

Simulated Passenger Journeys

Explanatory

The purpose of this monitoring is to simulate typical passenger journeys across the network and measure the respirable dust exposures during those journeys.

Respirable Dust has a very small particle size and can get deep into the lungs where the exchange of gases takes place. Workplace exposures to respirable dust are covered under Health and Safety legislation. The exposure limits are published in the Health and Safety Executives publication EH40/2005. Respirable Dust has an aerodynamic diameter of $4\mu\text{m}$ so is sometimes referred to as PM 4.0.

<http://www.hse.gov.uk/pubns/books/eh40.htm>

EH40/2005 requires that exposures to respirable dust do not exceed the following:

4mg/m³ (8 hours – time weighted average)

Transport for London has an internal target of respirable dust levels not exceeding the Institute of Occupational Medicines recommendations which are:

1mg/m³ (8 hours – time weighted average)

- In the following table average concentrations for each journey are highlighted in bold.
- In the appendices are graphs which show the real time exposure to dust along the route of the simulated passenger journey

Respirable Dust Exposures

Dust Meter Type	TSI Dust Trak 2
Dust meter Serial Number	6532-1732173511
Dust meter Calibration Date	14.09.18
Flow Rate Meter	TSI
Flow rate meter Serial Number	4140 1813 003
Flow rate meter calibration date	27.03.18
Samplers	Nick Wilson (NJW) Andy Lowther (AL) Carmel Micallef (CM)

Sample ¹	Line	Start Location	Stop Location	Date	Start Time	Stop Time	Average Conc (mg/m ³)	Min Conc (mg/m ³)	Max Conc (mg/m ³)	Flow Rate Cal (lpm)	Filter head	Zero Cal before use	Sampler
1	Central	Stratford	White City	03.12.18	12.18	12.54	0.378	0.028	0.660	3.0	PM4	Yes	NJW
2	Central	White City	Stratford	03.12.18	13.10	13.47	0.534	0.017	0.786	3.0	PM4	Yes	NJW
3	Victoria	Seven Sisters	Brixton	04.12.18	11.22	11.48	0.464	0.280	1.00	3.01	PM4	Yes	AL
4	Victoria	Brixton	Seven Sisters	04.12.18	11.51	12.15	0.369	0.067	0.640	3.01	PM4	Yes	AL
5	Jubilee	Stratford	W Hampstead	06.12.18	11.50	12.25	0.230	0.012	0.418	3.00	PM4	Yes	CM
6	Piccadilly	Wood green	Earls Court	06.12.18	14.14	14.49	0.272	0.048	1.01	3.00	PM4	Yes	CM
7	Piccadilly	Earls Court	Wood green	07.12.18	10.40	11.19	0.410	0.213	0.642	3.01	PM4	Yes	CM
8	Waterloo & City	Bank	Waterloo	07.12.18	12.28	12.32	0.425	0.337	0.495	3.01	PM4	Yes	CM
9	Waterloo &	Waterloo	Bank	07.12.18	12.36	12.40	0.324	0.105	0.457	3.00	PM4	Yes	CM

	City												
10	Jubilee	W Hampstead	Stratford	07.12.18	14.42	15.17	0.213	0.015	0.457	3.01	PM4	Yes	AL
11	Northern	Finchley Central	Morden	11.12.18	11.25	12.26	0.331	0.014	0.488	3.01	PM4	Yes	AL
12	Bakerloo	El & Castle	Queens park	13.12.18	12.38	13.04	0.401	0.017	0.672	3.00	PM4	Yes	CM
13	Bakerloo	Queens Park	El & Castle	13.12.18	13.08	13.34	0.337	0.020	0.550	3.00	PM4	Yes	CM
14	Metropolitan	Finchley Road	Aldgate	18.12.18	08.10	08.37	0.051	0.019	0.223	3.01	PM4	Yes	CM
15	Metropolitan	Aldgate	Finchley Road	18.12.18	08.42	09.04	0.055	0.013	0.131	3.01	PM4	Yes	CM
16	Northern	Finchley Central	Morden	18.12.18	09.50	10.47	0.305	0.012	0.498	3.01	PM4	Yes	CM
17	Northern	Morden	Burnt Oak	18.12.18	11.57	12.57	0.294	0.012	0.589	3.01	PM4	Yes	CM
18	Northern	Burnt Oak	Morden	18.12.18	13.08	14.14	0.303	0.008	0.772	3.01	PM4	Yes	CM
19	H & City	Paddington	West Ham	20.12.18	09.41	10.19	0.378	0.031	0.660	3.00	PM4	Yes	CM
20	District	West Ham	Earls Court	20.12.18	10.26	11.05	0.077	0.016	0.118	3.00	PM4	Yes	CM
21	District	Earls Court	West Ham	20.12.18	11.36	12.14	0.059	0.007	0.140	3.01	PM4	Yes	CM
22	H & City	West Ham	Earls Court	20.12.18	12.20	12.57	0.069	0.012	0.228	3.01	PM4	Yes	CM
23	Circle	Edgeware Rd	Hammersmith	20.12.18	12.58	13.12	0.020	0.008	0.036	3.01	PM4	Yes	CM
24	Circle	Hammersmith	Edgeware Road	20.12.18	13.28	13.42	0.028	0.011	0.082	3.00			CM

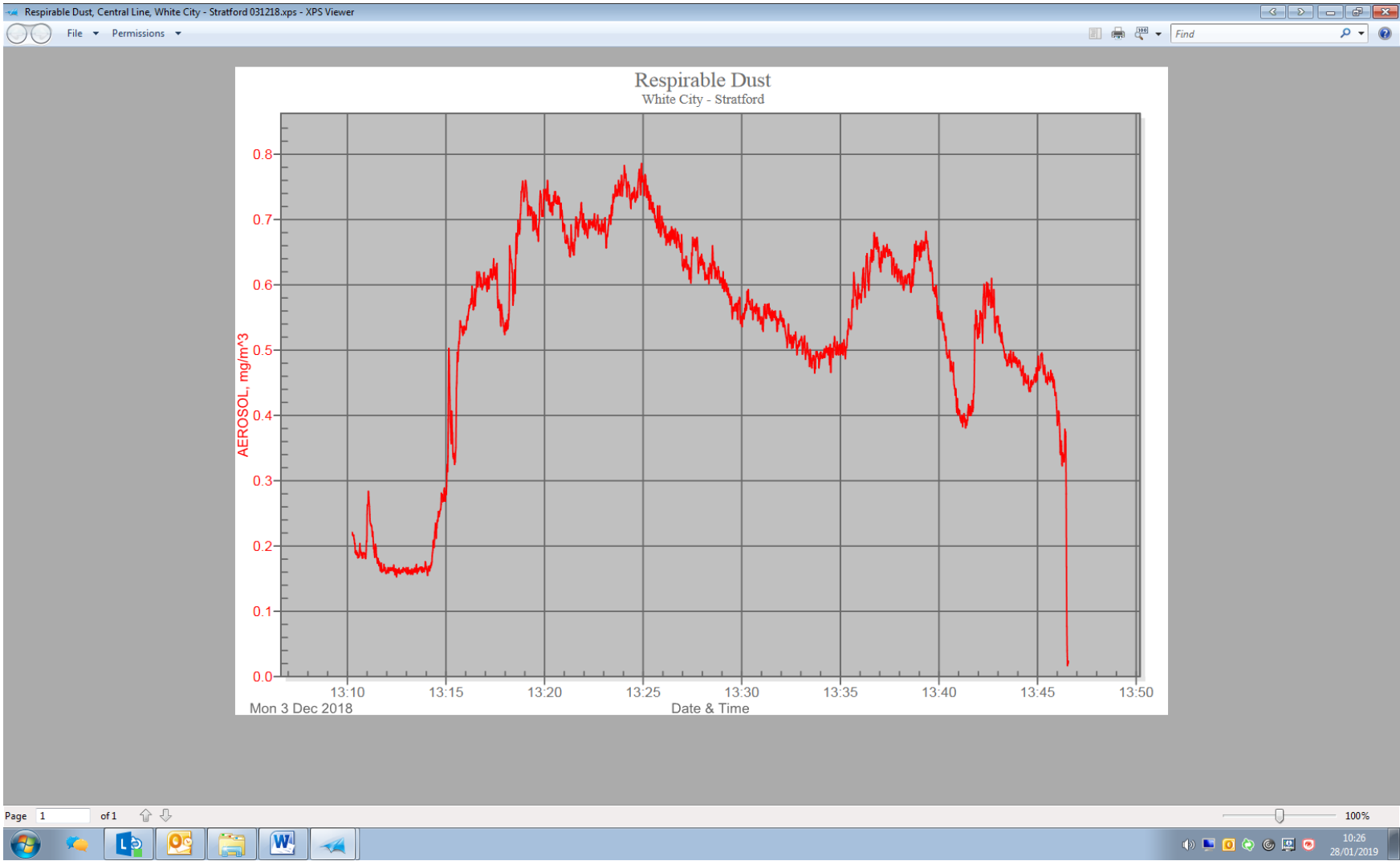
¹ Sample Number correlates to appendices below:

