceedances recorded.

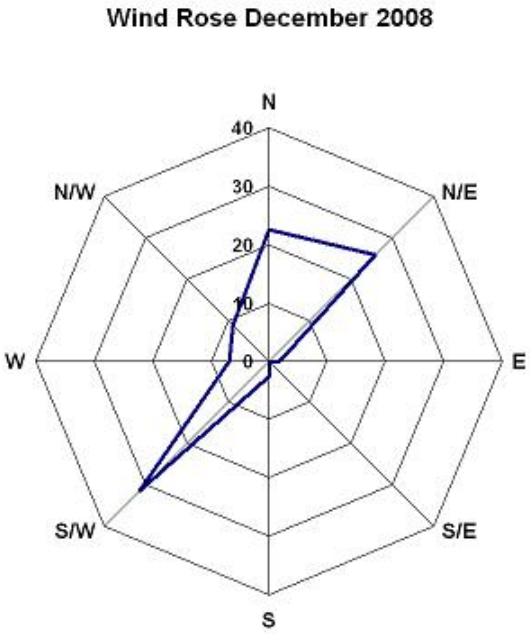


3.5 Graph 6: Wind Rose: August 08 – February 09. Graph shows the % of time the wind came from a particular direction.

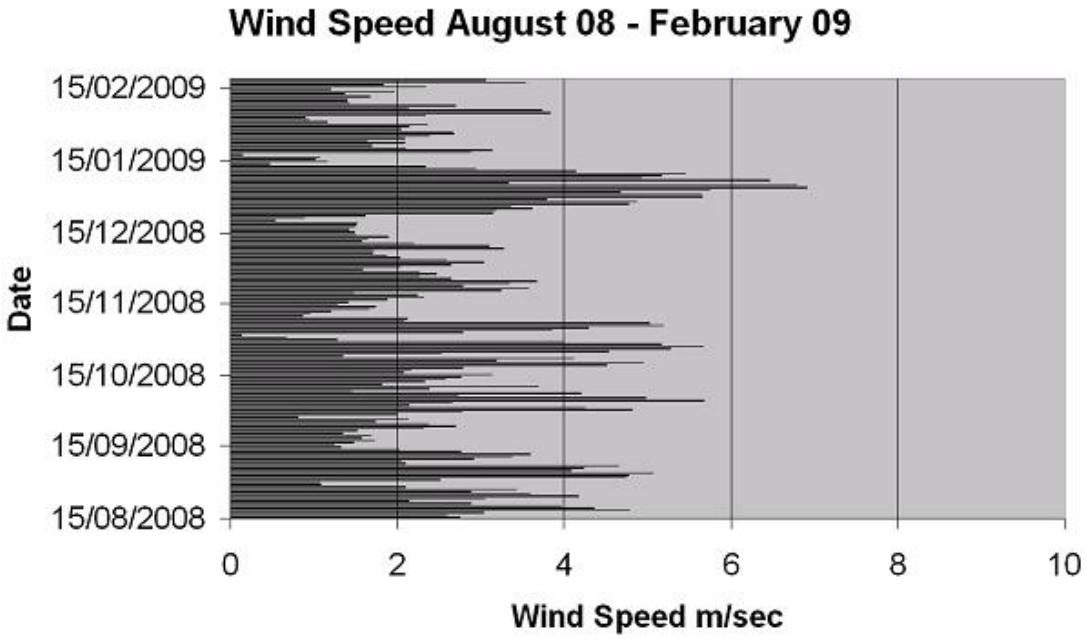


The wind rose shows that the predominant wind direction over the monitoring period was from the SW, downwind of the source. Note the lack of wind from a SE direction this is attributed to the façade of Gilbert Court.