Appendices

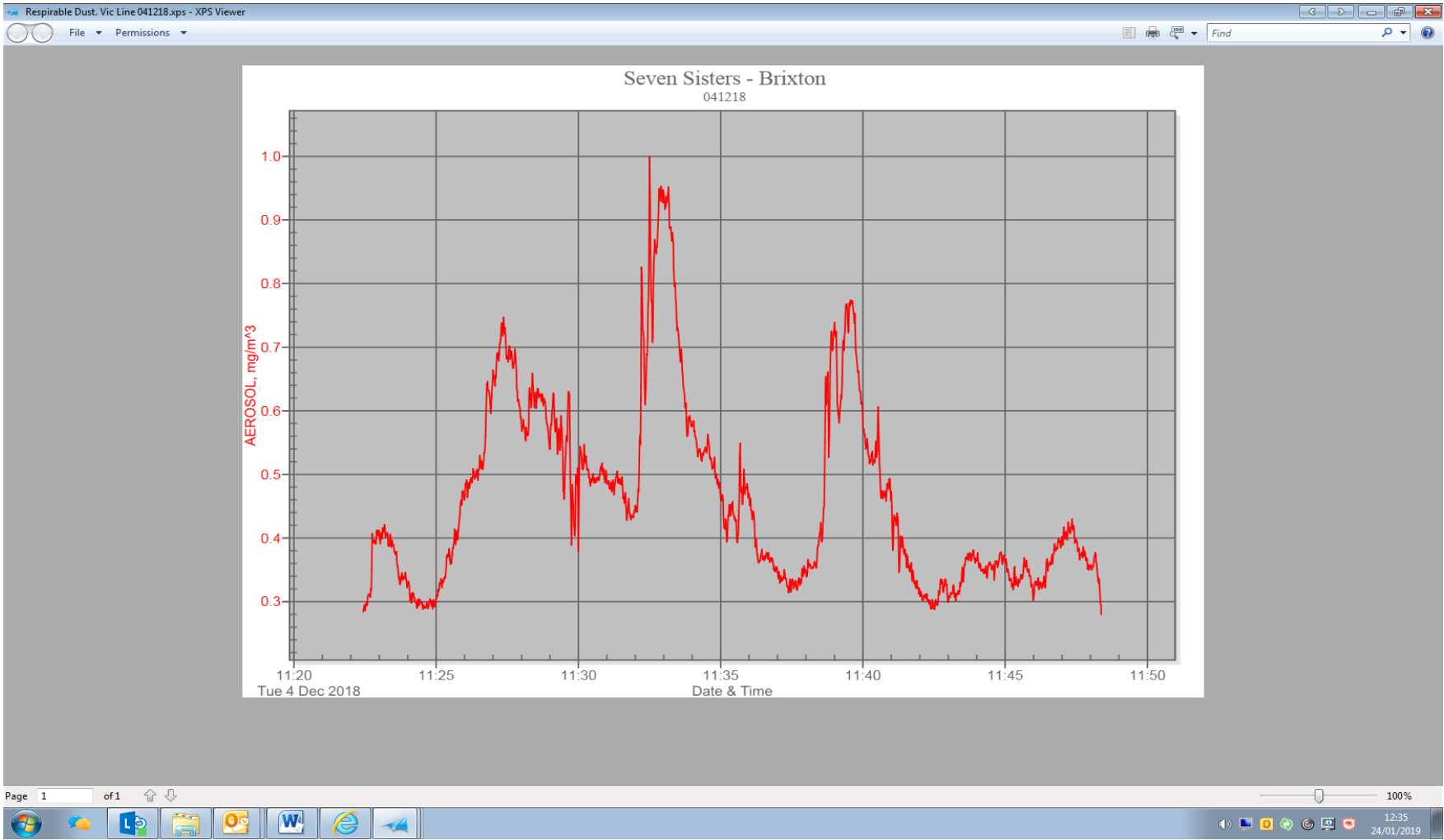
Appendix1:



Appendix 2:



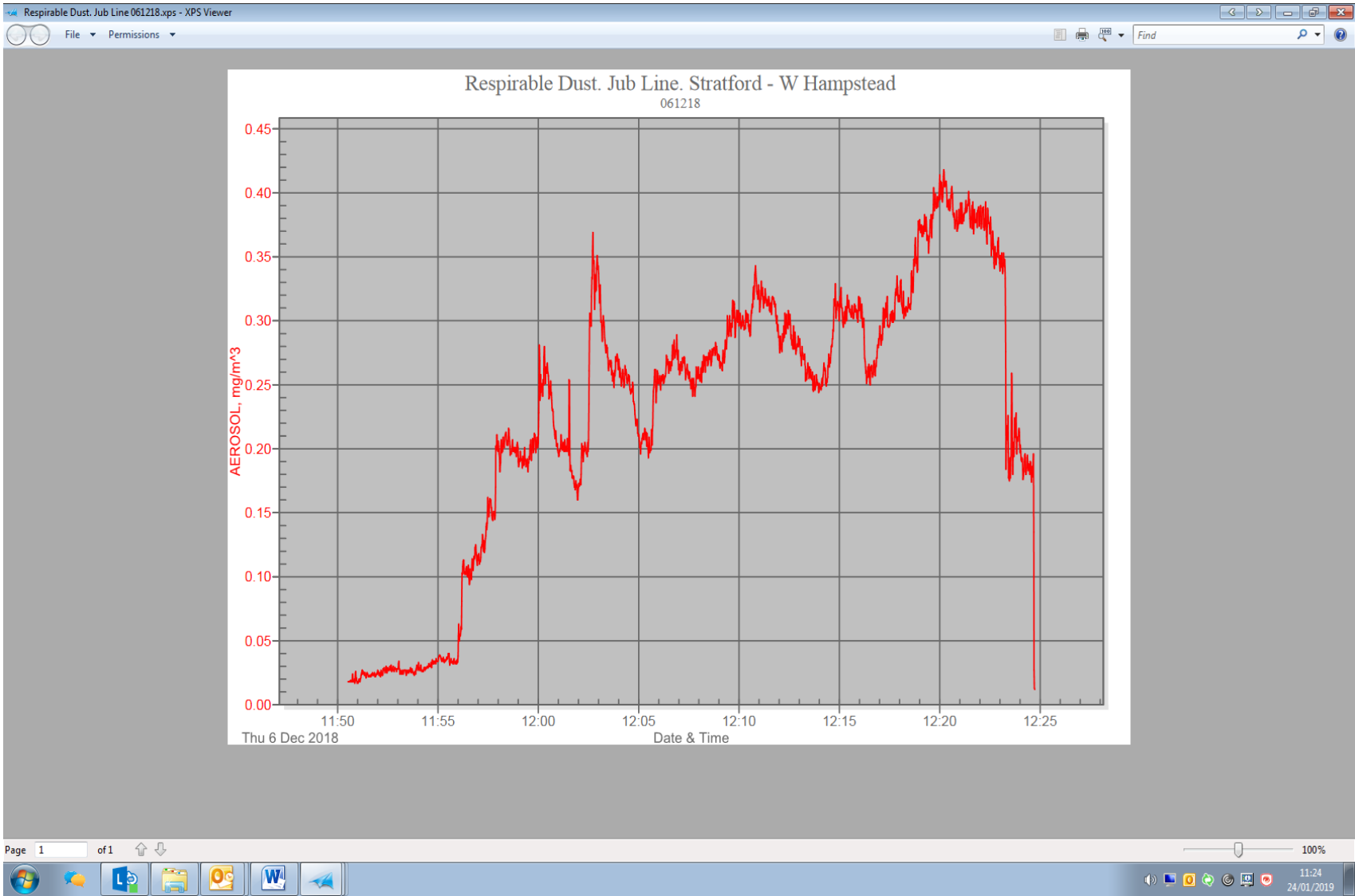
Appendix3: Victoria Line: Seven Sisters - Brixton



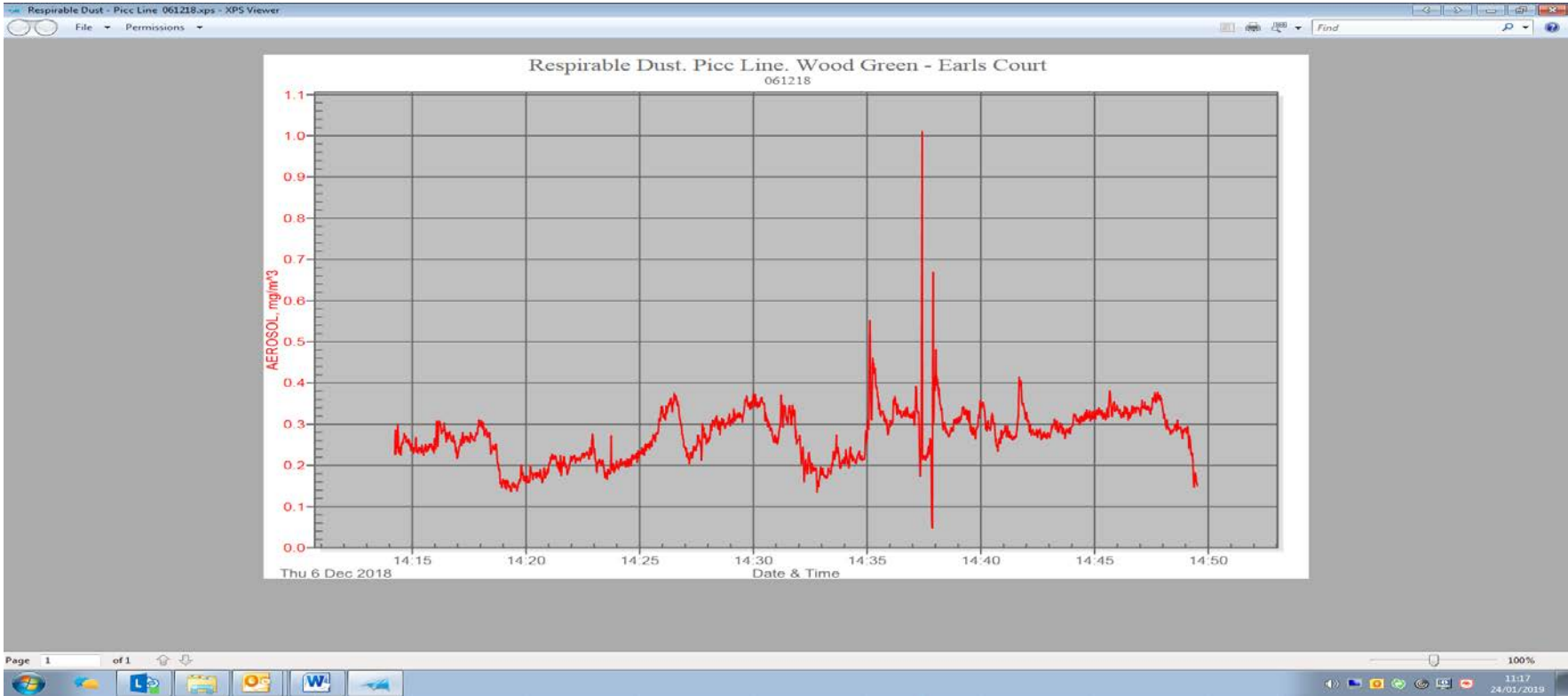
Appendix 4: Victoria Line. Brixton – Seven Sisters



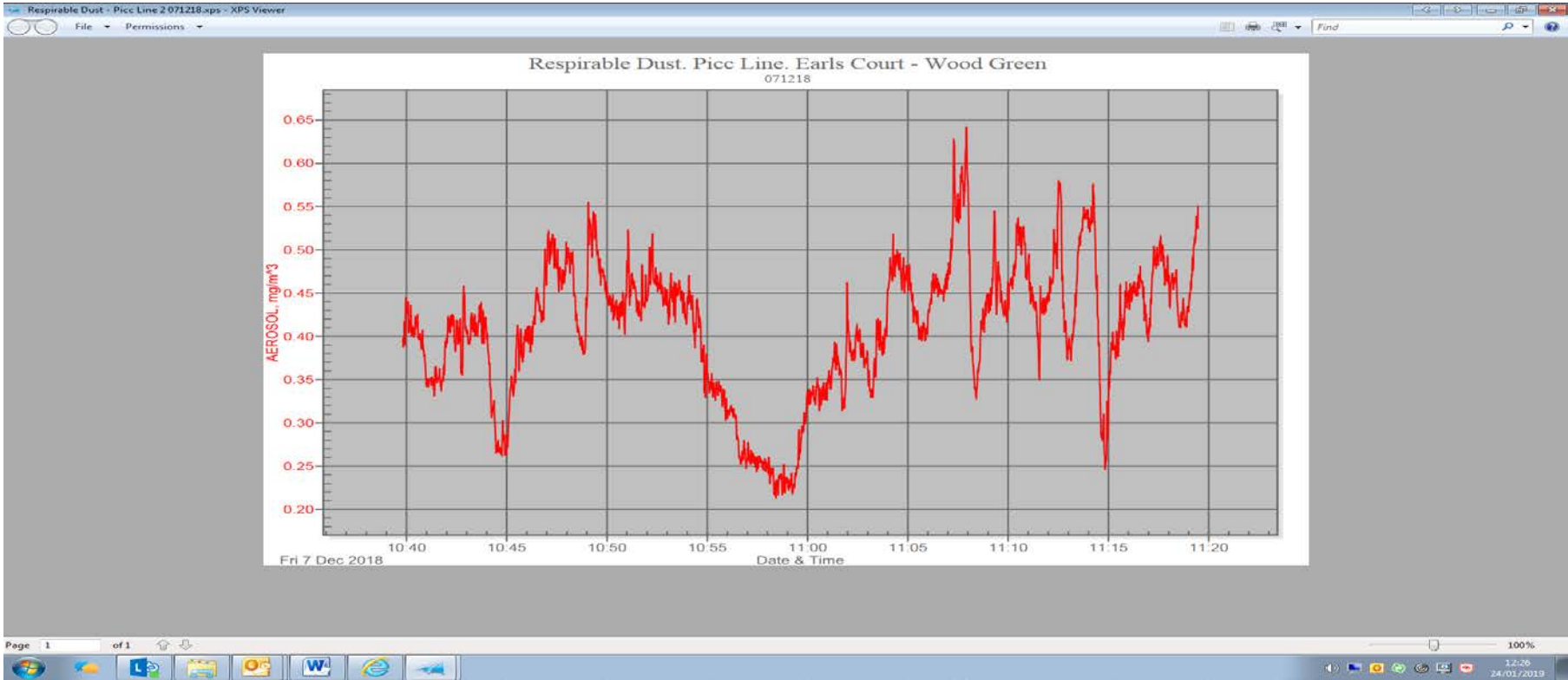
Appendix 5:



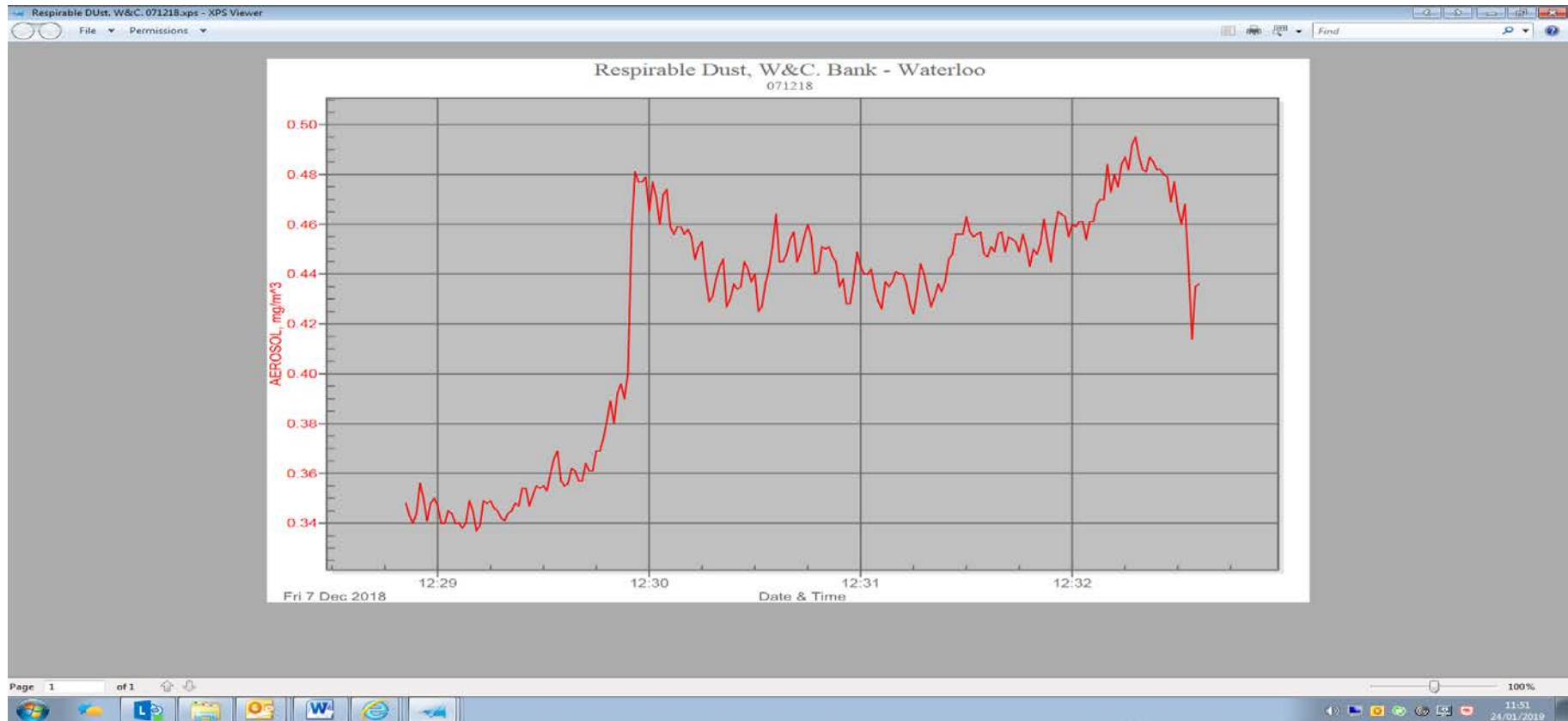
Appendix 6: Piccadilly Line, Wood Green – Earls Court