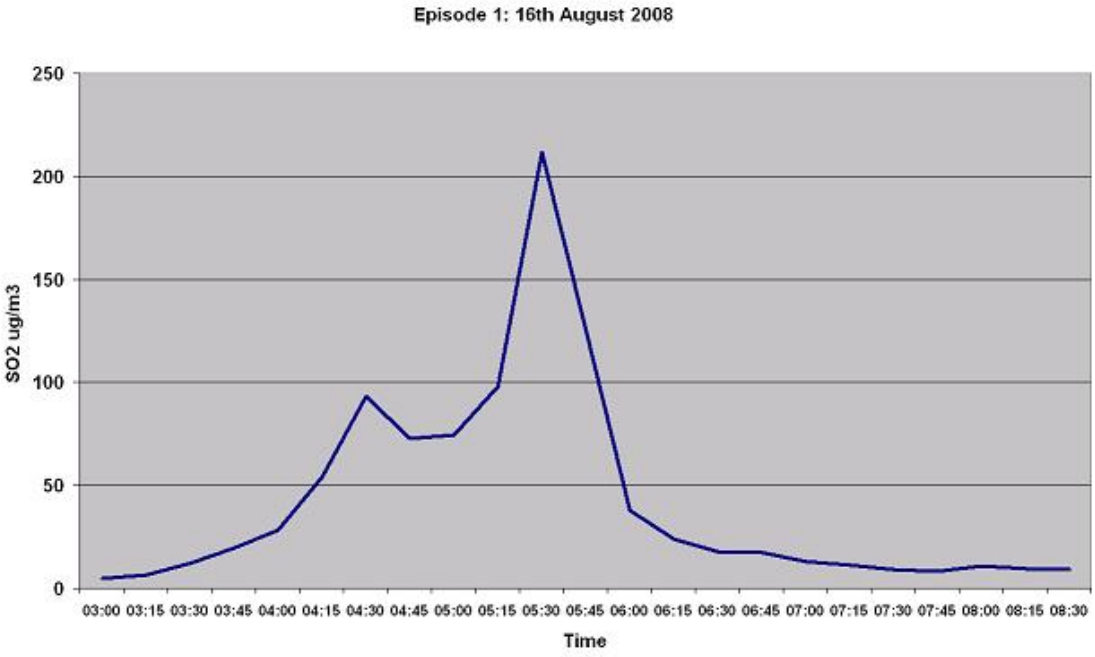
3.6 Graph 7: Wind Rose 1st – 31st December 2008 showing that the predominant wind direction in December was from N to NE. (49% of the time)