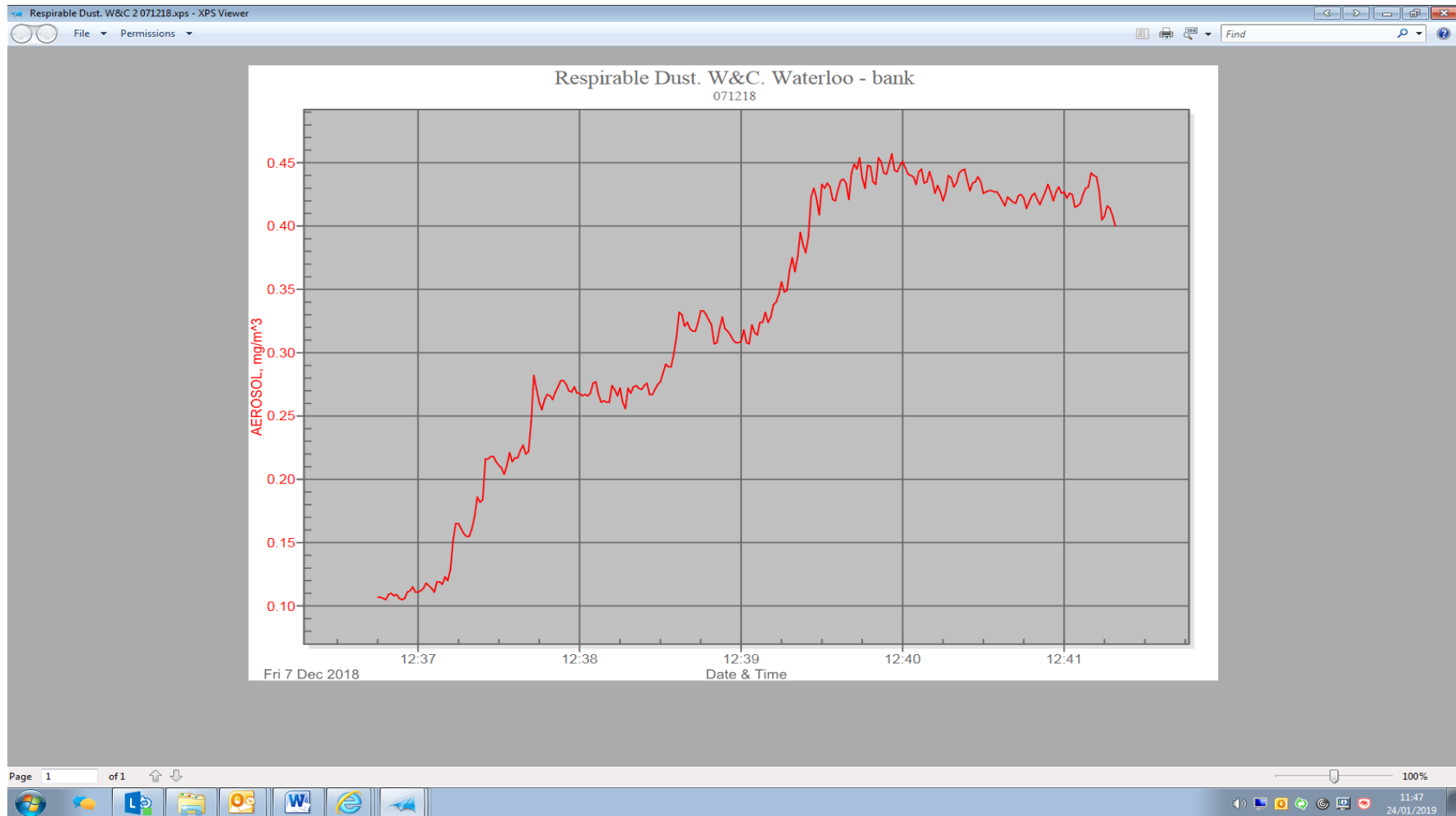
Appendix 7: Piccadilly Line, Earls Court – Wood Green



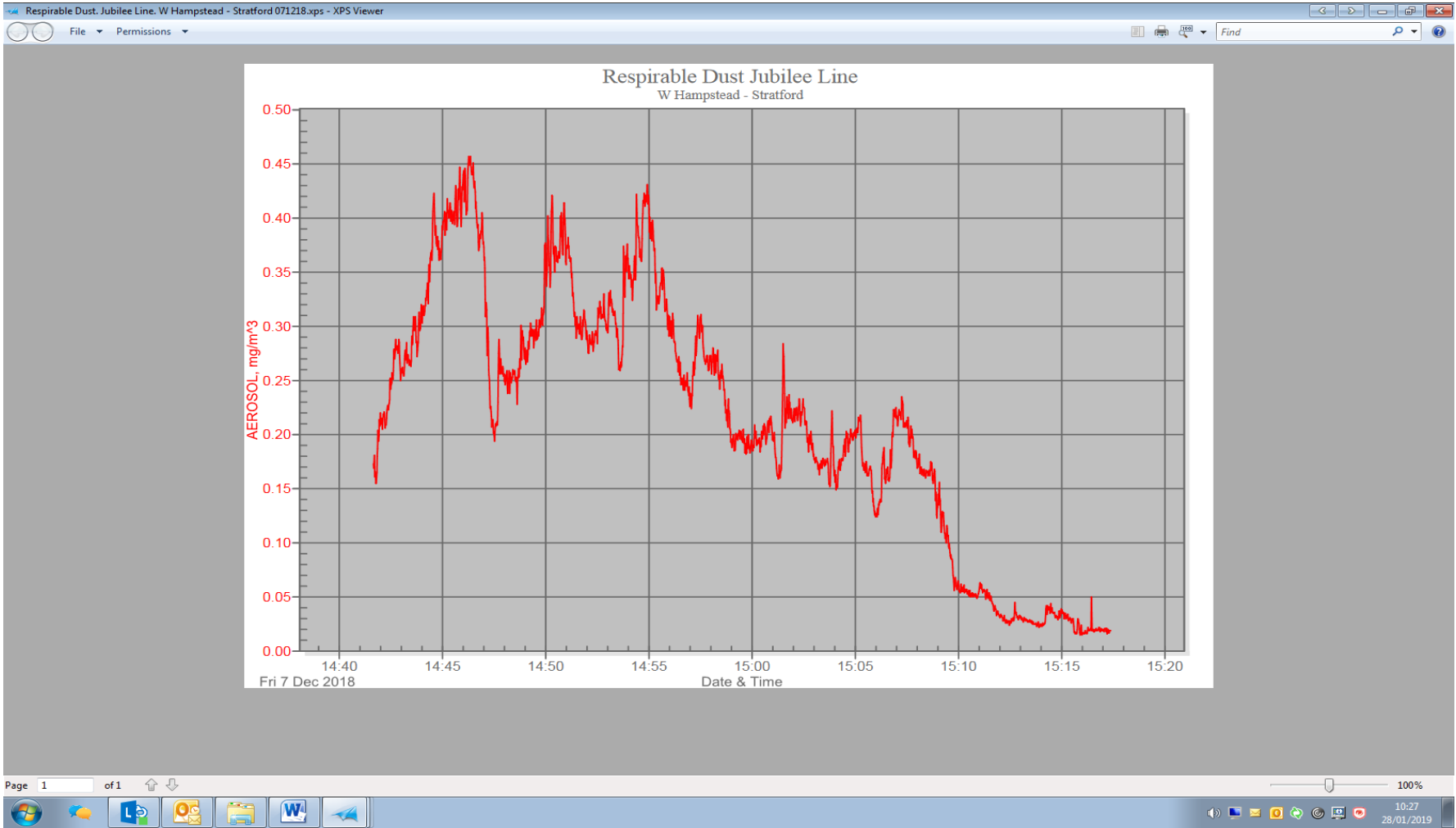
Appendix 8: Waterloo & City Line. Bank – Waterloo



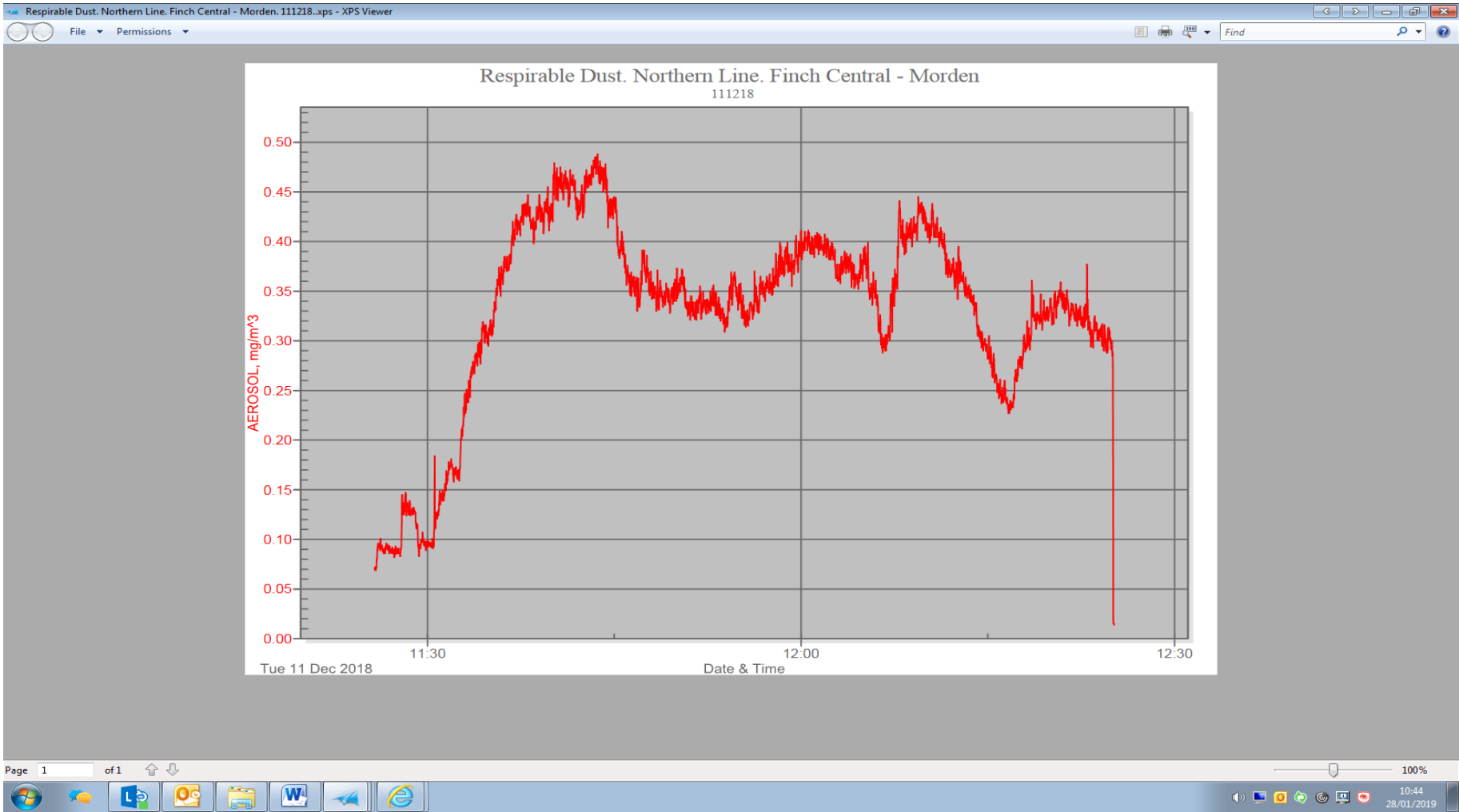
Appendix 9: Waterloo & City Line. Waterloo – Bank



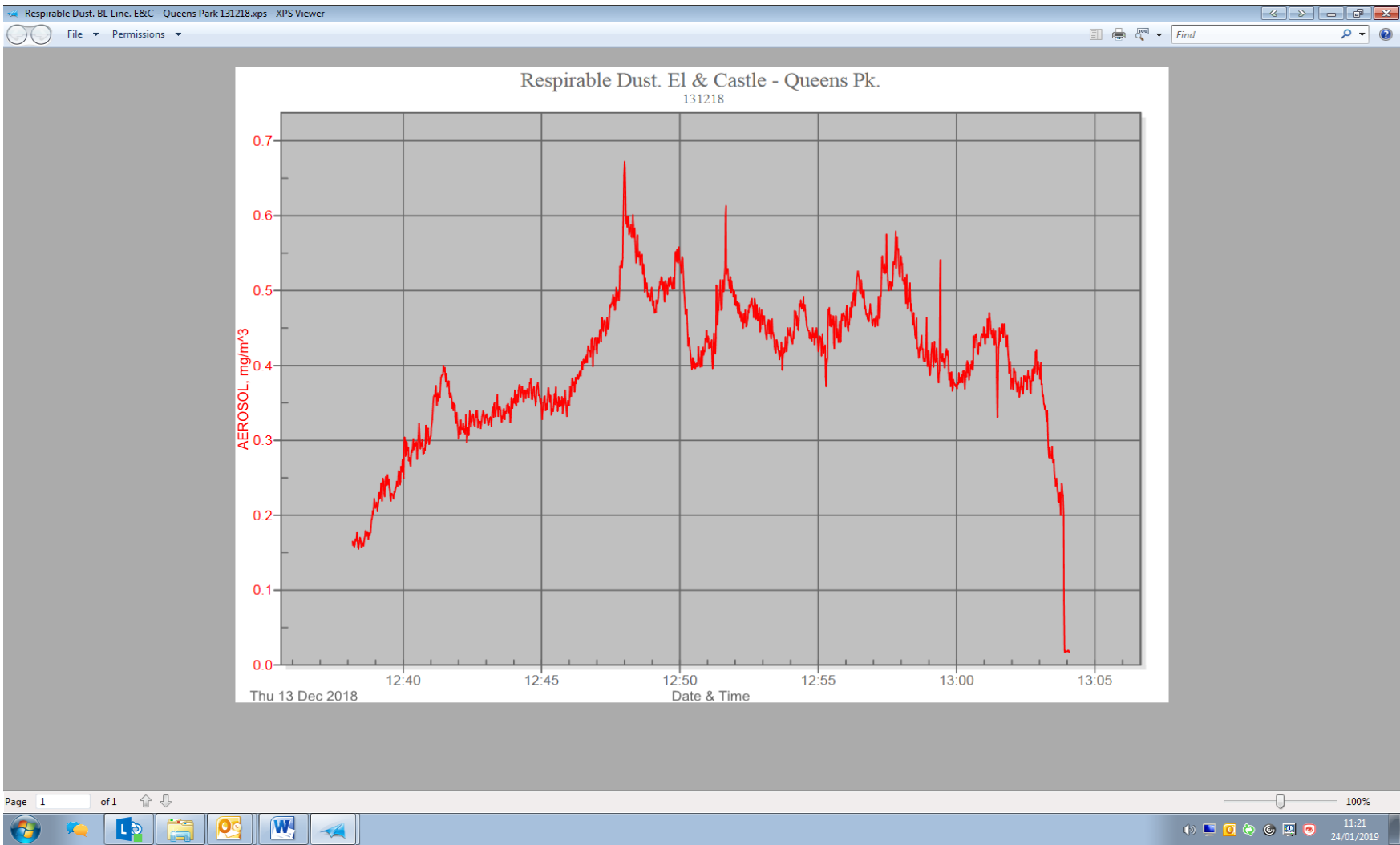
Appendix 10:



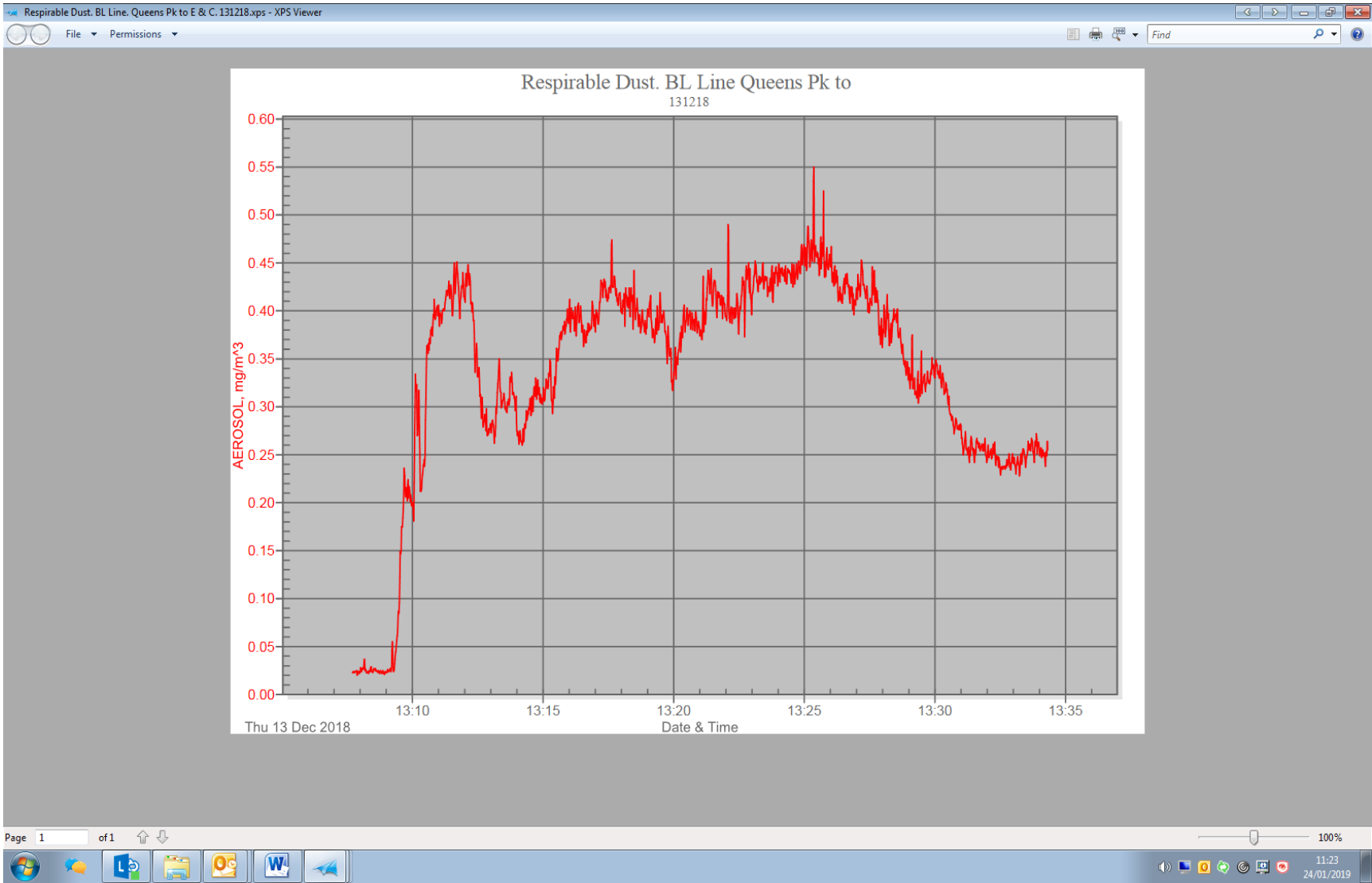
Appendix 11: Northern Line, Finchley Central - Morden