3.7 Graph 8: Wind Speed August 2008 – February 2009



3.8 Graph 9 Pollution Episode Saturday 16th August 2008



Graph 10 Pollution Episode 2 Monday 18th August 2008

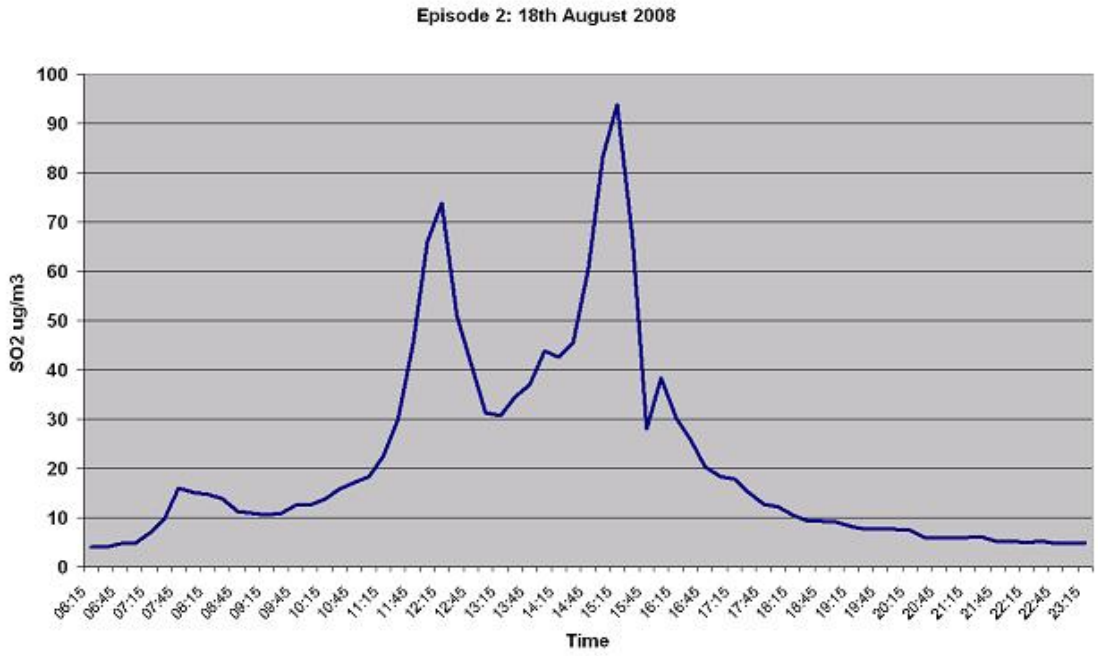


Table 3 Occurrence of Pollution Events

Pollution Episode	1	2	3	4	5	6	7	8
Date	16/08/2008	18/08/2008	24/08/2008	01/09/2008	09/09/2008	11/09/2008	13/09/2008	19/09/2008
Day	Saturday	Monday	Sunday	Monday	Tuesday	Thursday	Saturday	Friday
Time	08.30hrs	15.15hrs	07.30hrs	08.30hrs	15.45hrs	16.99hrs	15.30hrs	10.45hrs
Peak	211	94	66	53	49	81	90	46
Span of Event - hrs (above 20ug/m3)	2.75	5.75	2.5	5.75	1.25	1	2	2.75

	9	10	11	12	13	14	15
Date	19/09/2008	28/09/2008	04/10/2008	05/10/2008	10/10/2008	11/10/2008	11/10/2008
Day	Friday	Sunday	Saturday	Sunday	Friday	Saturday	Saturday
Time	15.30hrs	14.30hrs	07.45hrs	08.15hrs	08.30hrs	00.00hrs	09.15hrs
Peak	58	121	168	38	136	30	247
Span of Event - hrs (above 20ug/m3)	3.25	6.75	2	1.25	2.5	6.75	2.5

- 73% of pollution events occur on a Friday, Saturday or Sunday.
- 78% of pollution events occurring in the morning occur between 07.00hrs and 09.15hrs.
- All pollution events in the afternoon occurred between 2.30pm – 4pm.
- The average span of a pollution event (levels measured above 20ug/m^3) was $3^1/_4$ hrs

4. Discussion & Conclusions

Discussion

4.1 During the period of 6 months monitoring the following was found:

- There were no exceedances recorded for any of the three air quality objectives for SO_2.
- The most significant measurements occurred over the short term 15 minutes period. The maximum levels recorded were marginally below 250ug/m^3 and were related to peak activity at the depot in the first 3 months of monitoring.
- The predominant wind direction throughout the 6 month period was from the SW. (47%)
- Activity is known to have decreased at the depot after October and this was reflected in the reduction of SO_2 measured.
- There was no noticeable increase in SO_2 levels measured in December 2008. It was expected that Christmas services would increase measurable levels of SO_2 however the predominant wind direction shifted to a North – North-easterly.
- Monitoring picked up a minor secondary source of SO_2, N to NNE of the monitoring point. Possible sources include Ibstock Bricks (brick works approx 1500m NW of site), the passenger ferry movements to and from Poole Harbour (N of site) or nearby domestic coal use. This source was not however considered significant.
- The majority of pollution events occur on a Friday, Saturday or Sunday between 07.00hrs and 09.15hrs and corresponded to steaming up locomotives in the depot area.
- All pollution events in the afternoon occurred between 2.30pm – 4pm.
- The average span of a pollution event (levels measured above 20ug/m^3) was $3^1/_4$ hrs

Conclusions

4.2 Results show that there were no breaches of the air quality objectives over the six month period. The weather over this period was considered to be representative of the normal conditions experienced in the area.