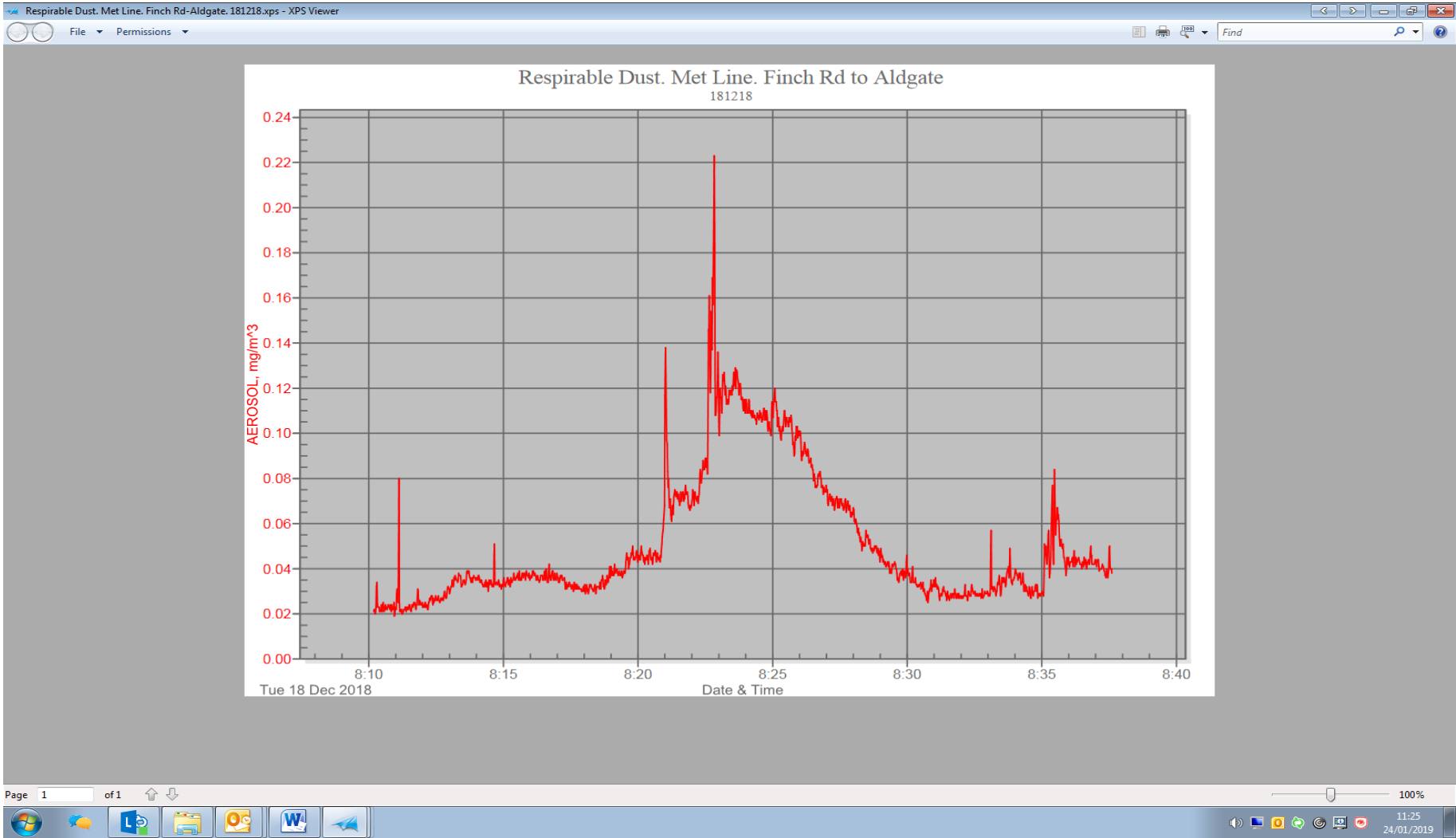
Appendix 12: Bakerloo Line, Elephant & Caste – Queens Park



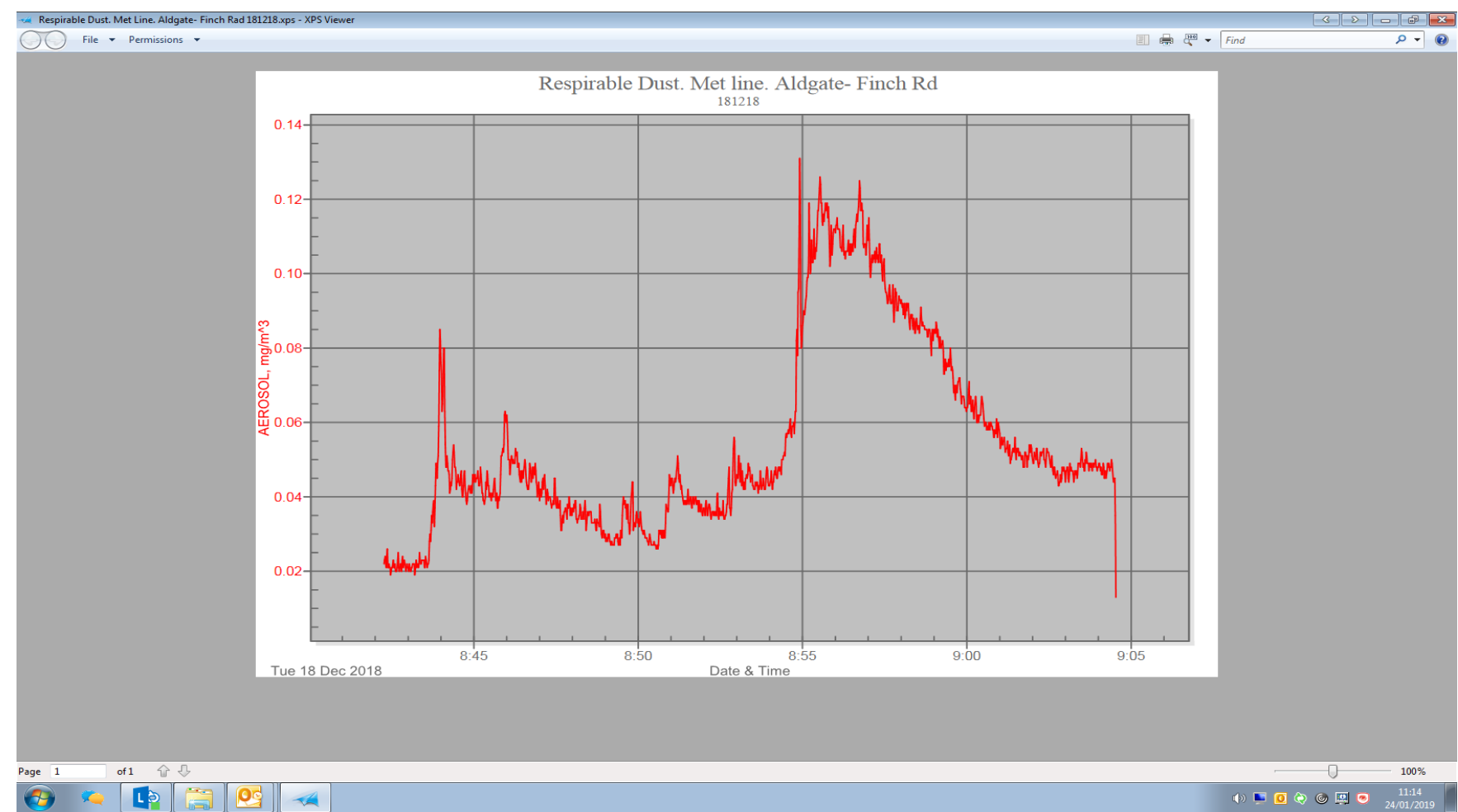
Appendix 13: Bakerloo Line, Queens Park – Elephant & Castle



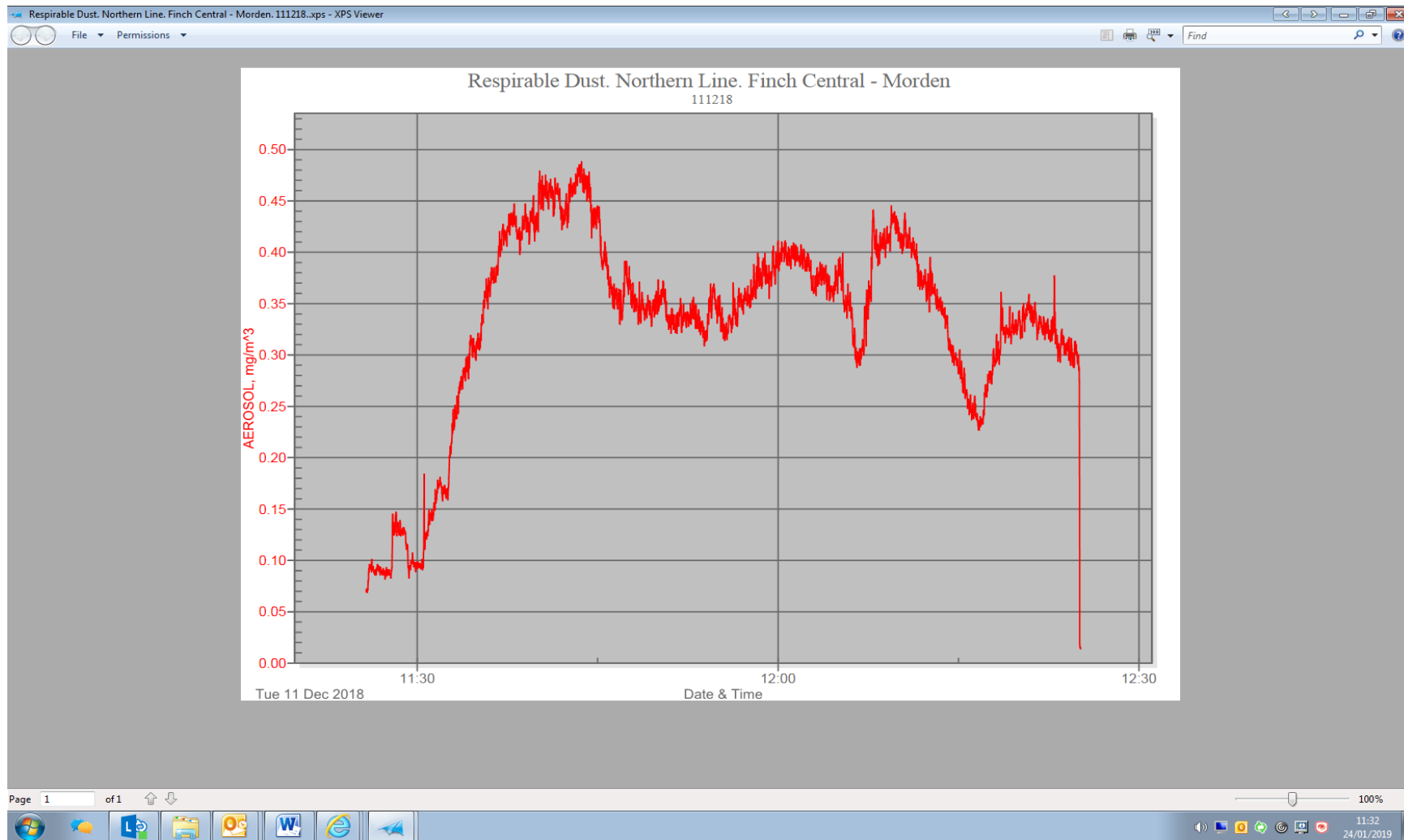
Appendix 14: Metropolitan Line: Finchley Road – Aldgate 18.12.18