As no exceedances of the air quality objectives were recorded it is not considered necessary to carryout any further monitoring of the site. In conclusion this report finds that the site is in compliance with the Air Quality Objectives for SO_2.

Appendix I

SWANAGE RAILWAY

2008 TIMETABLE

To find your train look for the date on the calendar and then go to the timetable of that colour. Where there is no colour on the calendar trains do not run.

JANUARY

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

MARCH

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

APRIL

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

MAY

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

JUNE

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

JULY

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

AUGUST

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SEPTEMBER

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

M	T	W	T	F	S	S
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

MARKET DAY FARE

Travel out on any train before 0945, return on any train.

Adult: £4.00

Concession: £3.00

EVENING ROVER FARES

Travel on any train after 1700 and enjoy unlimited travel for the evening.

Adult: £4.00

Concession: £3.00

BLUE TIMETABLE

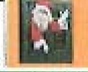
All these trains operate DAILY when blue timetable is in operation. | FRIDAYS ONLY 21st March and 26th September.

								D	D	D	D	D
Swanage	dep:	0950	1110	1230	1350	1510	1630	1810	1910	2010	2200	2300
Herston	dep:	All trains stop at Herston on request										
Harmans Cross	dep:	1000	1120	1240	1400	1520	1640	1820	1920	2020	2210	2310
Corfe Castle	dep:	1010	1130	1250	1410	1530	1650	1827	1926	2026	2216	2316
Norden Park & Ride	arr:	1013	1133	1253	1413	1533	1653	1830	Terminates at Corfe			
								D	D	D	D	D
Norden Park & Ride	dep:	1030	1150	1310	1430	1550	1710	1835	Starts from Corfe			
Corfe Castle	dep:	1032	1152	1312	1432	1552	1712	1837	1952	2050	2235	2325
Harmans Cross	dep:	1042	1202	1322	1442	1602	1722	1844	1958	2056	2241	2331
Herston	dep:	All trains stop at Herston on request										
Swanage	arr:	1053	1213	1333	1453	1613	1733	1856	2008	2106	2251	2342

SANTA SPECIALS

December 6th, 7th, 13th, 14th, 20th, 21st, 22nd & 24th

[illegible]



[illegible]

GREEN TIMETABLE

All these trains operate DAILY when green timetable is in operation. | FRIDAYS AND SATURDAYS 21st March to 27th Sept and DAILY 12th July to 18th Sept.

			D		D		D		D		D		D	D	D	D	D	D
Swanage	dep:	0950	1030	1110	1150	1230	1310	1350	1430	1510	1550	1630	1710	1810	1910	2010	2200	2300
Herston	dep:	All trains stop at Herston on request																
Harmans Cross	dep:	1000	1040	1120	1200	1240	1320	1400	1440	1520	1600	1640	1720	1820	1920	2020	2210	2310
Corfe Castle	dep:	1010	1050	1130	1210	1250	1330	1410	1450	1530	1610	1650	1730	1827	1926	2026	2216	2316
Norden Park & Ride	arr:	1013	1053	1133	1213	1253	1333	1413	1453	1533	1613	1653	1733	1830	Terminates at Corfe			
			D		D		D		D		D		D	D	D	D	D	D
Norden Park & Ride	dep:	1030	1110	1150	1230	1310	1350	1430	1510	1550	1630	1710	1745	1835	Starts from Corfe			
Corfe Castle	dep:	1032	1112	1152	1232	1312	1352	1432	1512	1552	1632	1712	1746	1837	1952	2050	2235	2325
Harmans Cross	dep:	1042	1122	1202	1242	1322	1402	1442	1522	1602	1642	1722	1752	1844	1958	2056	2241	2331
Herston	dep:	All trains stop at Herston on request																
Swanage	arr:	1053	1133	1213	1253	1333	1413	1453	1533	1613	1653	1733	1805	1856	2005	2106	2251	2342

SPECIAL EVENTS 2008

Special timetables will apply

16th-24th Feb (Special timetable will apply)	Half Term Fun Week
21st-24th Mar (Special timetable will apply)	Easter Specials
5th-6th April (Special timetable will apply)	Railway at Work Weekend
12th-13th Apr (Special timetable will apply)	Branch Line Weekend
9th-11th May (Special timetable will apply)	Swanage Railway Beer Festival & Diesel Gala
24th Jul-2nd Aug (Yellow timetable with some extra trains will apply)	Swanage Regatta & Carnival
13th-14th Sep (Special timetable will apply)	Grand Steam Gala and Vintage Transport Rally
25th Oct-2nd Nov (Special timetable will apply)	Event to be announced
29th-30th Nov (Special timetable will apply)	1960s Weekend
26th Dec-1st Jan (Special timetable will apply)	Mince Pie Specials

On Special Event days timetables and fares are liable to alteration. Please visit our website for further details.

YELLOW TIMETABLE

All trains run DAILY when yellow timetable is in operation

															D	D	D	D	D
Swanage	dep:		0950	1030	1110	1150	1230	1310	1350	1430	1510	1550	1630	1710	1810	1910	2010	2200	2300
Herston	dep:	All trains stop at Herston on request									All trains stop at Herston on request								
Harmans Cross	dep:		1000	1040	1120	1200	1240	1320	1400	1440	1520	1600	1640	1720	1820	1920	2020	2210	2310
Corfe Castle	dep:	0930	1010	1050	1130	1210	1250	1330	1410	1450	1530	1610	1650	1730	1827	1926	2026	2216	2316
Norden Park & Ride	arr:	0933	1013	1053	1133	1213	1253	1333	1413	1453	1533	1613	1653	1733	1830	1928	2028	Corfe Only	
															D	D	D	D	D
Norden Park & Ride	dep:	0950	1030	1110	1150	1230	1310	1350	1430	1510	1550	1630	1710	1743	1835	1935	2035	from Corfe	
Corfe Castle	dep:	0952	1032	1112	1152	1232	1312	1352	1432	1512	1552	1632	1712	1745	1837	1952	2052	2235	2325
Harmans Cross	dep:	1002	1042	1122	1202	1242	1322	1402	1442	1522	1602	1642	1722	1752	1844	1958	2058	2241	2331
Herston	dep:	All trains stop at Herston on request									All trains stop at Herston on request								
Swanage	arr:	1013	1053	1133	1213	1253	1333	1413	1453	1533	1613	1653	1733	1803	1856	2008	2108	2251	2342

MARKET DAY TRAINS

Swanage	dep: 0900	Norden P & R	dep: 0925
Herston	dep: 0903	Corfe Castle	dep: 0927
Harmans Cross	dep: 0913	Harmans Cross	dep: 0935
Corfe Castle	dep: 0917	Herston	dep: 0942
Norden P & R	arr: 0920	Swanage	arr: 0945

* Operates Tuesdays only from 20th May until 9th September 2008.

ENJOY A PANORAMIC LAND CRUISE

Most services shown with a D in the timetable are operated by Heritage Diesel Rail Car, which offers a panoramic view of the line.

SWANAGE TO NORDEN SAMPLE FARES

Adult Return from	£9.00
Concession Return from	£6.00
Adult Day Rover from	£9.50
Concession Day Rover from	£7.50

Family ticket (2 adults + up to 3 children) from £23.00

Fares to and from other stations are available. Please see posters for details.

Special offers available throughout the year - see our website for details.

Concession applies to children aged 5-15 and adults 60 years and over.

WINTER SERVICES

Saturdays & Sundays 5th Jan - 3rd Feb 2008

Harmans X		1044	1124	1204	1244	1324	1404	1444	1524
Corfe	1011	1050	1130	1210	1250	1330	1410	1450	1530
Norden	1013	1053	1133	1213	1253	1333	1413	1453	1533
Norden	1030	1110	1150	1230	1310	1350	1430	1510	1550
Corfe	1032	1112	1152	1232	1312	1352	1432	1512	1552
Harmans X	1039	1119	1159	1239	1319	1359	1439	1519	

There will be no service to or from Swanage Station during this period.

AVOID THE HASSLE OF PARKING BY TRAVELLING FROM NORDEN PARK & RIDE OFF THE A351

SWANAGE RAILWAY COMPANY LIMITED Station House, Swanage, Dorset, BH19 1HB
Tel: 01929 425800 Fax: 01929 426680 Email: info@swanage-railway.co.uk
Registered in England and Wales No. 1412568
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Appendix II

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Email tutu.aluko@defra.gsi.gov.uk

defra
Department for Environment Food and Rural Affairs

Mr R. Conway
Principal Environmental Health Officer
Purbeck District Council
Westport House
Worgret Road
Wareham
Dorset. BH20 4PP

09 April 2008

Dear Mr Conway

LOCAL AIR QUALITY MANAGEMENT: 2007 AIR QUALITY PROGRESS REPORT

Thank you for keeping Defra informed of progress regarding this matter. As concerns about sulphur dioxide concentrations around the Swanage station have been ongoing for some time now, monitoring should be established in this area as soon as possible. A Detailed Assessment is required without delay once 6 months monitoring data has been collected.

Purbeck District Council should submit a Progress Report by April 2008, and a Detailed Assessment will be expected once 6 months monitoring near Swanage station has been completed. It is stressed that this Detailed Assessment should be submitted as soon as possible, preferably within the next 12 months.
An Updating and Screening Assessment should be submitted by April 2009 irrespective of any other Review and Assessment reporting carried out.

Yours sincerely

Tutu Aluko
AIR, ENVIRONMENT QUALITY DIVISION

Appendix III

UV SO2 Analyzer Calibration & Data Capture

Swanage SO2: Calibration Data

Cal Date	Zero	Span	Cylinder gas conc	Factor	Cylinder ID	Expiry date	Data period start	Data period end	Data points	Increment
01/08/2008	-0.1	471.2	470	0.997242	109470	06/02/2009				
15/08/2008	1.3	472.3	470	0.997877	109470	06/02/2009	14	368	354	0.0000017943
28/08/2008	3.30	450.7	470	1.050514	109470	06/02/2009	374	1621	1247	0.0000422111
16/09/2008	3.30	430.4	470	1.100445	109470	06/02/2009	1626	3438	1812	0.0000275556
22/10/2008	0.00	450.4	470	1.043517	109470	06/02/2009	3443	6893	3450	-0.0000165009
26/11/2008	2.60	449.1	470.0	1.052632	109470	06/02/2009	6543	9902	3359	0.0000027135
17/12/2008	2.60	406.8	430.0	1.063830	194906	10/06/2011	9907	11918	2011	0.0000055685
27/01/2009	2.60	412.8	430.0	1.048269	194906	10/06/2011	11922	15865	3943	-0.0000039464
18/02/2009	3.30	399.3	430.0	1.085859	194906	10/06/2011	15869	17982	2113	0.0000177896

Data Capture:

	15/8/08 – 22/10/08			22/10/08 – 18/2/09		
	15 Minute SO_2	**Hourly SO_2**	**24hr SO_2**	**15 Minute SO_2**	**Hourly SO_2**	**24hr SO_2**
	ug/m3	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**	**ug/m3**
min	0.5	0.6	3.0	0.23	1.4	2.6
avg	5.6	5.7	5.7	5.00	5.0	5.0
std	8.2	7.3	3.0	3.89	3.6	1.9
med	4.1	4.1	4.6	4.63	4.6	4.6
max	246.7	118.2	16.7	175.05	126.1	17.2
Count (No of periods)	6512	1629	67	11406	2856	120
Capture (%)	99.9	99.9	100.0	99.71	99.9	100.0
Exceedances	0	0	0	0	0	0

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