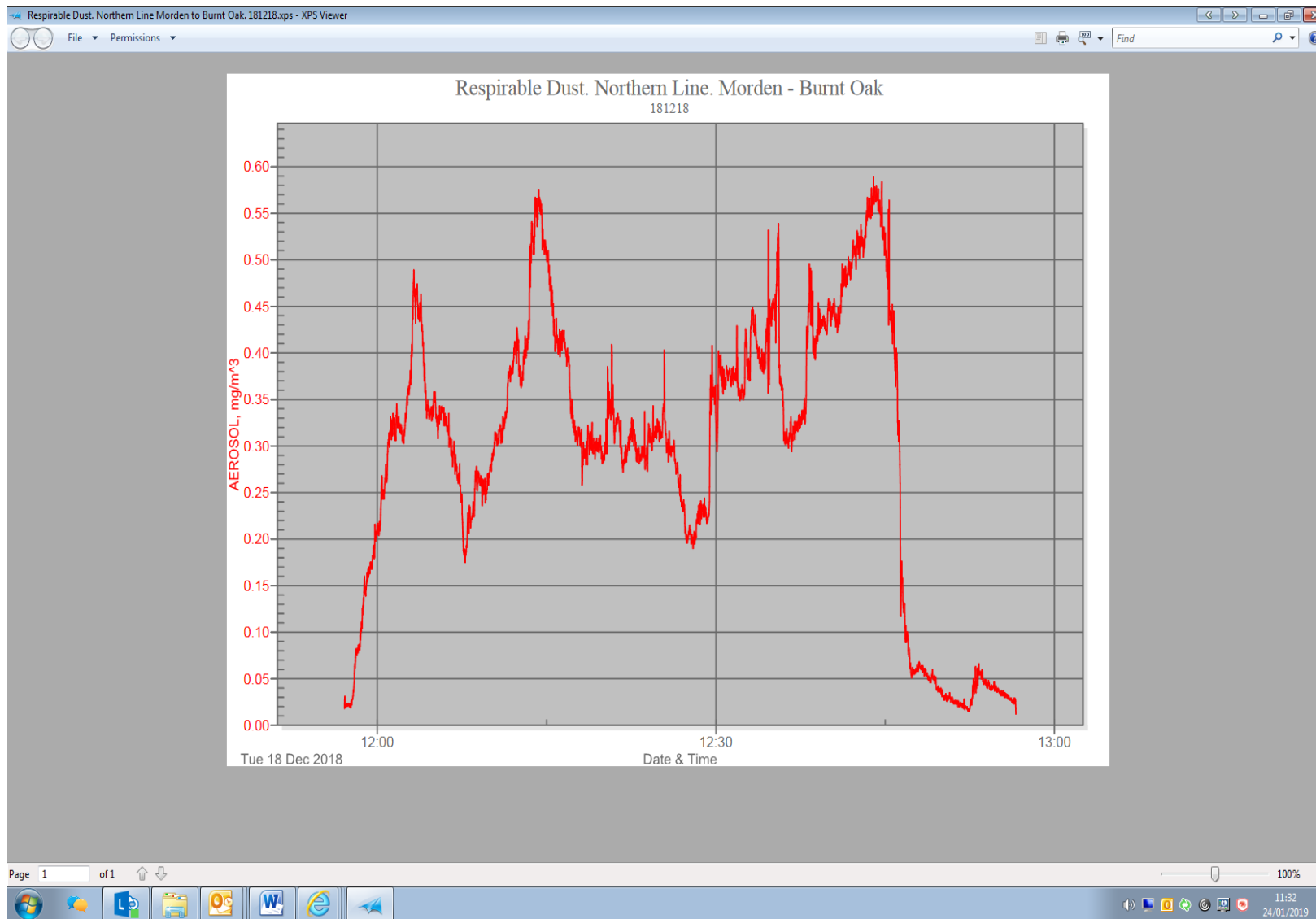
Appendix 15: Metropolitan Line – Aldgate – Finchley Road. 18.12.18



Appendix 16: Northern Line, Finchley Central – Morden



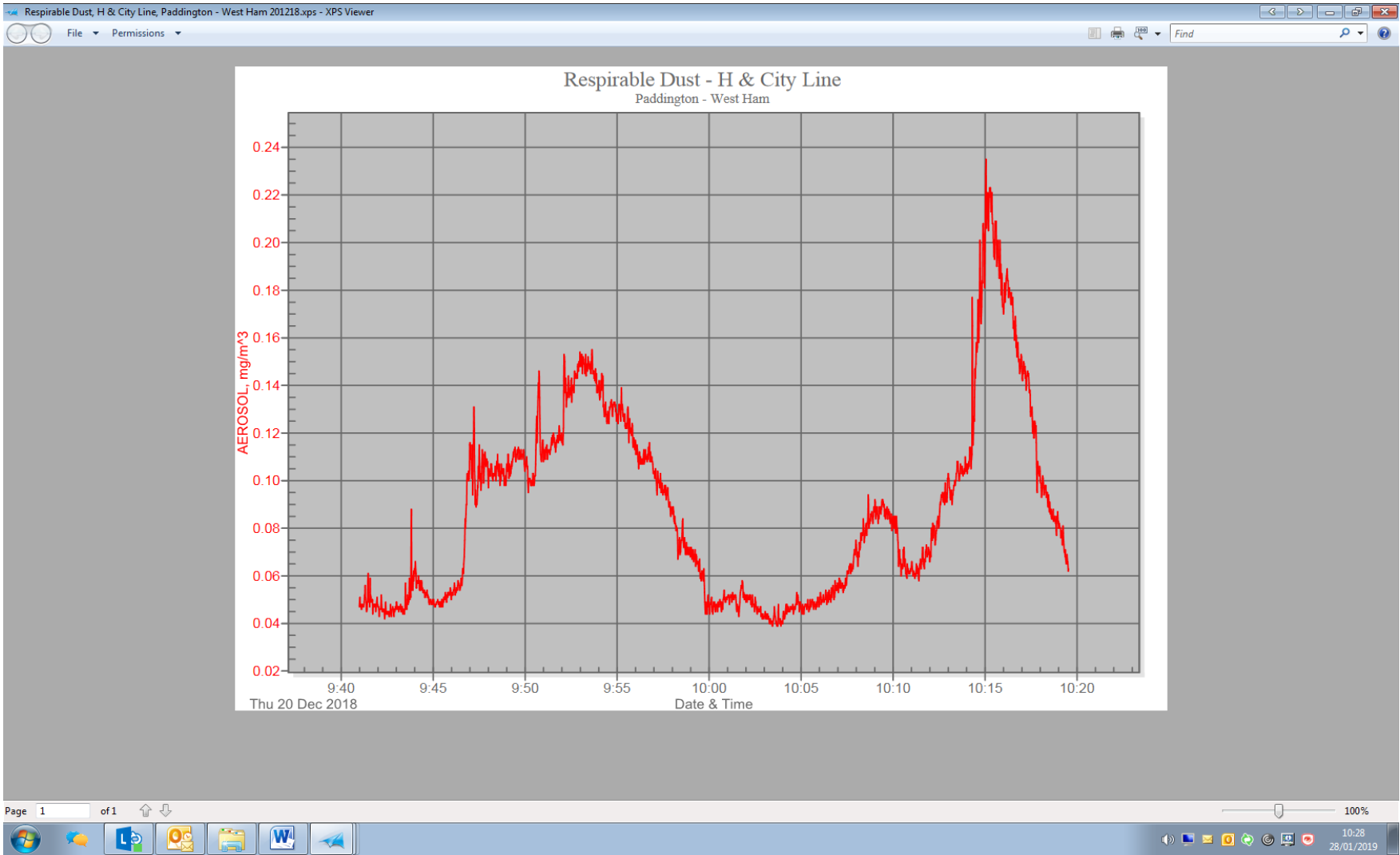
Appendix 17: Northern Line, Morden – Burnt Oak



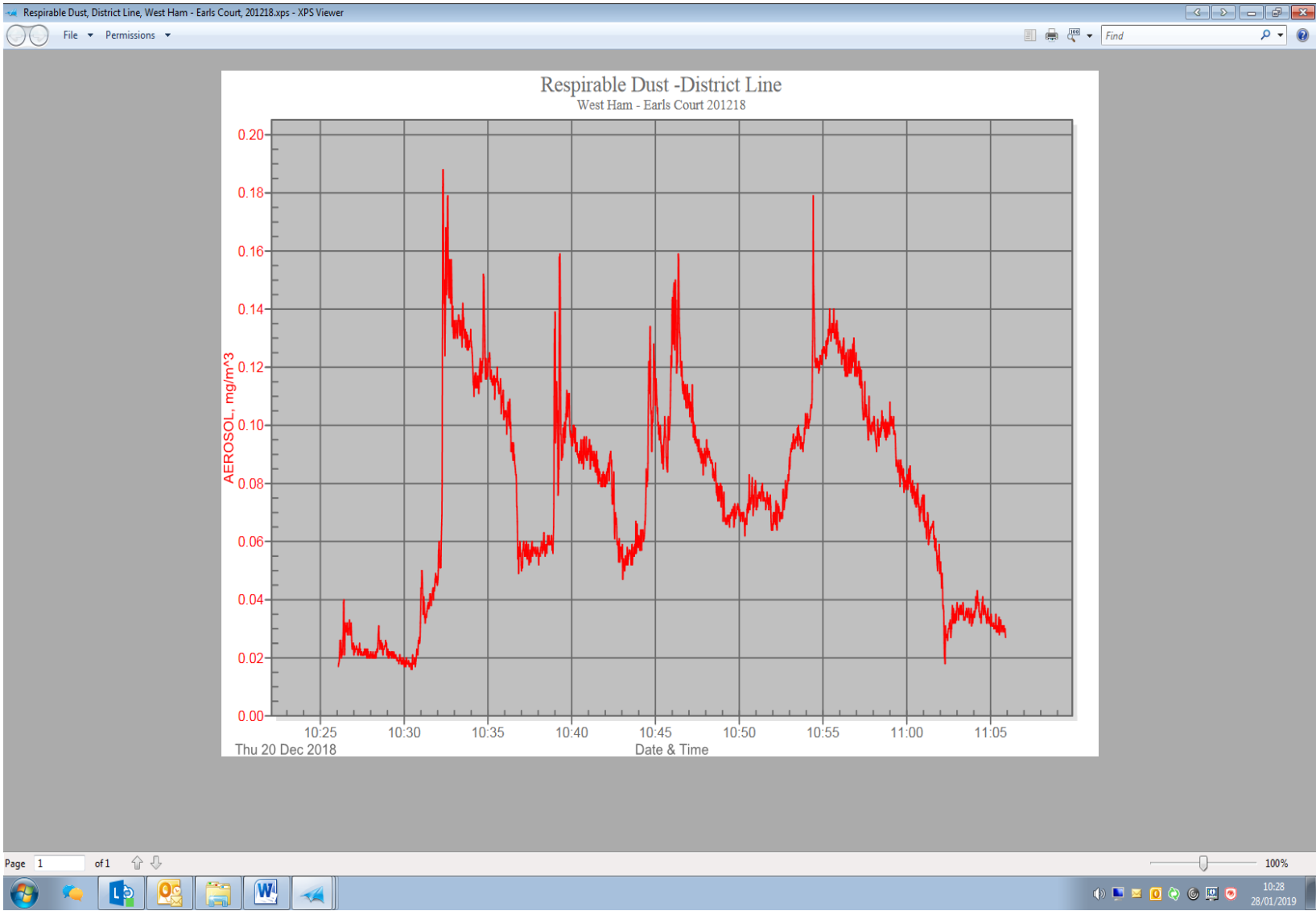
Appendix 18: Northern Line. Morden – Burnt Oak

Graph Not Available.

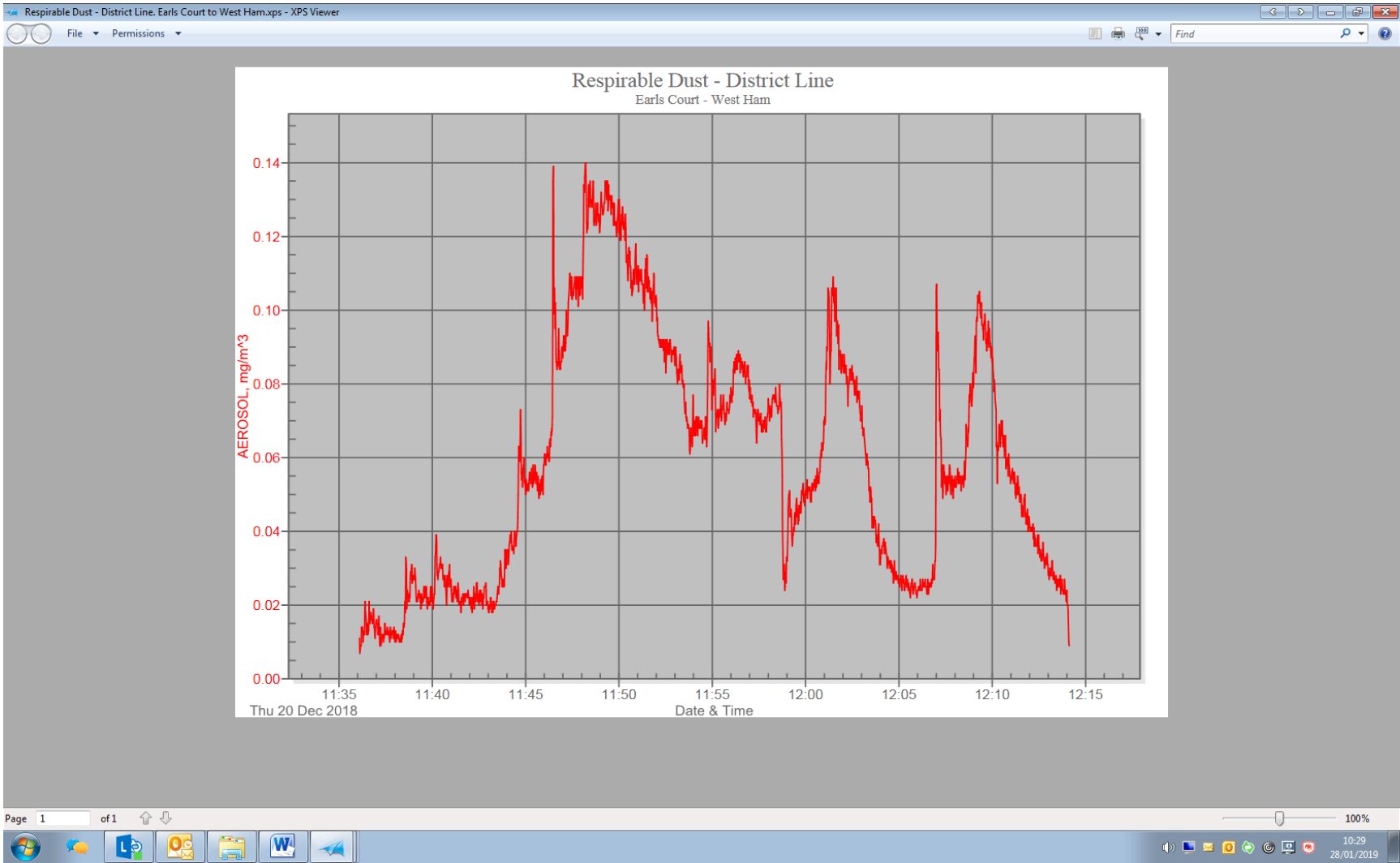
Appendix 19:



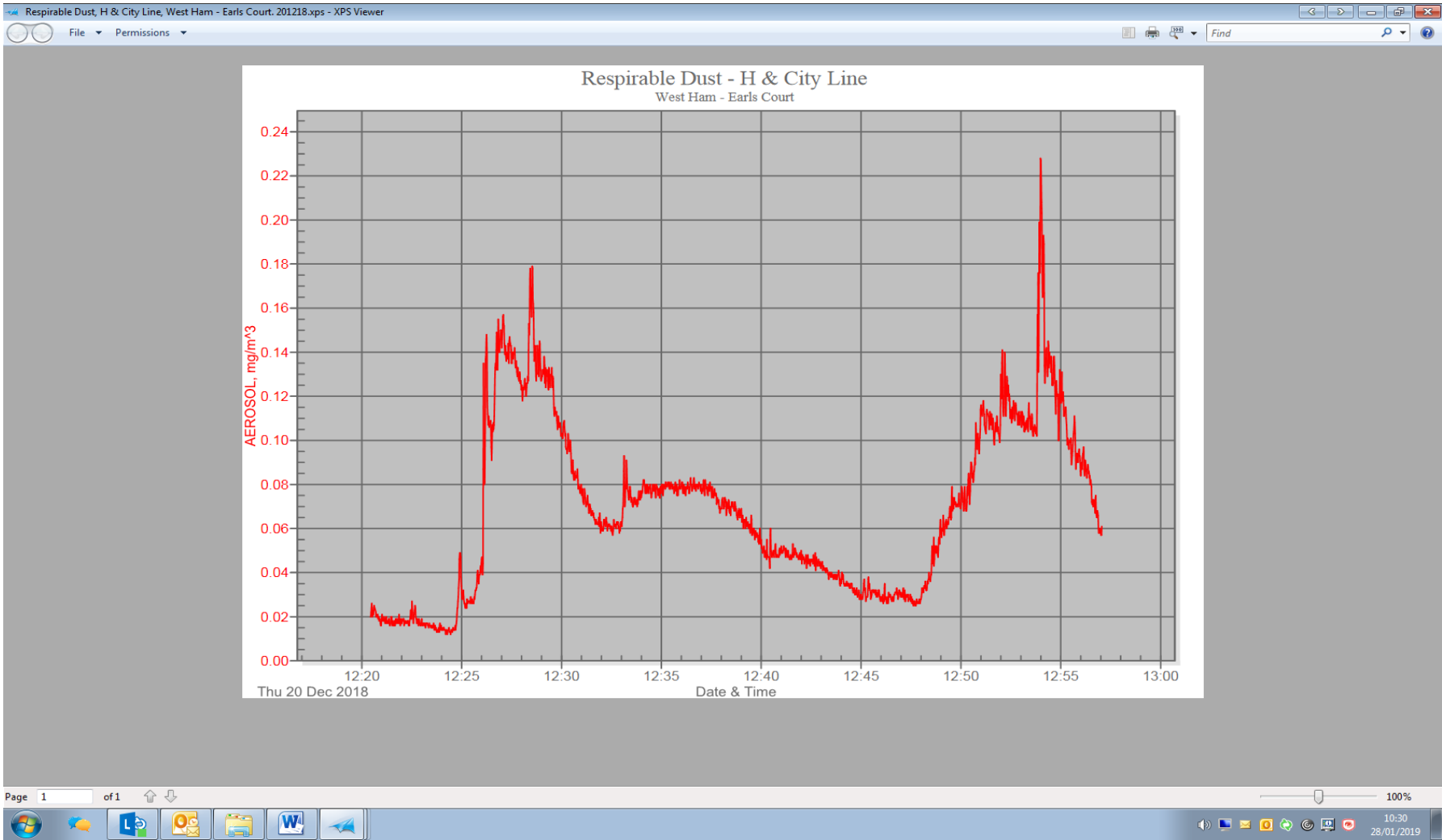
Appendix 20:



Appendix 21:



Appendix 22:



Appendix 23:

