
High Speed Rail
(London-West Midlands)

Dust! «^a ¥«® £&¡ ¬«®

National Temperance Hospital

October' 6 May 2017





Department for Transport

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Dust Monitoring Reports National Temperance Hospital October 2016 - May 2017

Omissions and Clarifications

Table of Omissions and Clarifications

Section / page number of PDF document	Issue	Comment
All months	Clarification of trigger level and action level applied to the National Temperance Hospital demolition works.	The contractor presents data against a trigger level of $150\mu\text{g}/\text{m}^3$ as a 15 minute mean and an action level of $250\mu\text{g}/\text{m}^3$ as a 15 minute mean. The trigger level of $150\mu\text{g}/\text{m}^3$ is used as a warning level, but action is only taken when the action level of $250\mu\text{g}/\text{m}^3$ is exceeded. Future HS2 dust monitoring reports will only present data against the $250\mu\text{g}/\text{m}^3$ as a 15 minute mean level.
Graphs of data for all months	The lines indicating the trigger and action level is only applied to working hours.	Although the trigger and action level is shown for working hours it was actually applicable for all hours in all months.
Photos of RP ₄ for all months between 31 October 2016 until 30 April 2017	For the monthly reports between 31 st October 2016 and 30 th April 2017 the caption above the photos of RP ₄ states these are photos of RP ₂ .	The caption should read "Photograph of dust monitor @ RP ₂ "
Page 25, 26, Report for 10 October to 30 October 2016	The lines indicating the trigger and action level have not been	Although the trigger and action level is shown for working hours

Section / page number of PDF document	Issue	Comment
Page 50, Report for 31 October to 27 November 2016	correctly aligned to the working hours.	it was actually applicable for all hours in all months.
All months between 31 October 2016 until 30 April 2017	For the monthly reports between 31 st October 2016 and 30 th April 2017 the caption above the photos of RP4 states these are photos of RP2.	The caption should read "Photograph of dust monitor @ RP2".
Page 41, Report for 31 October 2016 to 27 November 2016	The map of RP2 and RP3 monitoring locations is repeated	Ignore the repetition.
Page 52, Report for 31 October 2016 to 27 November 2016 Page 96, Report for 30 January to 26 February 2017 Page 111, Report for 27 February to 26 March 2017	Clarification needed where smoking identified as the cause of trigger/action exceedance.	Where smoking was identified as the cause of trigger/action exceedance this smoking was associated with the adjacent Thistle Hotel, not the staff working on the National Temperance Hospital site.
Page 96, Report for 30 January to 26 February 2017	The text refers to elevated PM10 concentrations between 9 and 14 th January, but the report is for the period 30 th January to 26 th February 2017	The text should read "From 9 February to 14 February PM10 concentrations at all positions were elevated..."
Page 108-110, Report for 27 February to 26 March 2017	In the line charts PRP2 is shown as recording zero for the period between 7 th March and 26 th March, but no comment included in the report text.	An outage occurred in the RP1 equipment and data is not available for the 7 th March and 26 th March period.
Page 127, Report for 27 March to 30 April 2017	Text states that no monitoring data was collected for RP1 due to equipment outage, but there is data shown on the graph for some short periods.	Some data is available for RP1 for short periods in the in the 27 th March to 30 th April 2017 period.
Page 130, Report for 1 May to 31 May 2017	RP2 is shown at the incorrect position.	The position of RP2 was not changed during the October to May monitoring period. Refer to previous months for the correct position.
Page 127, Report for 27 March to 30 April 2017	The RP1 was decommissioned in April 2017, not relocated as stated in the text.	The RP1 was decommissioned in April 2017.

Unattended Dust (PM10) Baseline Monitoring Report

Monitoring Period: 10 October 2016 to 30 October 2016

Project No. EEMC/065/2016
Report No EEMC-DMR-065/001-NTH, HS2
Client: Keltbray Limited
Title: EEMC/065/001 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1
Report No.01
Period: 10 October 2016 – 30 October 2016

Details of Dust (PM10) and Weather Monitor at Receptor Point (RP)

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016

Map of monitoring location



Photograph of dust monitor @ RP1



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, located in London Borough of Camden (LBC). This report presents the baseline data prior to work commencing. Dust (PM10) monitoring equipment has been installed; the measured levels will be compared against set criteria for the project.

This report details the results for concentrations of PM10 particulates measured and recorded in the period 10 October 2016 to 30 October 2016 at position RP1. This report on unattended Dust (PM10) measured data is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd will carry out site operations in compliance with the clients DMP and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.
Dust Monitoring Procedure

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units and two Osiris Dust (PM10) units, housed in weather-proof environmental enclosures have been installed around the site. The unit at RP1 is a MetOne system. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute periods.

3.0 Methodology

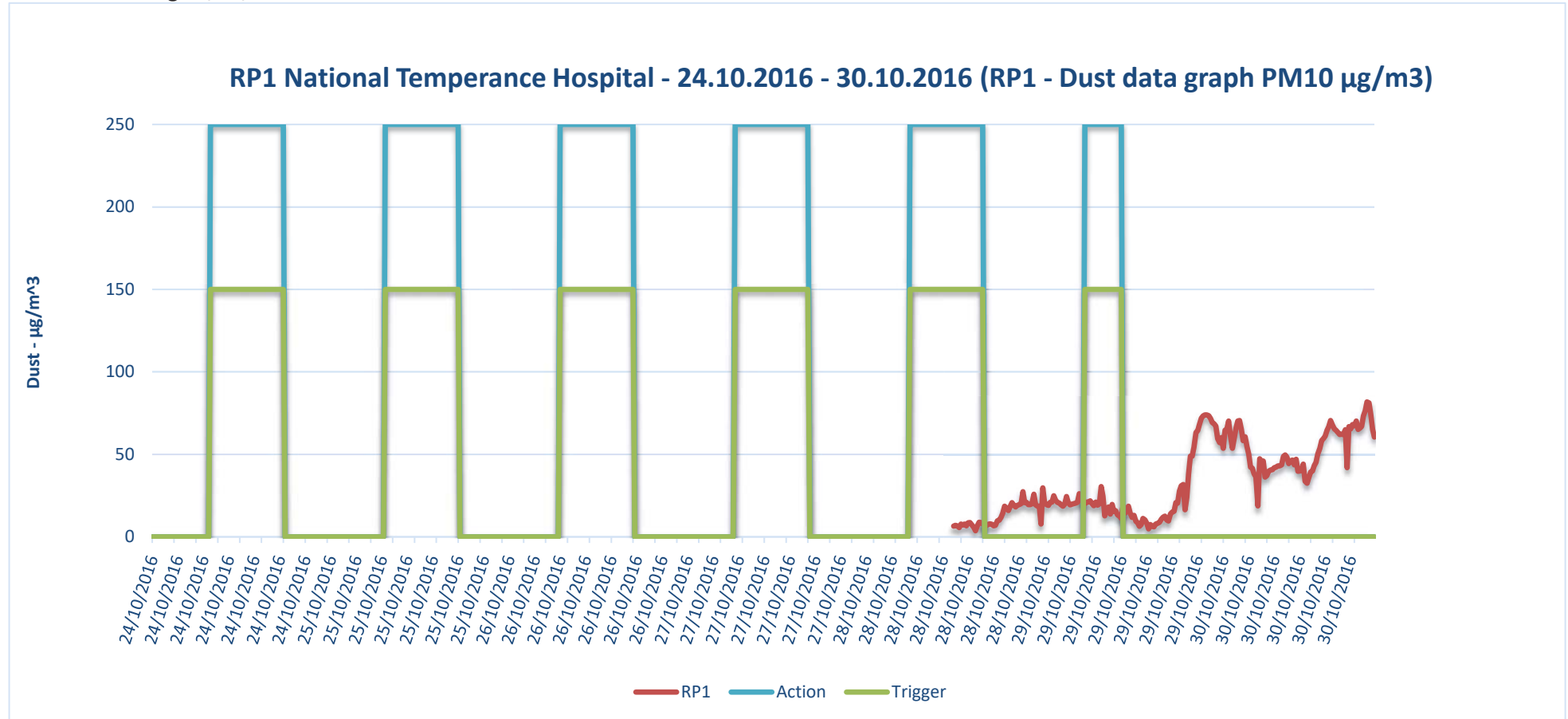
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations near the works. Keltbray agreed these locations with officers from LBC. The monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

4.0 Dust (PM10) Monitoring Graphs
RP1 Week ending 30/10/2016



5.0 Discussion

Unattended baseline Dust (PM10) monitoring has been undertaken at position RP1 at the National Temperance Hospital project where structural demolition works are yet to commence. The monitor at RP1 was installed late into this baseline monitoring period on the 28 October 2016 and therefore there is limited data at this position.

This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring position RP1 late in the period 10 October 2016 to 30 October 2016.

There were no exceedance events of the trigger or action level PM10 concentration limits in this baseline monitoring period of dates from 28 October to 30 October 2016.

The PM10 baseline concentration data in this report will be compared to later stages of the demolition.

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Unattended Dust (PM10) Baseline Monitoring Report

Monitoring Period: 10 October 2016 to 30 October 2016

Project No. EEMC/065/2016

Report No EEMC-DMR-065/002-NTH, HS2

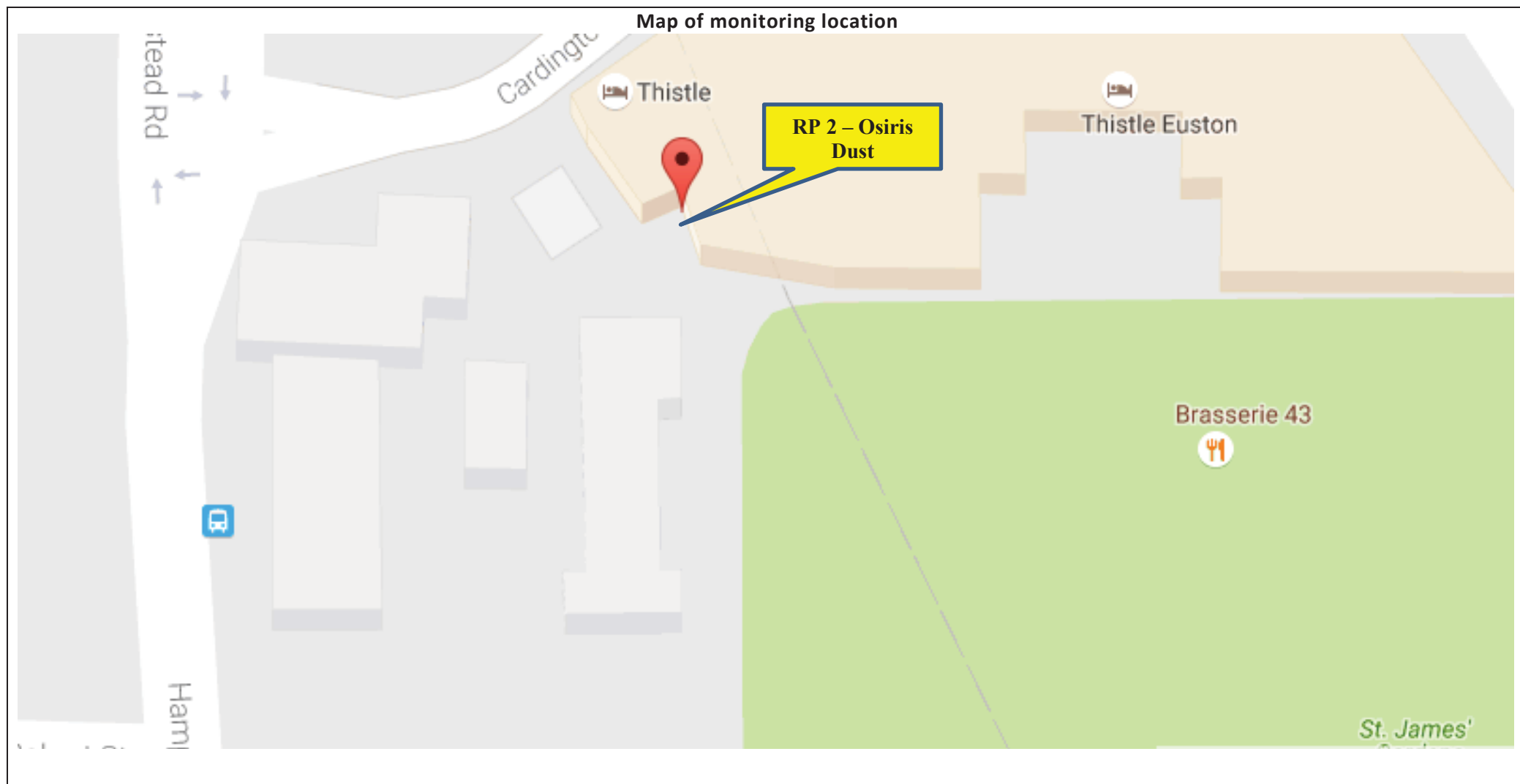
Client: Keltbray Limited

Title: EEMC/065/002 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP2
Report No.02

Period: 10 October 2016 – 30 October 2016

Details of Dust (PM10) and Weather Monitor at Receptor Point RP2

ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016 OS - 10941



Photos of monitor



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, located in London Borough of Camden (LBC). This report presents the baseline PM10 concentrations prior to work commencing. Dust (PM10) monitoring equipment has been installed; the measured levels will be compared against set criteria for the project.

This report details the results for concentrations of PM10 particulates measured and recorded in the period 10 October 2016 to 30 October 2016 at location RP2. This report on unattended Dust (PM10) measured data is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd will carry out site operations in compliance with the DMP and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.
Dust Monitoring Procedure.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units and two Osiris Dust (PM10) units, housed in weather-proof environmental enclosures are installed around the site. The unit at RP2 is an Osiris Dust (PM10) system. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute periods.

3.0 Methodology

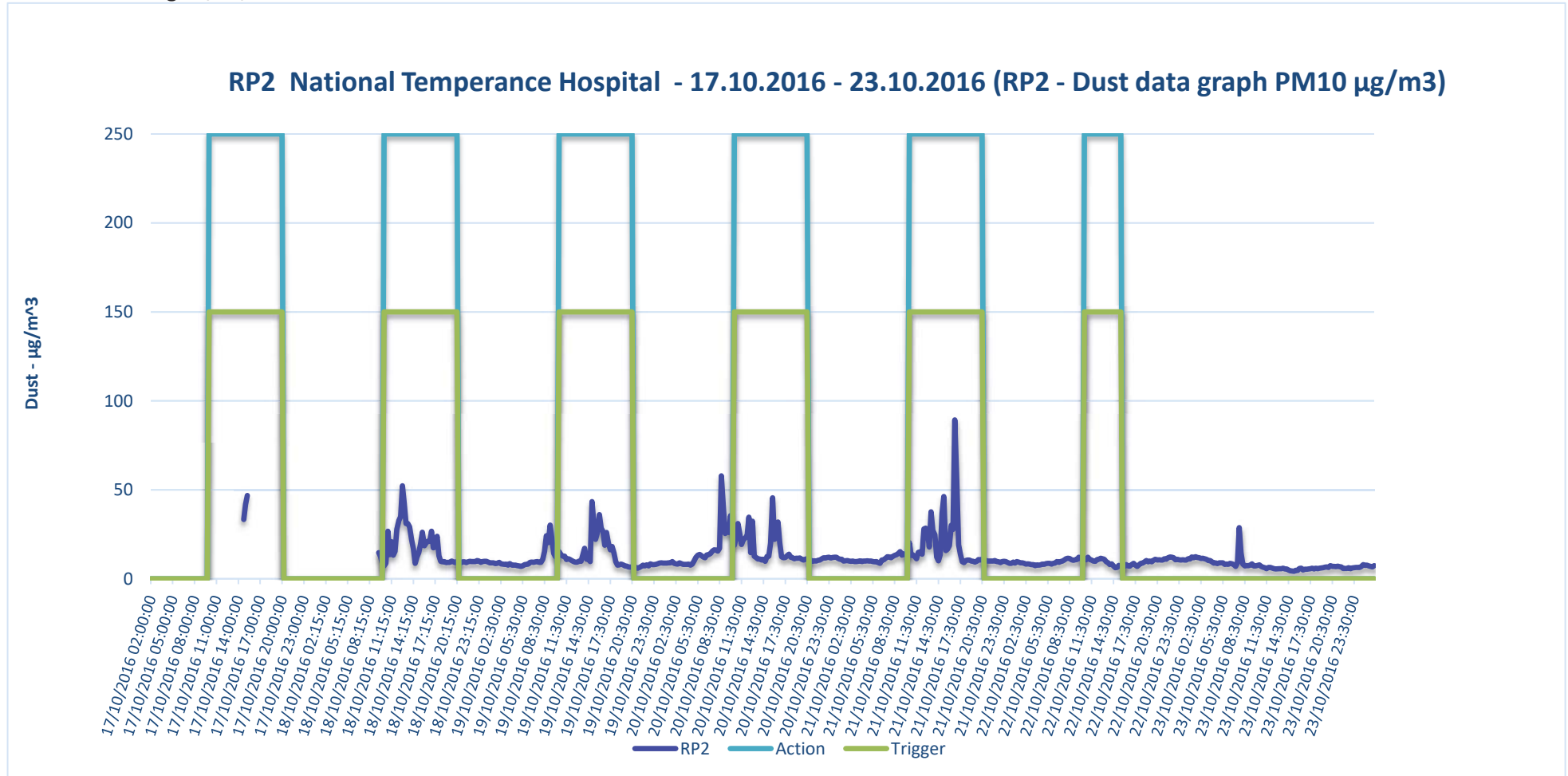
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations near the site. Keltbray agreed these locations with the air quality officers from LBC. The monitoring will be continuous for the duration of demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

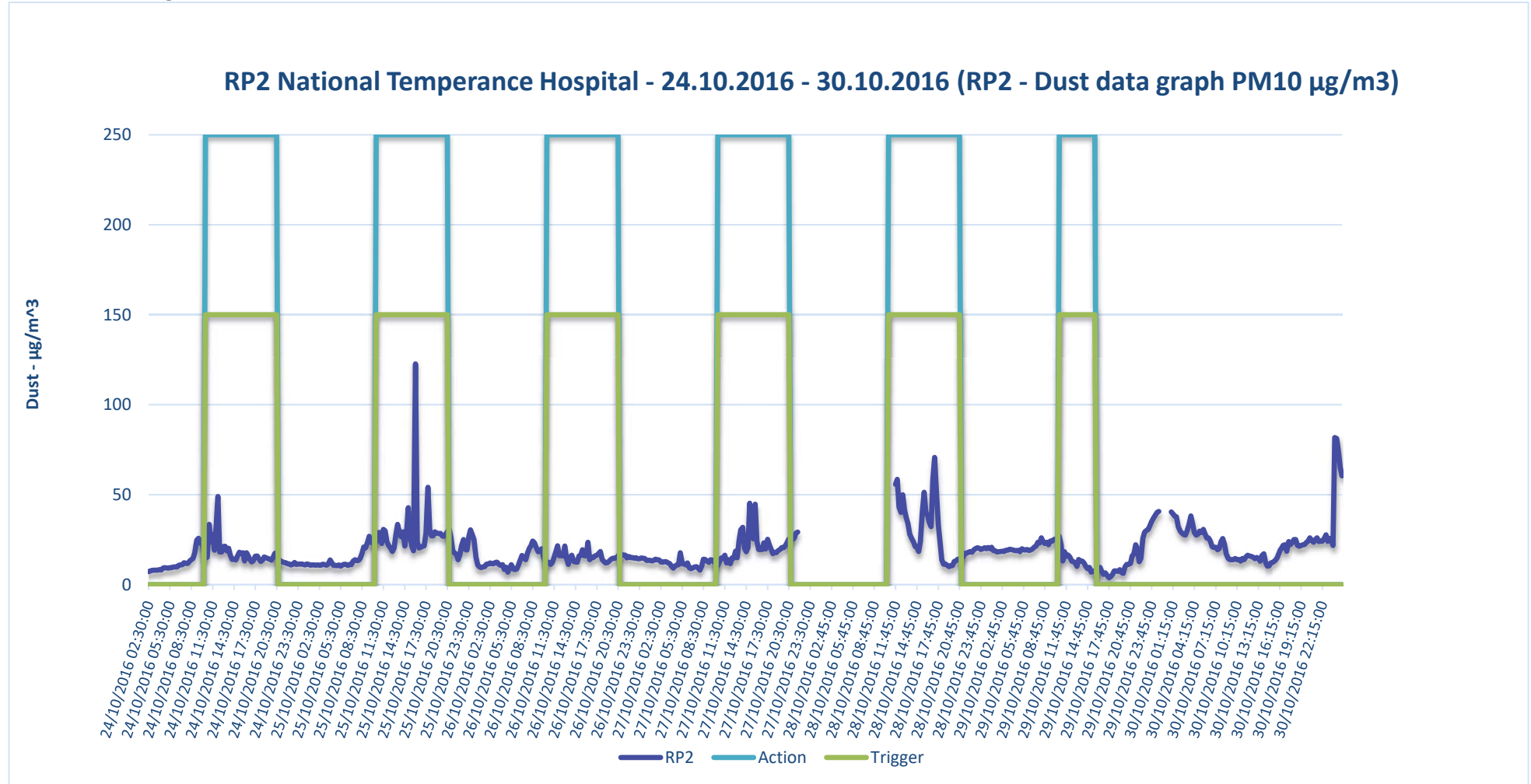
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

4.0 Dust (PM10) Monitoring Graphs
RP2 Week ending 23/10/2016



RP2 Week ending 30/10/2016



5.0 Discussion

Unattended baseline Dust (PM10) monitoring has been undertaken at National Temperance Hospital project.

This report presents the measured and recorded dust (PM10) data downloaded from the web interface at monitoring position RP2 within the period 10 October 2016 to 30 October 2016. The unit at RP2 was installed on the 18 October 2016.

There were no exceedance of the trigger or action level PM10 concentration limits in this period during this baseline monitoring.

The PM10 baseline concentration data in this report can be compared to later stages of the demolition and construction phases.

Power supply to this unit was interrupted between 27th October and 28th October. An alternative power supply has been sourced.

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Unattended Baseline Dust (PM10) Monitoring Report

Monitoring Period: 10 October 2016 to 30 October 2016

Project No. EEMC/065/2016

Report No EEMC-DMR-065/003-NTH, HS2

Client: Keltbray Limited

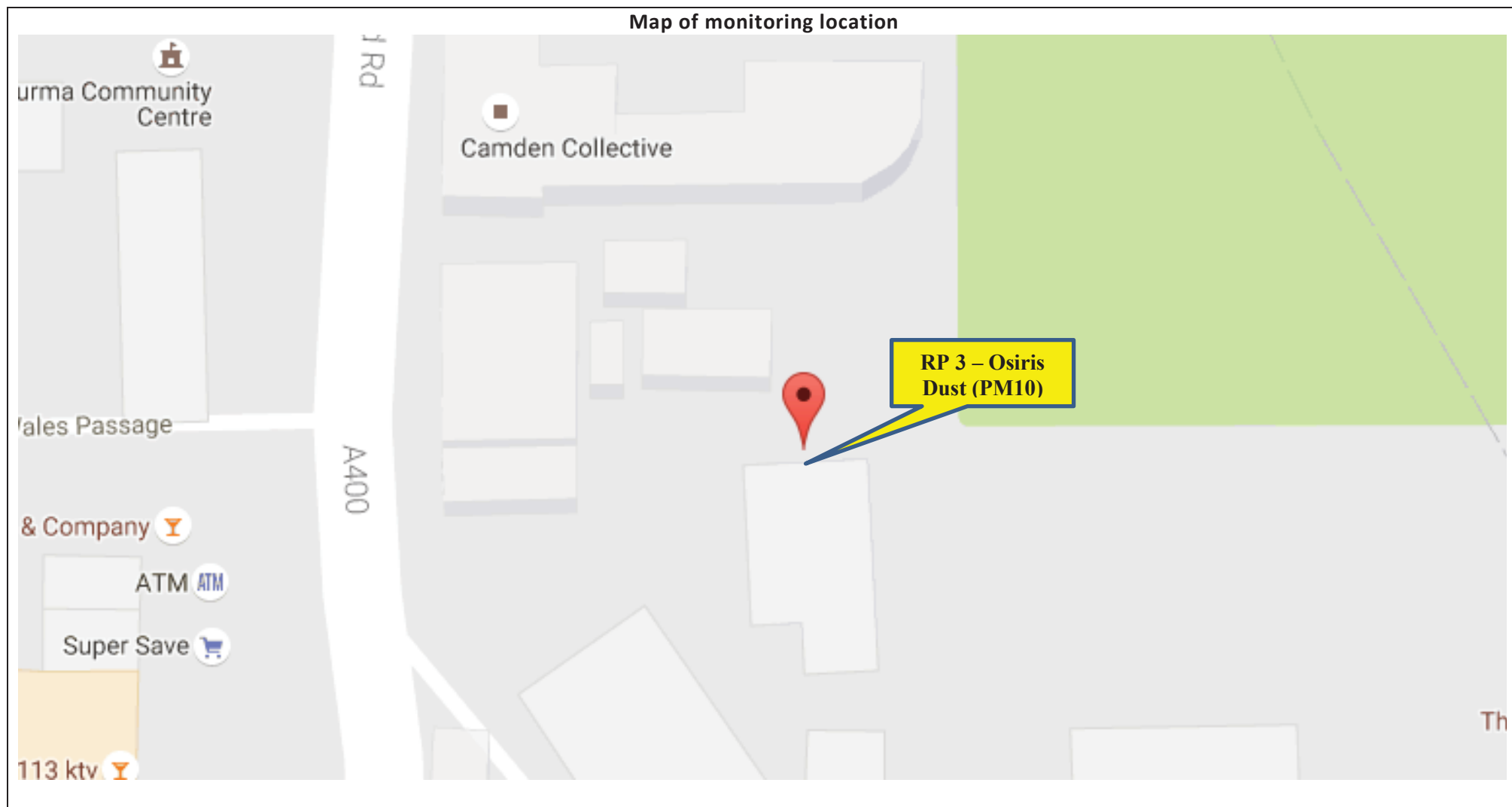
Title: EEMC/065/003 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP3
Report No.03

Period: 10 October 2016 – 30 October 2016

Details of Dust (PM10) and Weather Monitor at Receptor Point (RP)

ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3764
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016 OS - 10941

Map of monitoring location



Photos of monitor



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, located in the London Borough of Camden (LBC). This report presents the baseline data prior to work commencing. Dust (PM10) monitoring equipment has been installed; the measured levels will be compared against set criteria for the project.

This report details the results for concentrations of PM10 particulates measured and recorded in the period 10 October 2016 to 30 October 2016 at position RP3. This report on unattended baseline Dust (PM10) measured data is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd will carry out the site operations in compliance with the DMP and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'. Dust Monitoring Procedure.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units and two Osiris Dust (PM10) units, housed in weather-proof environmental enclosures are installed around the site. The system at RP3 is an Osiris unit. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute periods.

3.0 Methodology

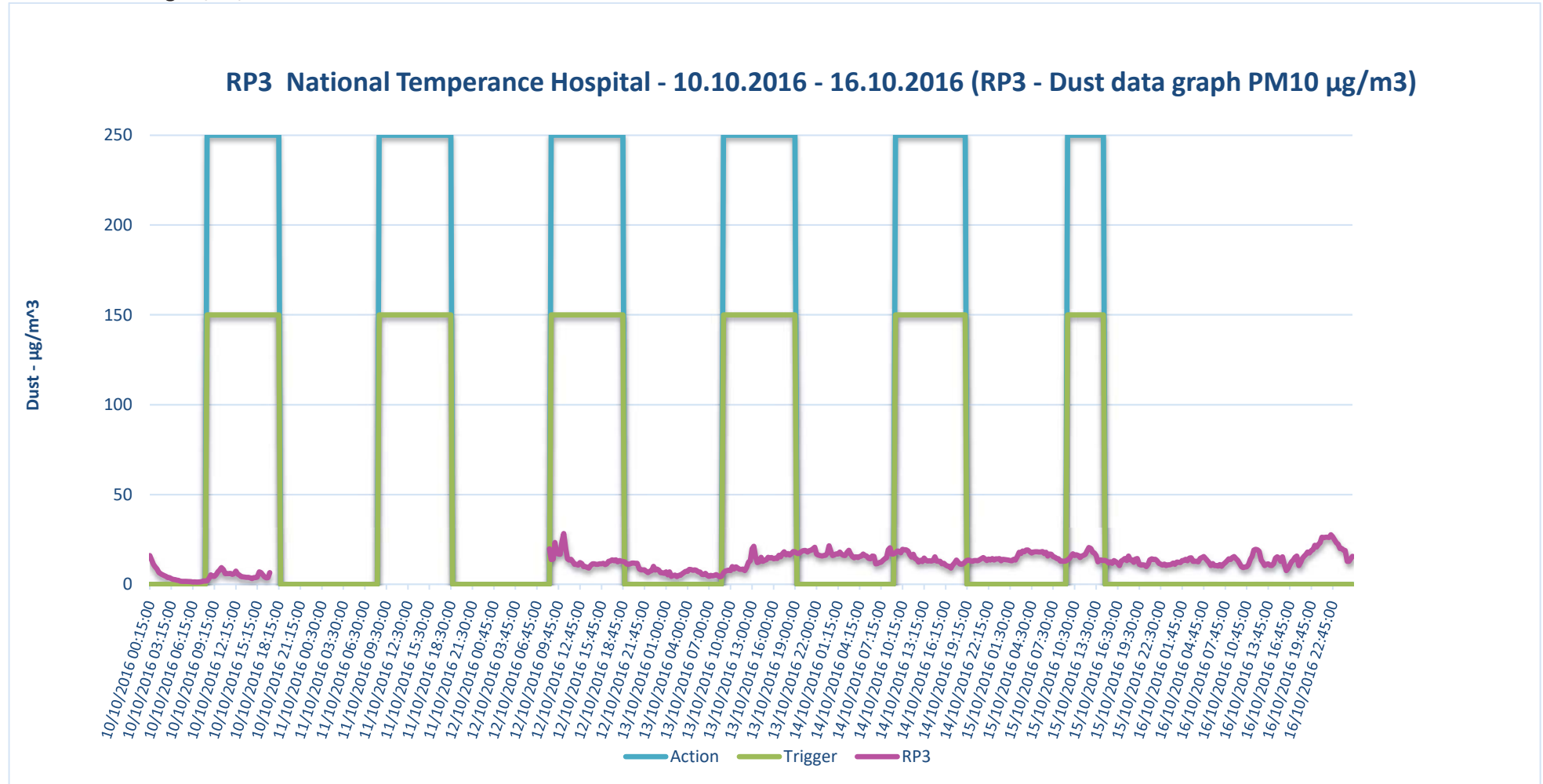
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations near the site. Keltbray agreed these locations with the air quality officers from LBC. The monitoring will be continuous for the duration of demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

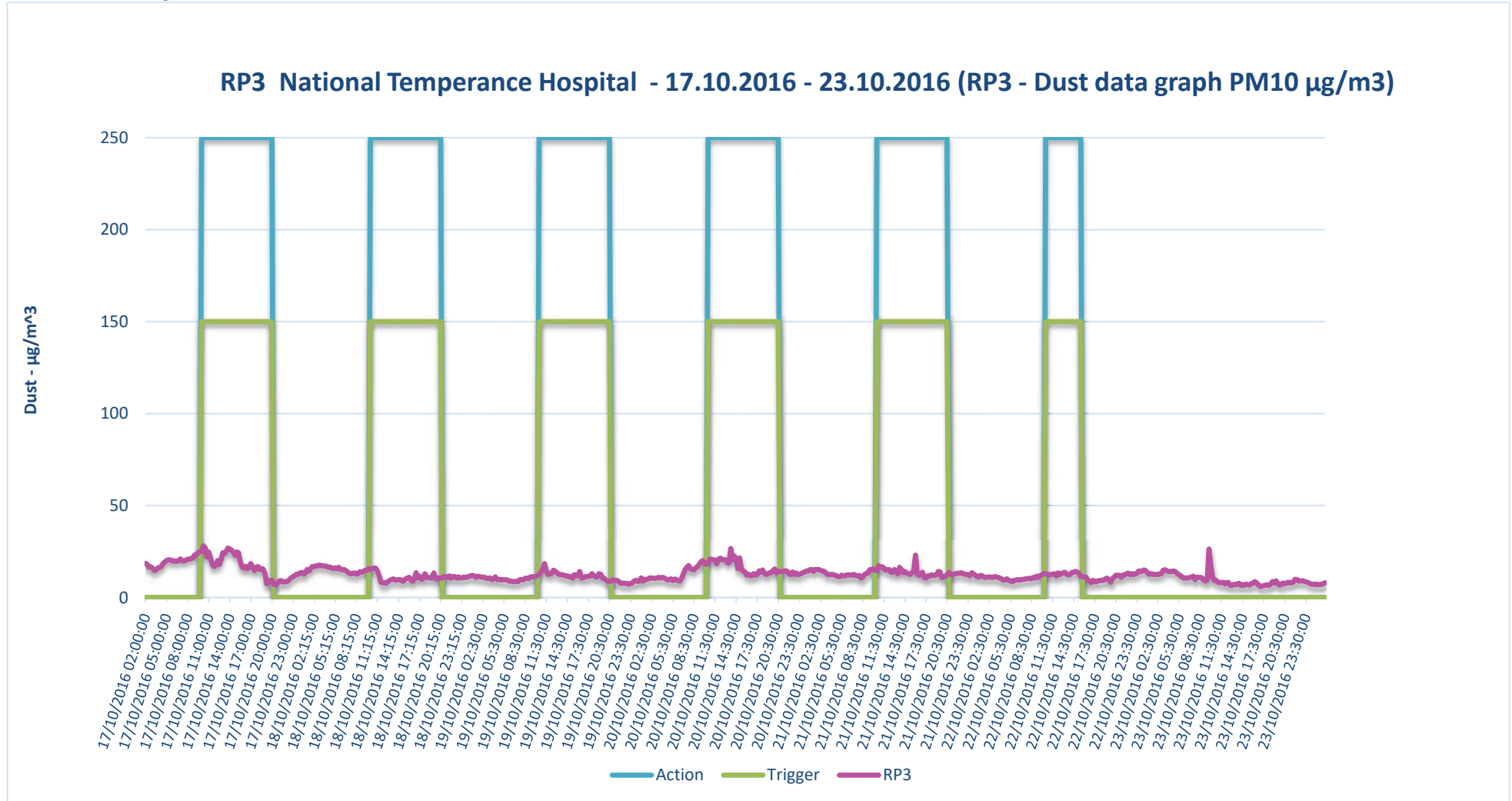
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

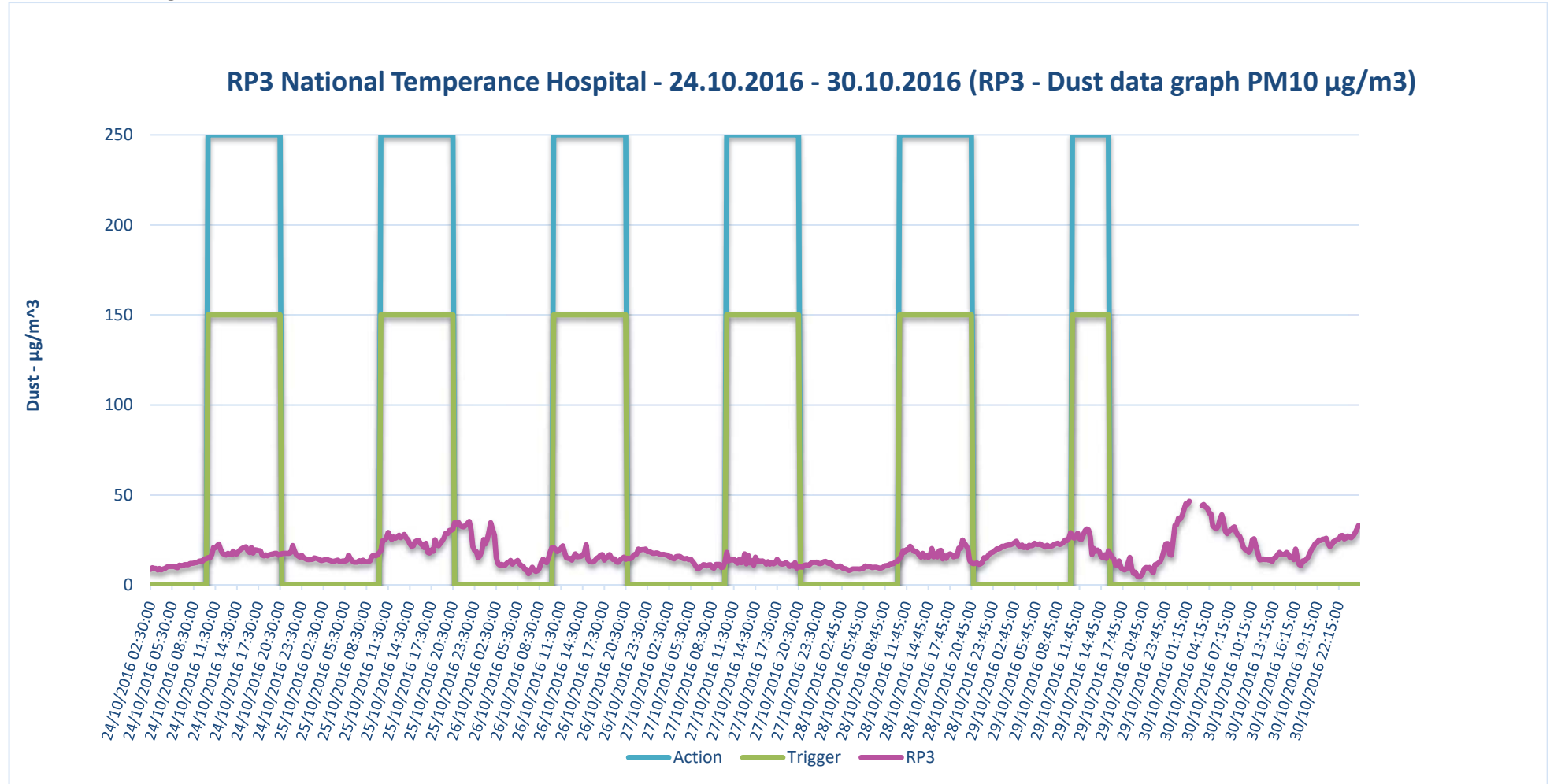
4.0 Dust (PM10) Monitoring Graphs
RP3 Week ending 16/10/2016



RP3 Week ending 23/10/2016



RP3 Week ending 30/10/2016



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at National Temperance Hospital project.

This report presents the measured and recorded baseline dust (PM10) data downloaded from the web interface at monitoring position RP3 in the period 10 October 2016 to 30 October 2016 inclusive.

There were no exceedance events of the trigger or action level PM10 concentration limits in this period.

The PM10 concentration data in this report can be compared to PM10 measurement data measured and recorded in later stages of the demolition.

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Unattended Dust (PM10) Baseline Monitoring Report

Monitoring Period: 10 October 2016 to 30 October 2016

Project No. EEMC/065/2016

Report No EEMC-DMR-065/004-NTH, HS2

Client: Keltbray Limited

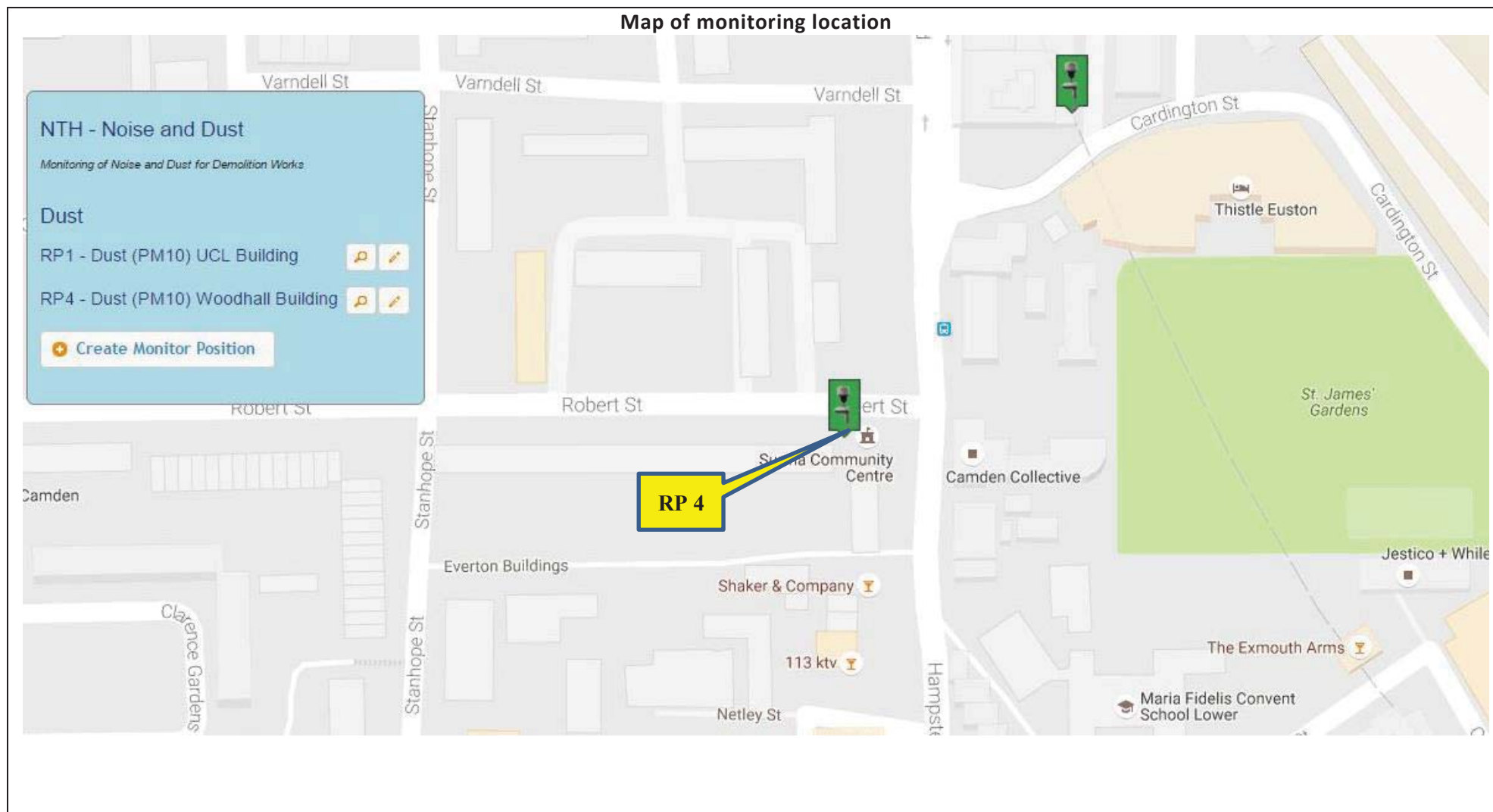
Title: EEMC/065/004 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP4
Report No.04

Period: 10 October 2016 – 30 October 2016

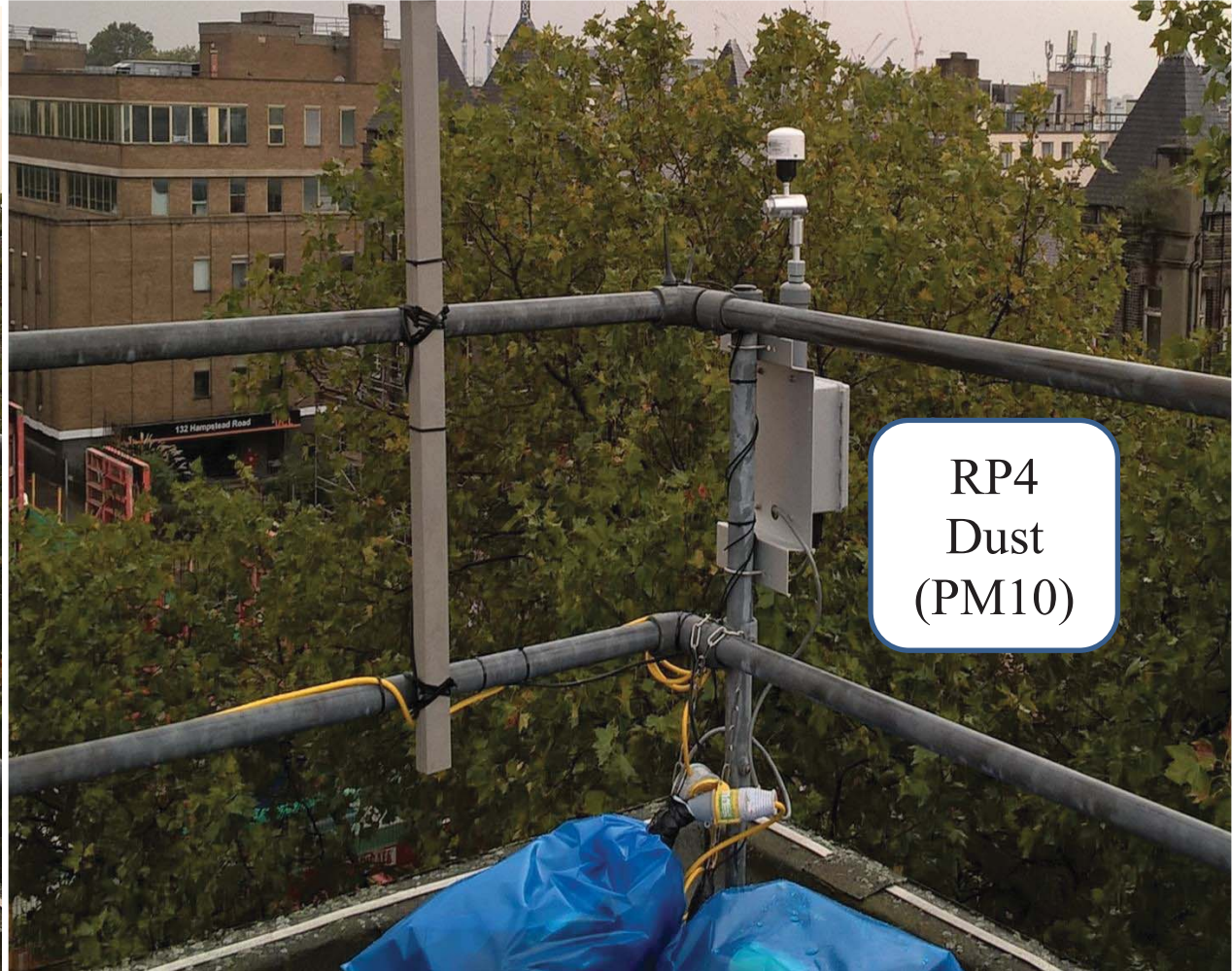
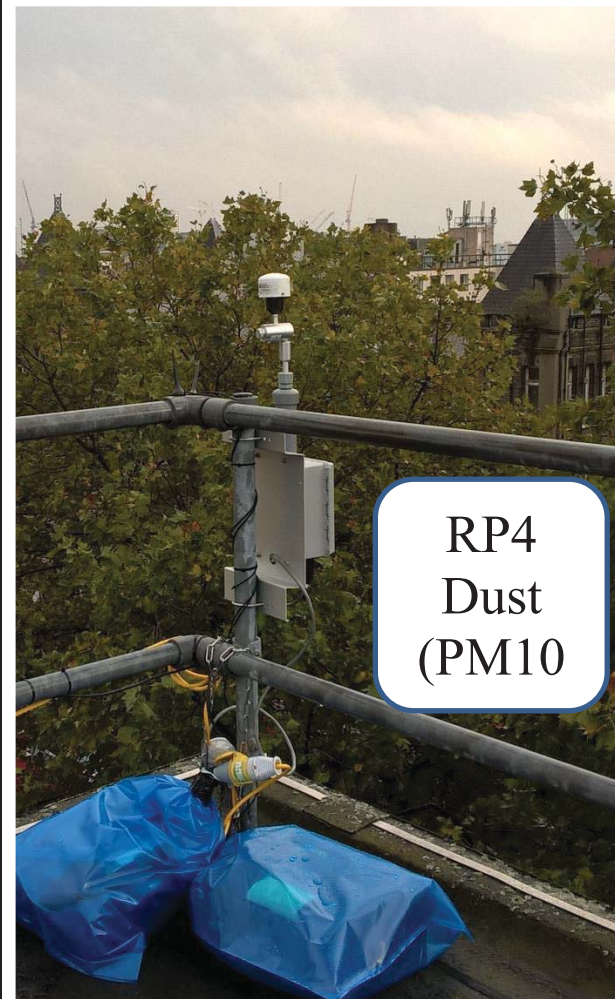
Details of Dust (PM10) and Weather Monitor at Receptor Point (RP)

ID Reference	RP4
Location:	Terrace of Woodhall residential block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	04/11/2015 ES – 642 – SN – T20194

Map of monitoring location



Photos of monitor



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at National Temperance Hospital project, located in the London Borough of Camden (LBC). This report presents baseline data prior to work commencing. Dust (PM10) monitoring equipment has been installed; the measured levels will be compared against set criteria for the project.

This report presents the results for concentrations of PM10 particulates measured and recorded in the period 10 October 2016 to 30 October 2016. This report on unattended Dust (PM10) measured data is to be read in conjunction with the clients Dust Management Plan (DMP) for National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd will carry out site operations in compliance with the DMP and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.
Dust Monitoring Procedure.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units and two Osiris (PM10) systems, housed in weather-proof environmental enclosures have been installed around the site. The unit at RP4 is a MetOne system. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute periods.

3.0 Methodology

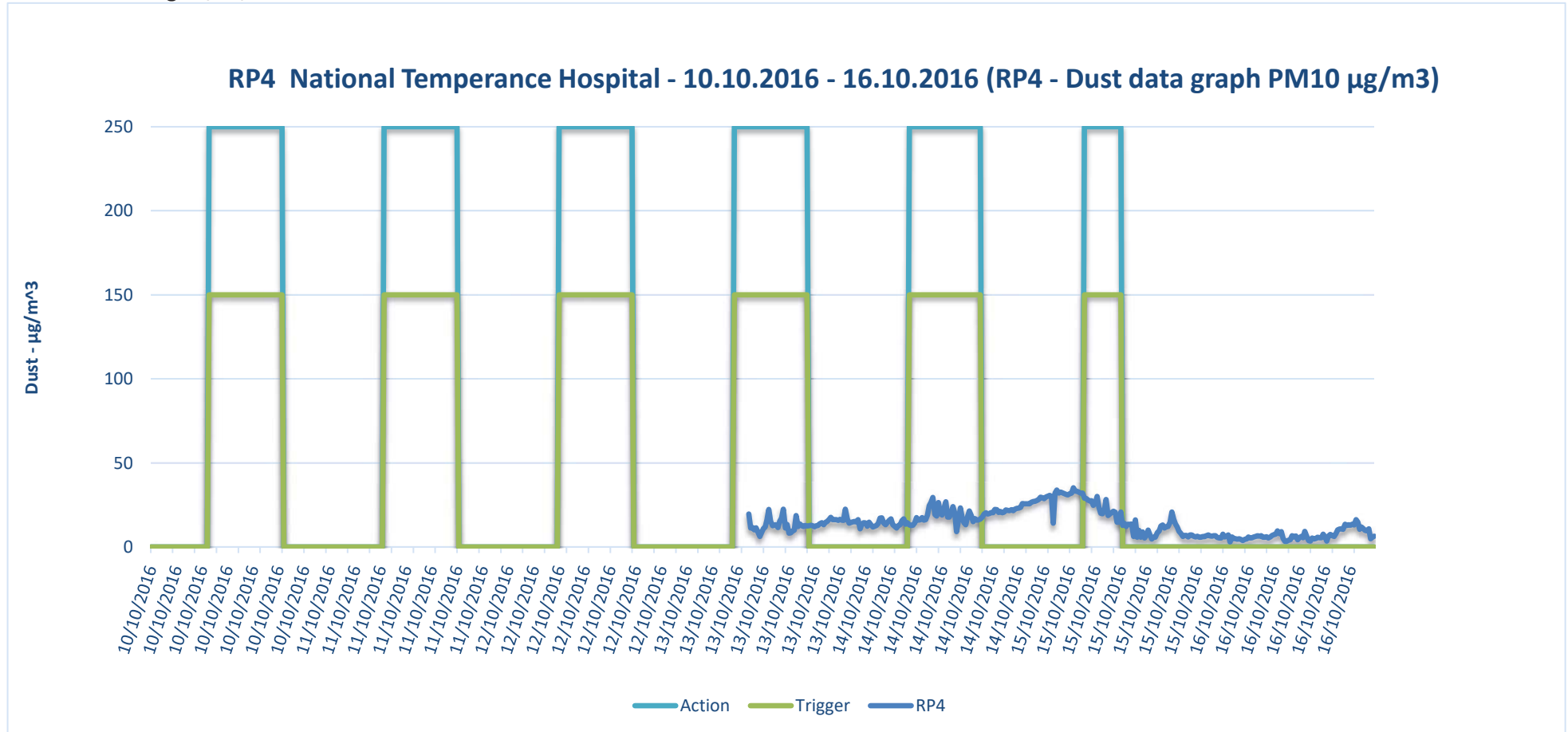
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations near the site. Keltbray agreed these locations with the London Borough of Camden. The monitoring will continue for the duration of demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

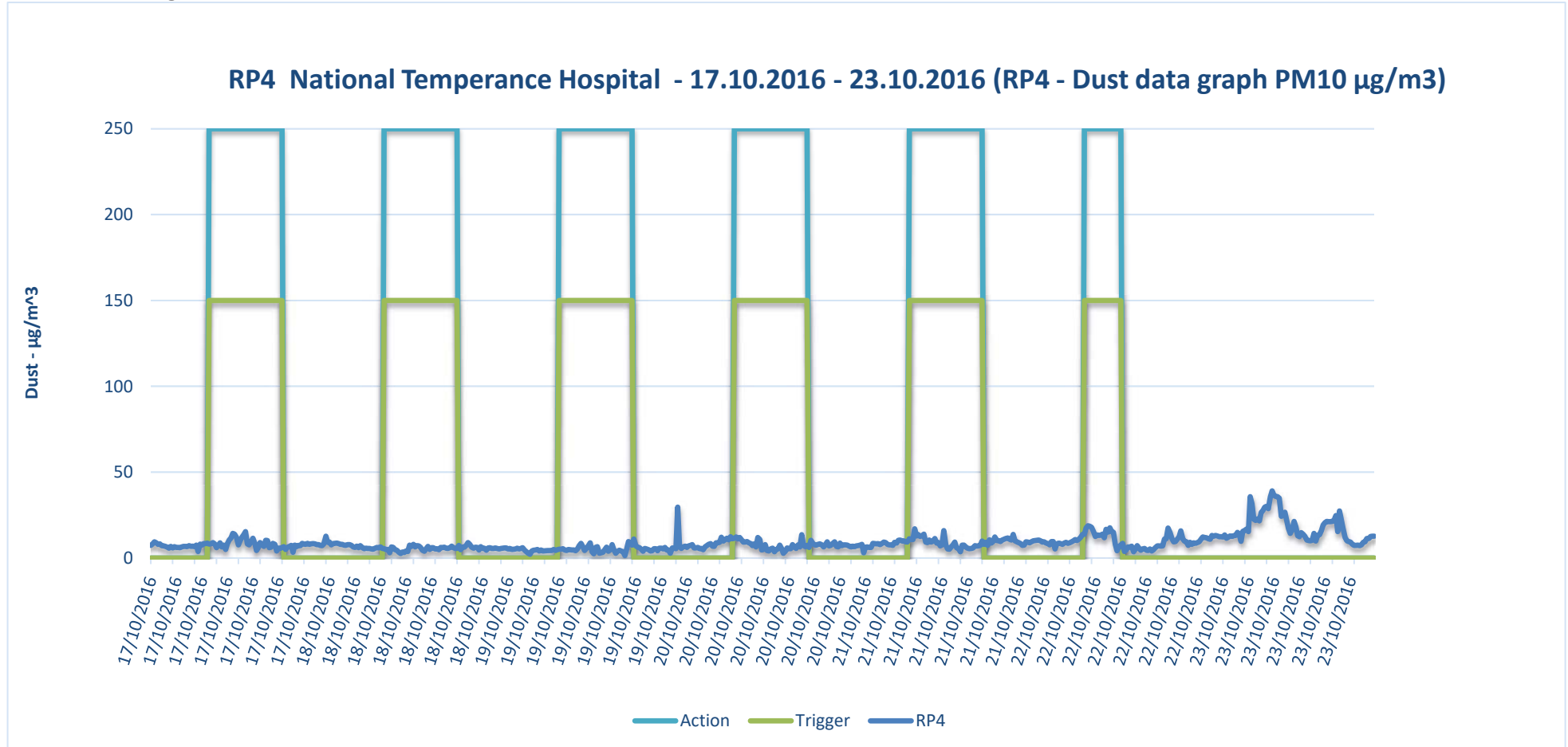
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

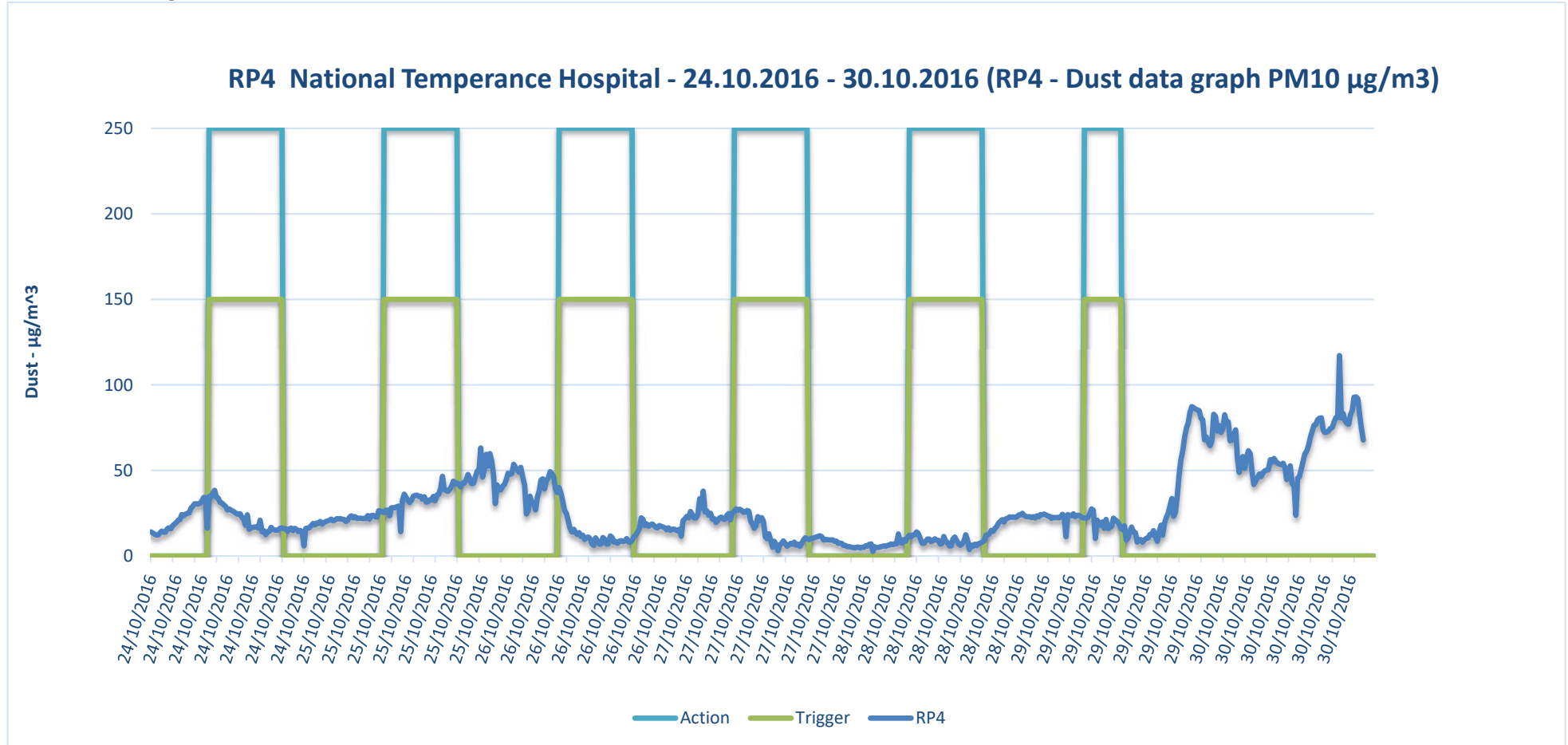
4.0 Dust (PM10) Monitoring Graphs
RP4 Week ending 16/10/2016



RP4 Week ending 23/10/2016



RP4 Week ending 30/10/2016



5.0 Discussion

Unattended baseline Dust (PM10) monitoring has been undertaken at National Temperance Hospital project where structural demolition works are yet to commence.

This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring position RP4 in the period 10 October 2016 to 30 October 2016 inclusive. The unit at RP4 was installed on 13 October 2016.

There were no exceedance events of the trigger or action level PM10 concentration limits in this baseline monitoring period.

The PM10 baseline concentration data in this report can be compared with PM10 measurement data recorded during later stages of the demolition.

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Unattended Dust (PM10) Monitoring Report

Monitoring Period: 31 October 2016 to 27 November 2016

Project No. EEMC/065/2016

Report No EEMC-DMR-065/005-NTH, HS2

Client: Keltbray Limited

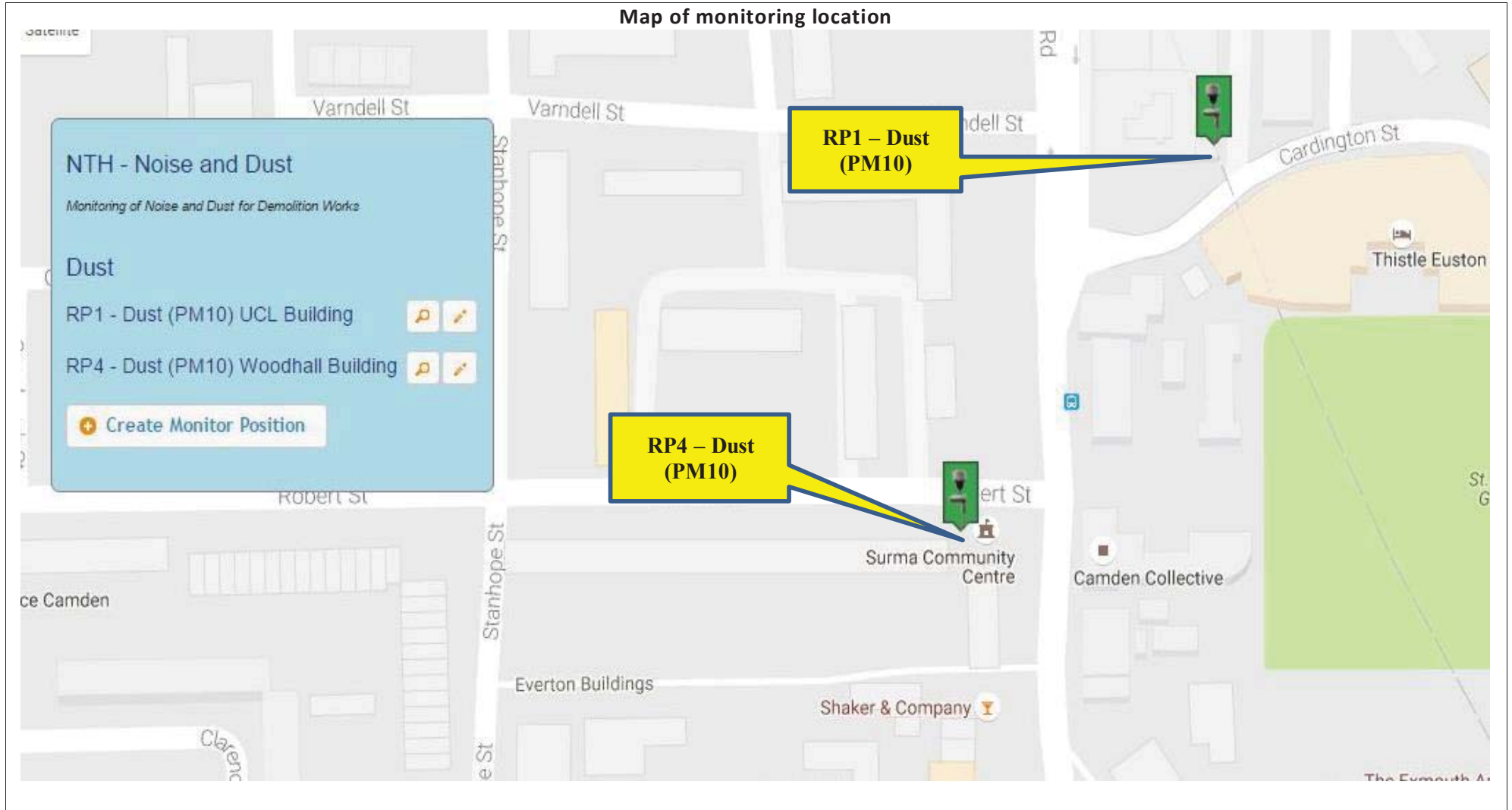
Title: EEMC/065/005 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4
Report No.05

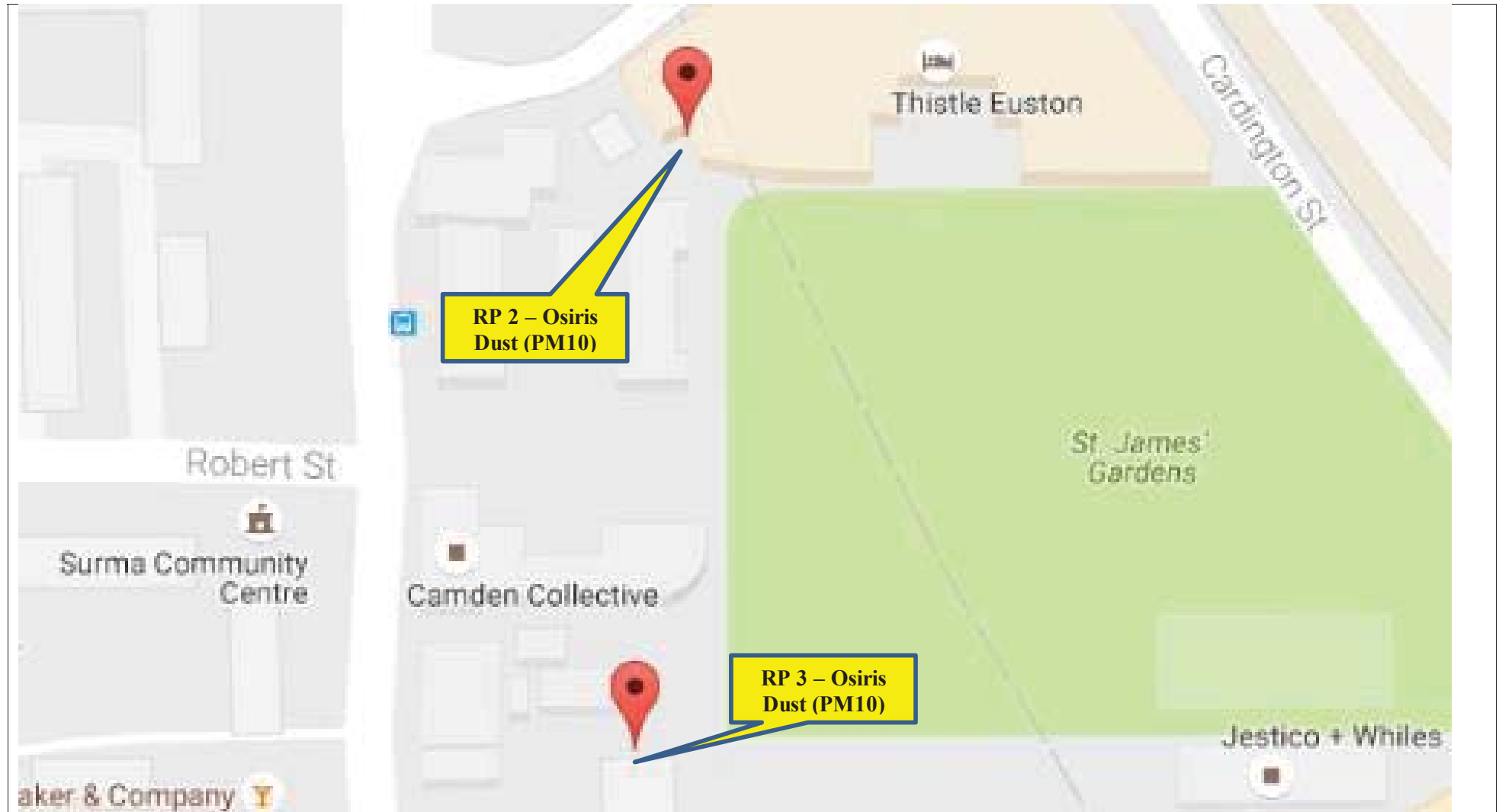
Period: 31 October 2016 – 27 November 2016

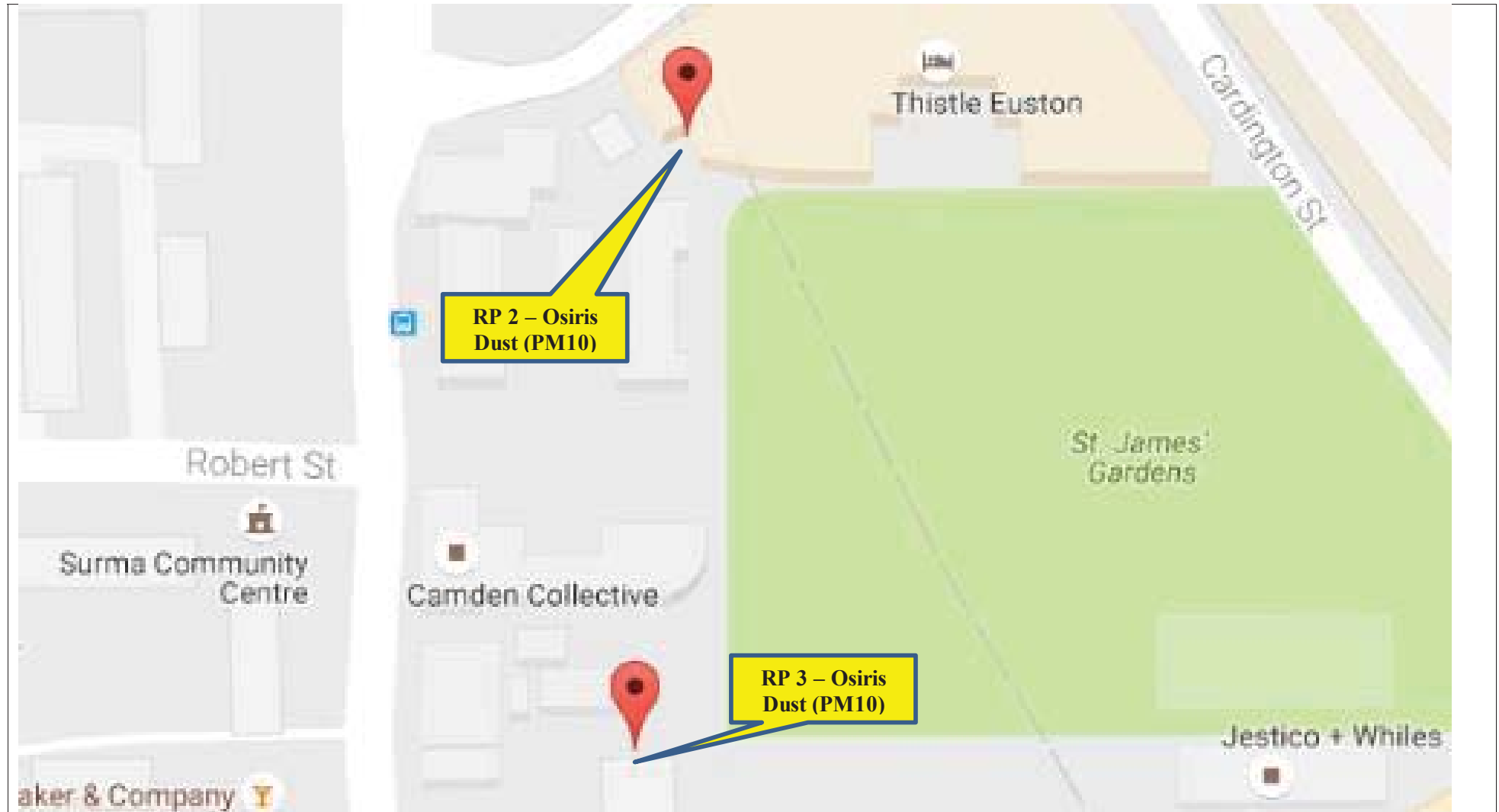
Details of Dust (PM10) at Receptor Point (RP)

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016 OS - 10941
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3764
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016 OS - 10941
ID Reference	RP4
Location:	Terrace of Woodhall residential block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	04/11/2015 ES – 642 – SN – T20194

Map of monitoring location







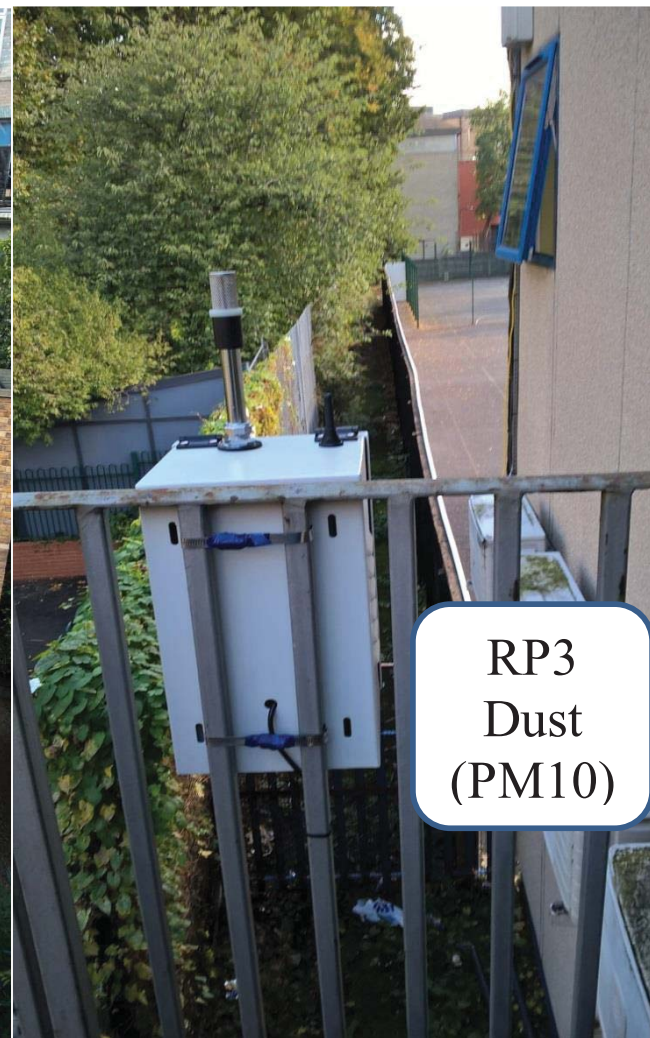
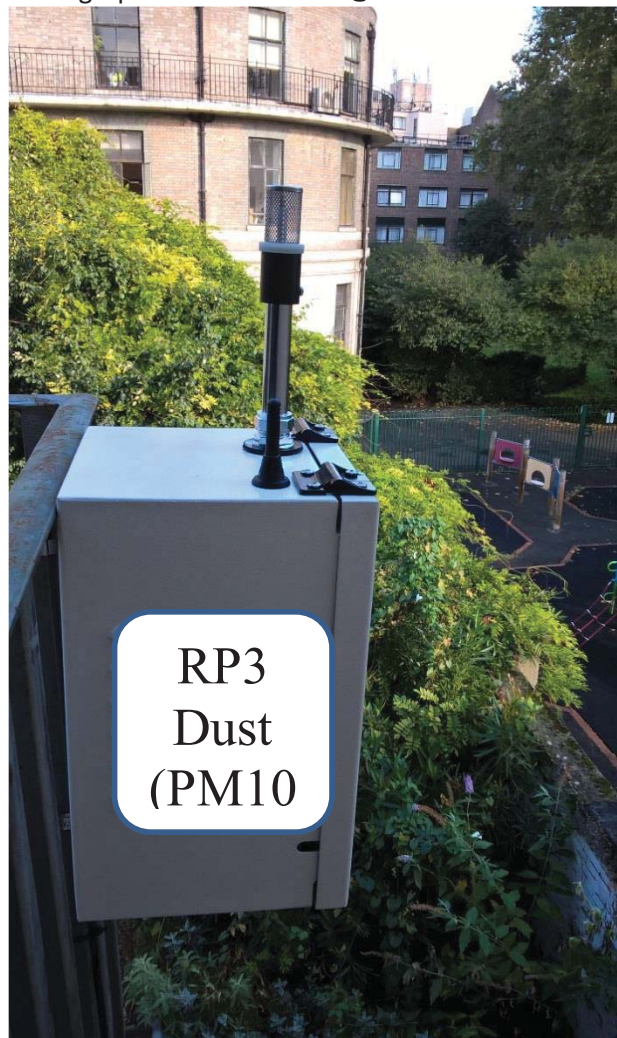
Photograph of dust monitor @ RP1



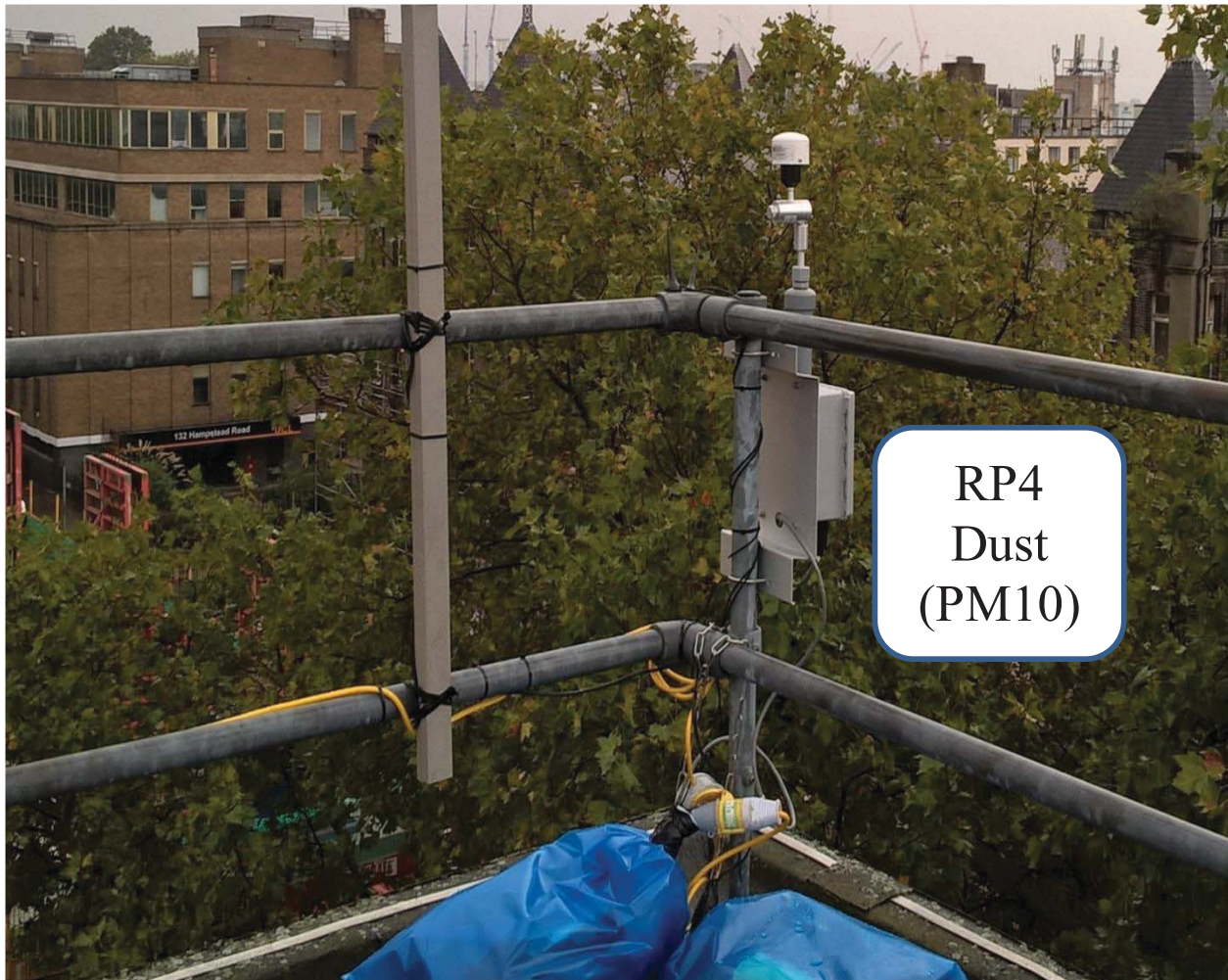
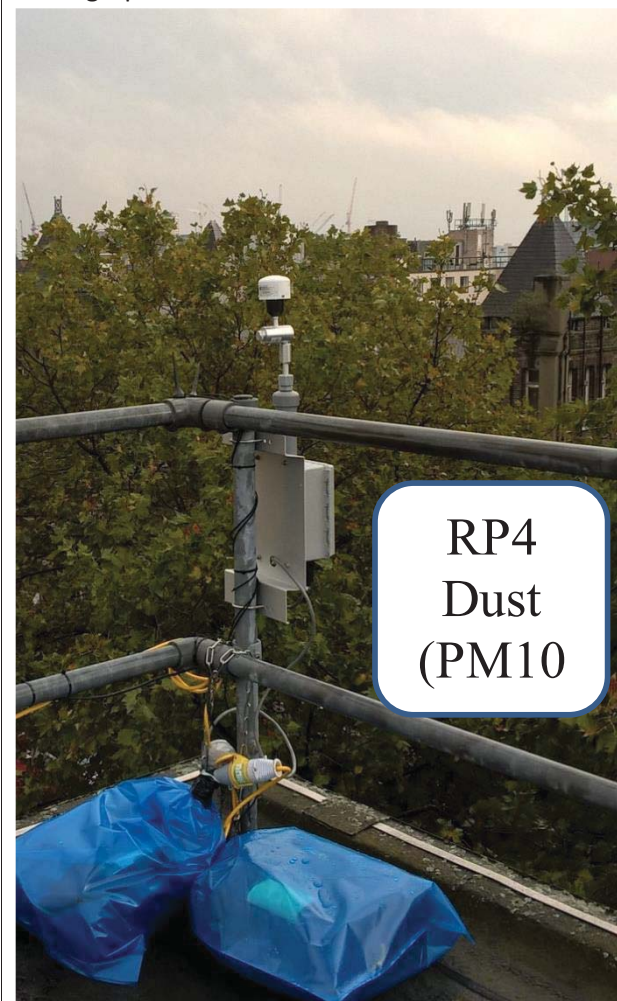
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, located in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

This report details the results for concentrations of PM10 particulates measured and recorded in the period 31 October 2016 to 27 November 2016 at positions RP1, RP2, RP3, RP4. This report on unattended Dust (PM10) measured data is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd will carry out site operations in compliance with the clients DMP and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'. Dust Monitoring Procedure.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed around the site. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) continuously over 15-minute periods.

3.0 Methodology

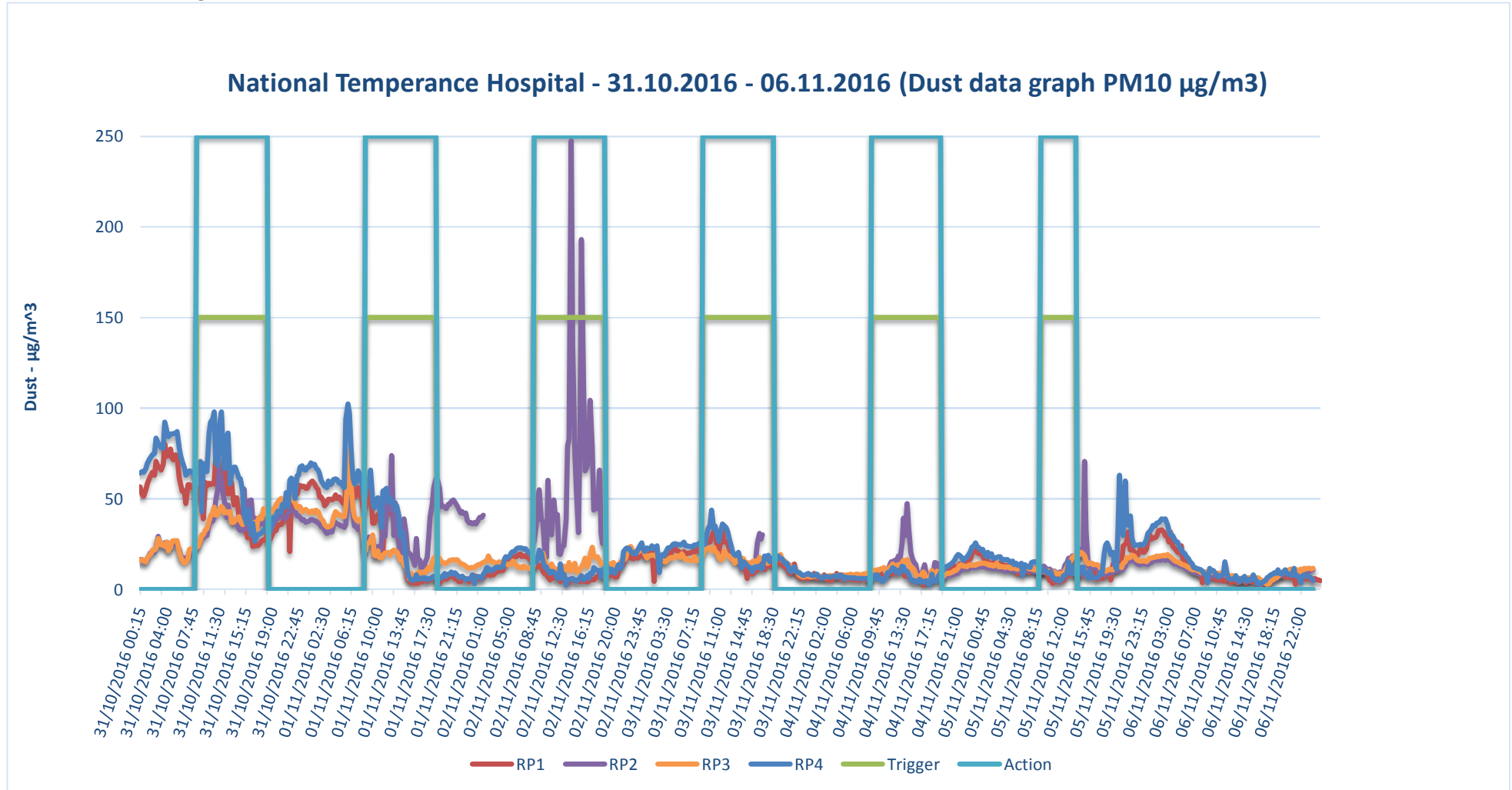
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations near the works. Keltbray agreed these locations with officers from LBC. The monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

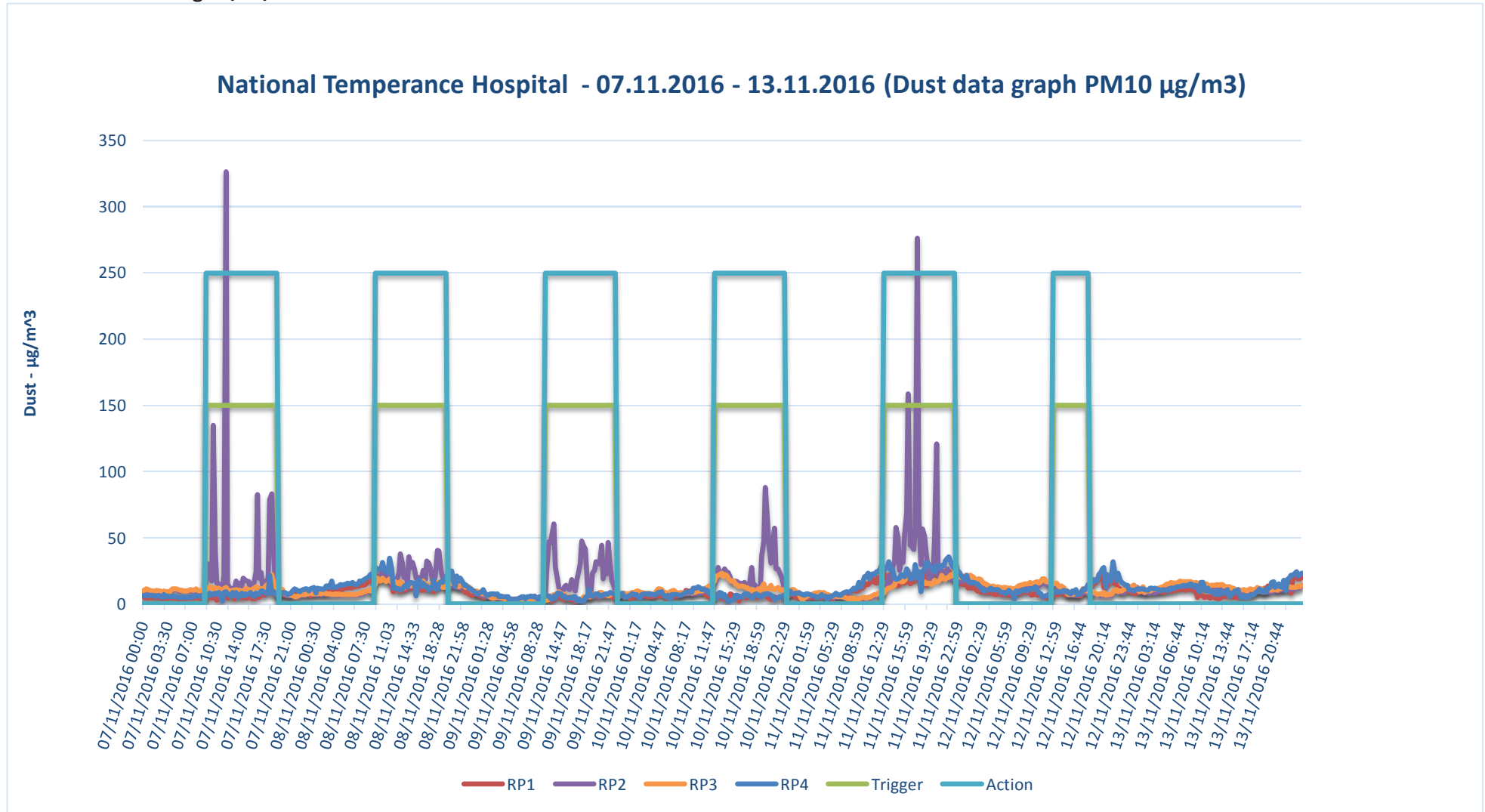
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

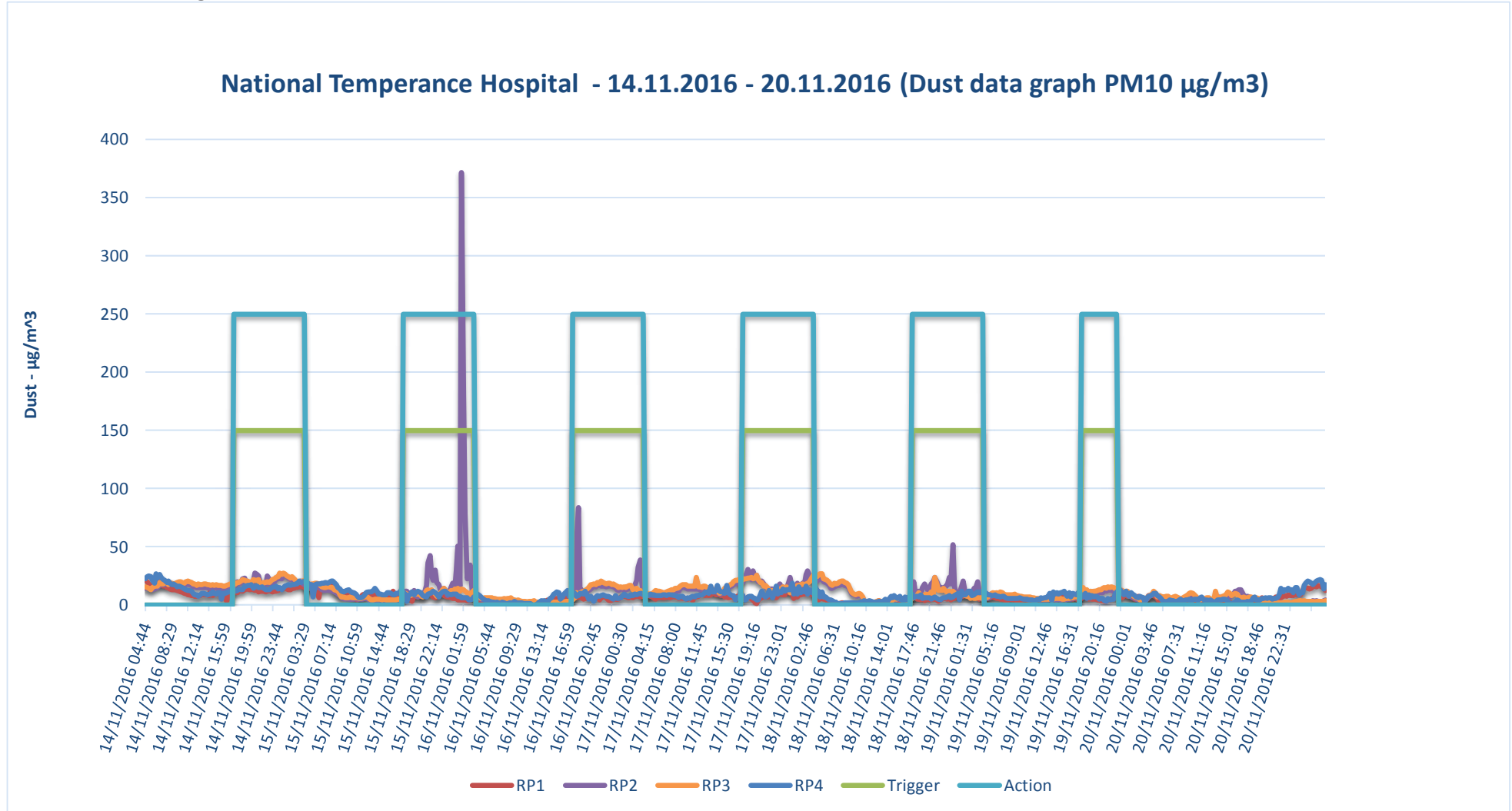
4.0 Dust (PM10) Monitoring Graphs
Week ending 06/11/16



Week ending 13/11/16

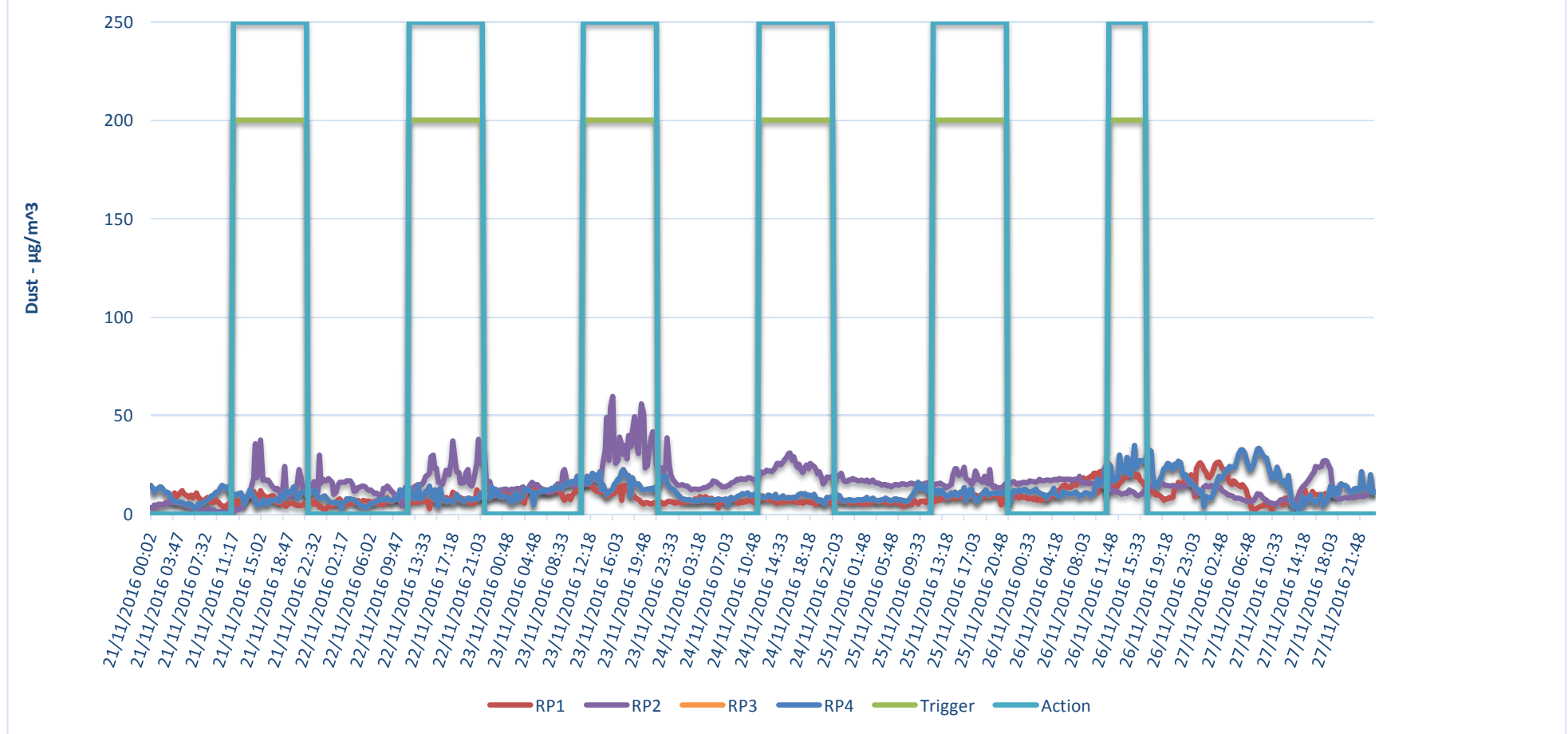


Week ending 20/11/16



Week ending 27/11/16

National Temperance Hospital - 21.11.2016 - 27.11.2016 (Dust data graph PM10 $\mu\text{g}/\text{m}^3$)



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, RP4 from 31 October 2016 to 27 November 2016.

PM10 concentrations were low at positions RP1 RP3 and RP4 with no exceedance of either the trigger or action level. There were exceedance events of the trigger and action level PM10 concentration limits at position RP2 in this monitoring period; on 2, 7, 11, and 16 November.

The works in this period were the following

- Pumping water from basements 7 – 8 November
- Internal scaffold erection 3 – 25 November
- External scaffold erection 1 – 4 November
- Asbestos removal 1 – 25 November
- Soft strip 1 – 25 November
- External hoarding 1 – 4 November
- Roof strip 22 – 25 November
- Dismantling of turrets 23 – 25 November

These activities are not likely to generate dust so as to cause exceedances of the PM10 trigger and alert concentration levels at position RP2. Asbestos removal was carried out by specialist contractors. The Keltbray site team responded to these alerts and concluded following inspection of the site and the type of work being undertaken at the time of the alerts that the source was not the National Temperance Hospital site. It may be smokers on the external stairway close to the monitor.

Unattended Dust (PM10) Monitoring Report

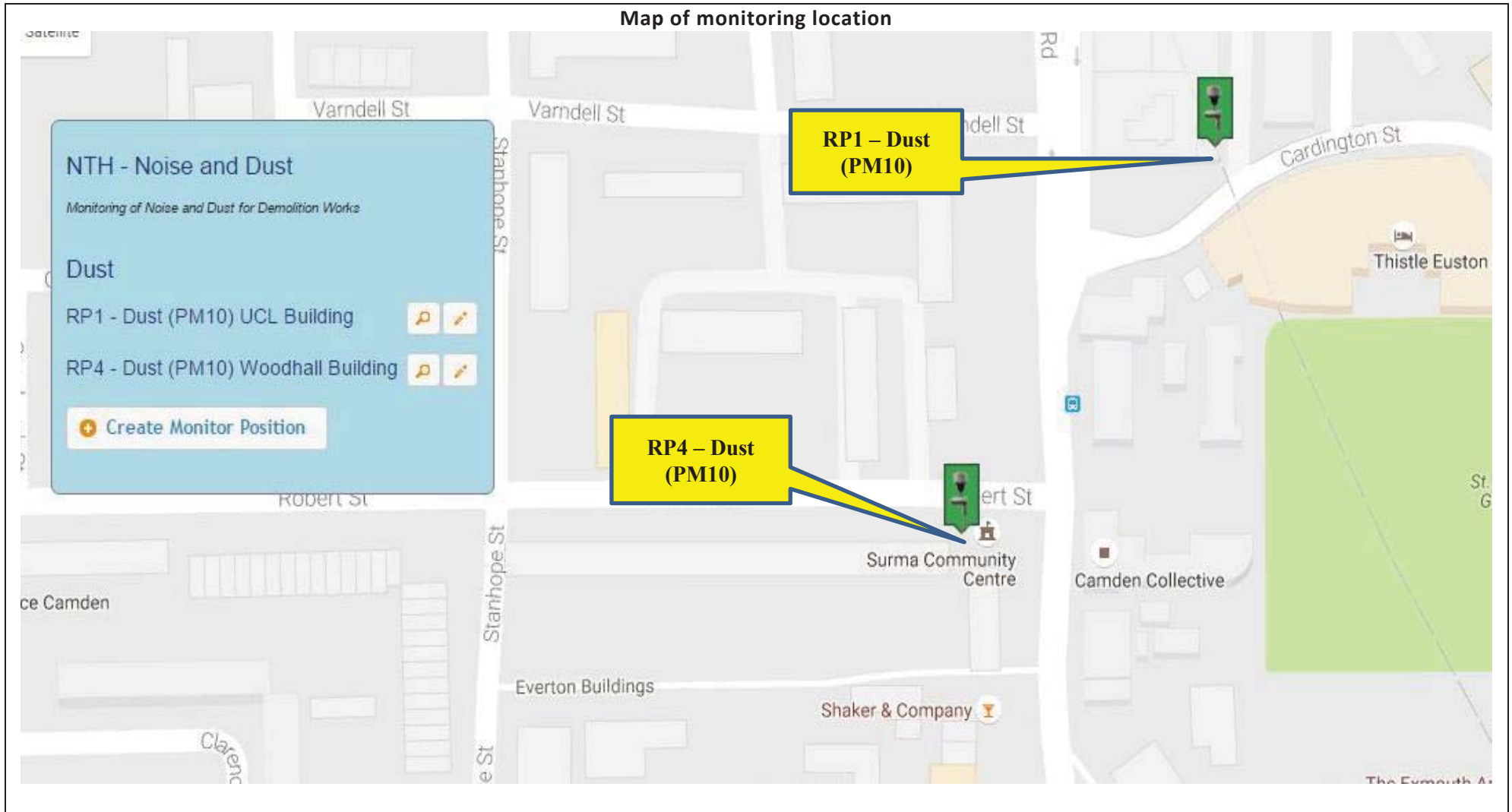
Monitoring Period: 28 November 2016 to 24 December 2016

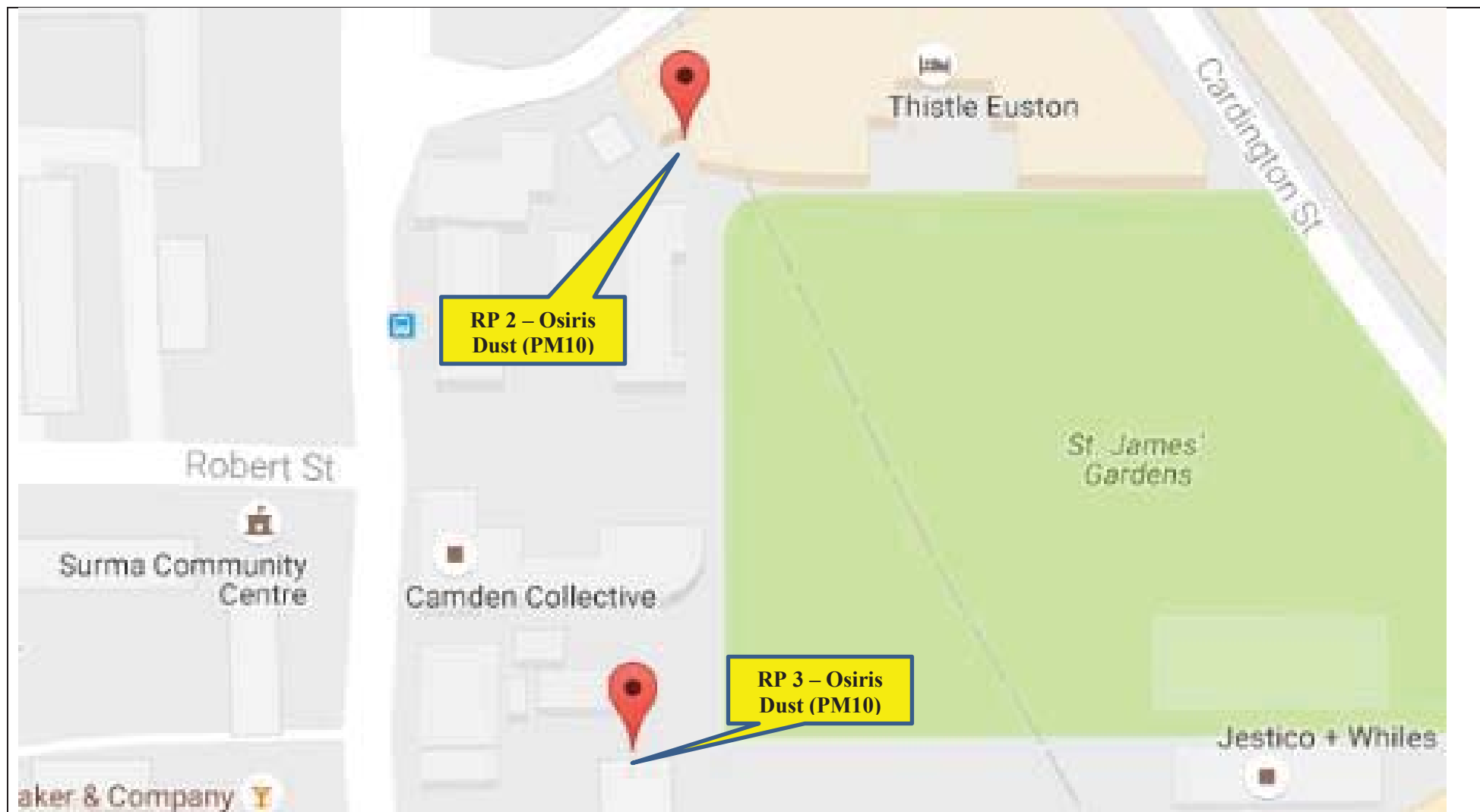
Project No.	EEMC/065/2016
Report No	EEMC-DMR-065/006-NTH, HS2
Client:	Keltbray Limited
Title:	EEMC/065/006 – National Temperance Hospital Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4 Report No.06
Monitoring Period:	28 November 2016 – 24 December 2016

Details of Dust (PM10) at Receptor Points (RP)

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
Manufactures last calibration date:	25/01/2016 ES – 642 – SN – U10897 (See appendix 1)
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3764
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location





Photograph of dust monitor @ RP1



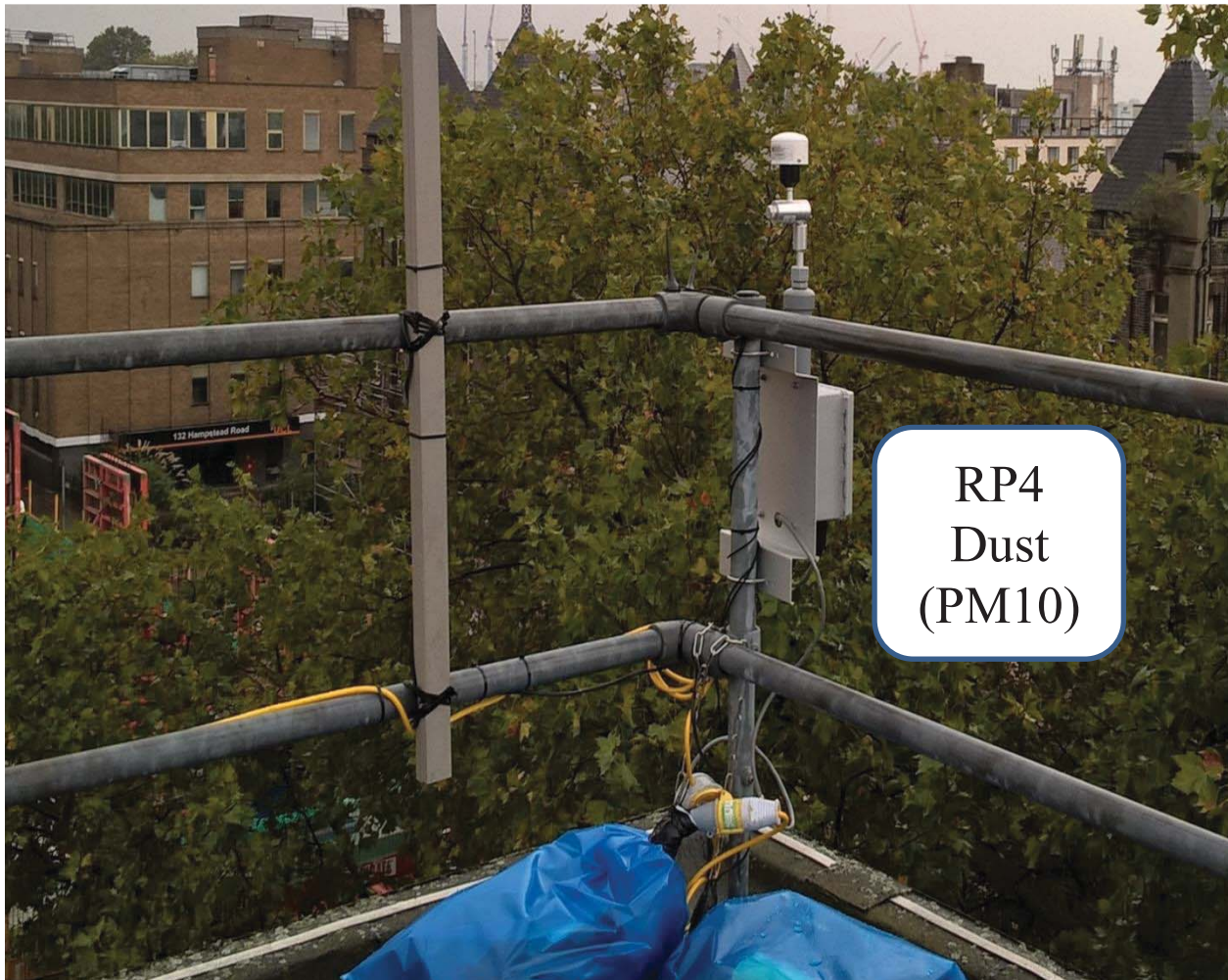
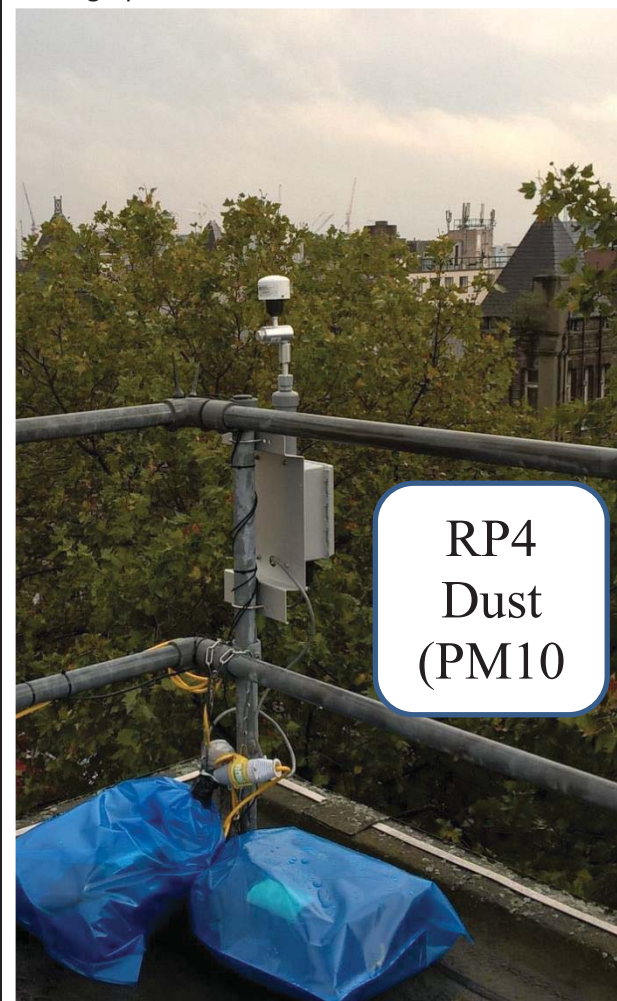
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 28 November 2016 to 24 December 2016 at positions RP1, RP2, RP3, RP4 and is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

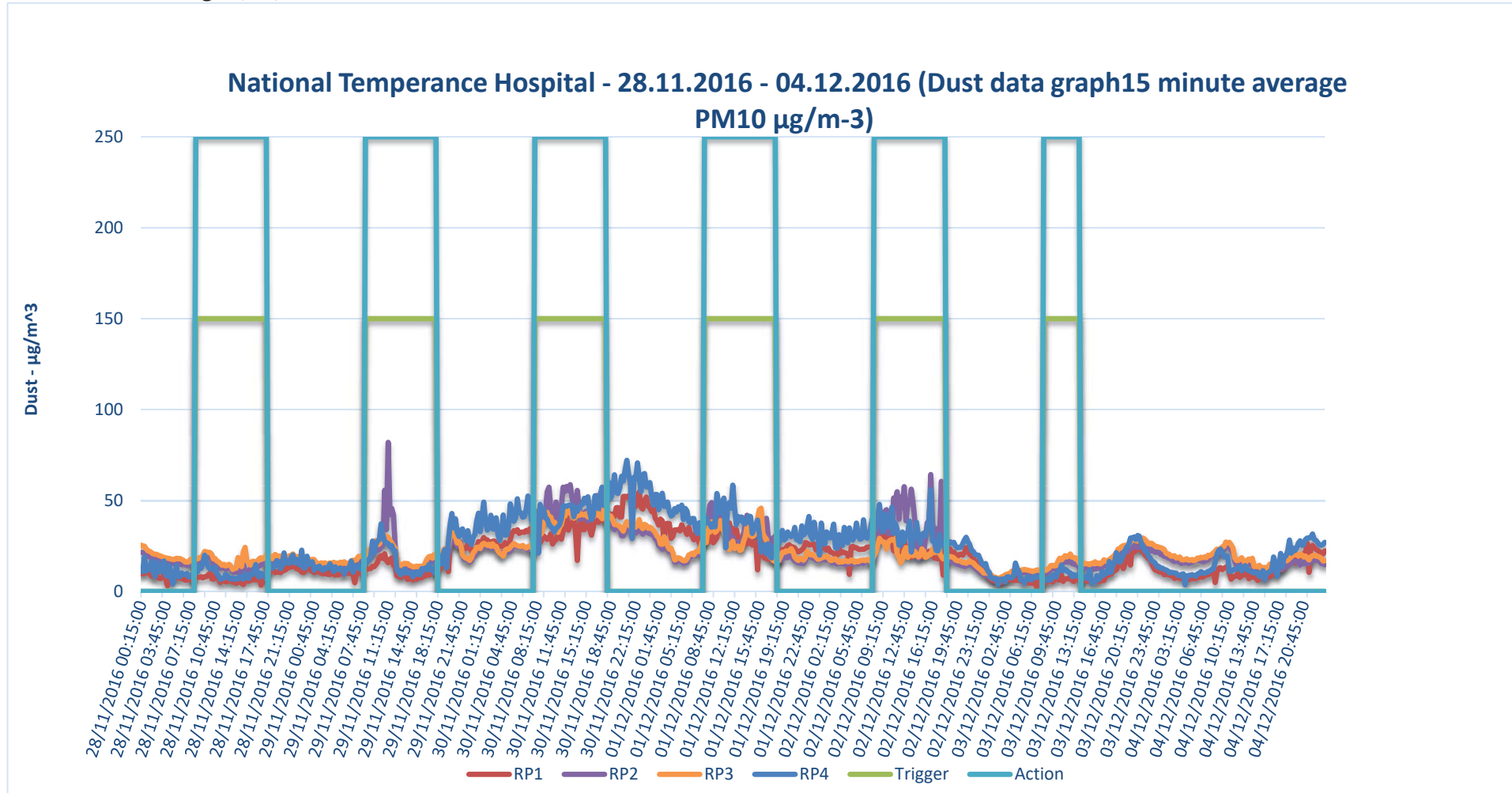
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

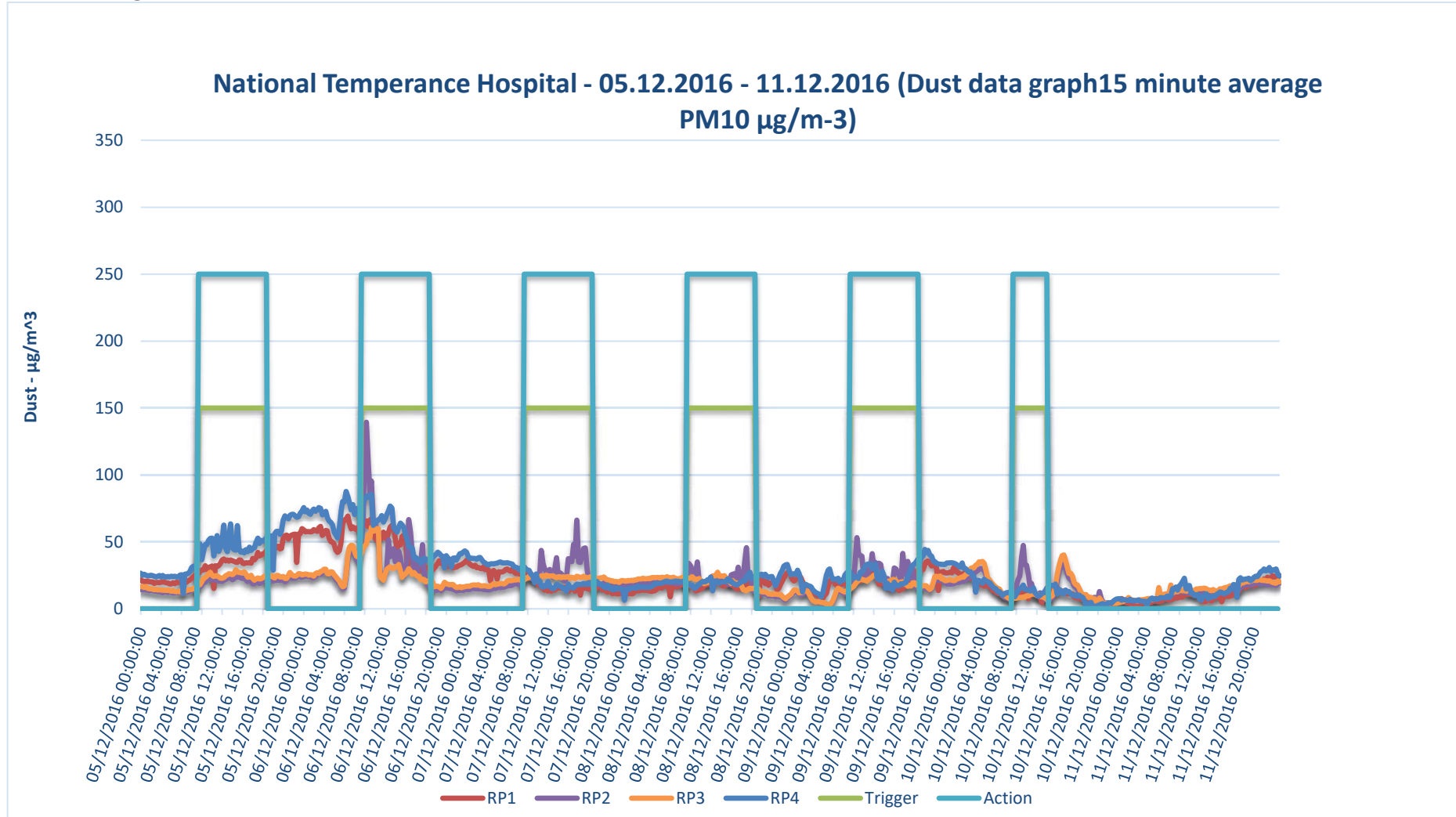
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

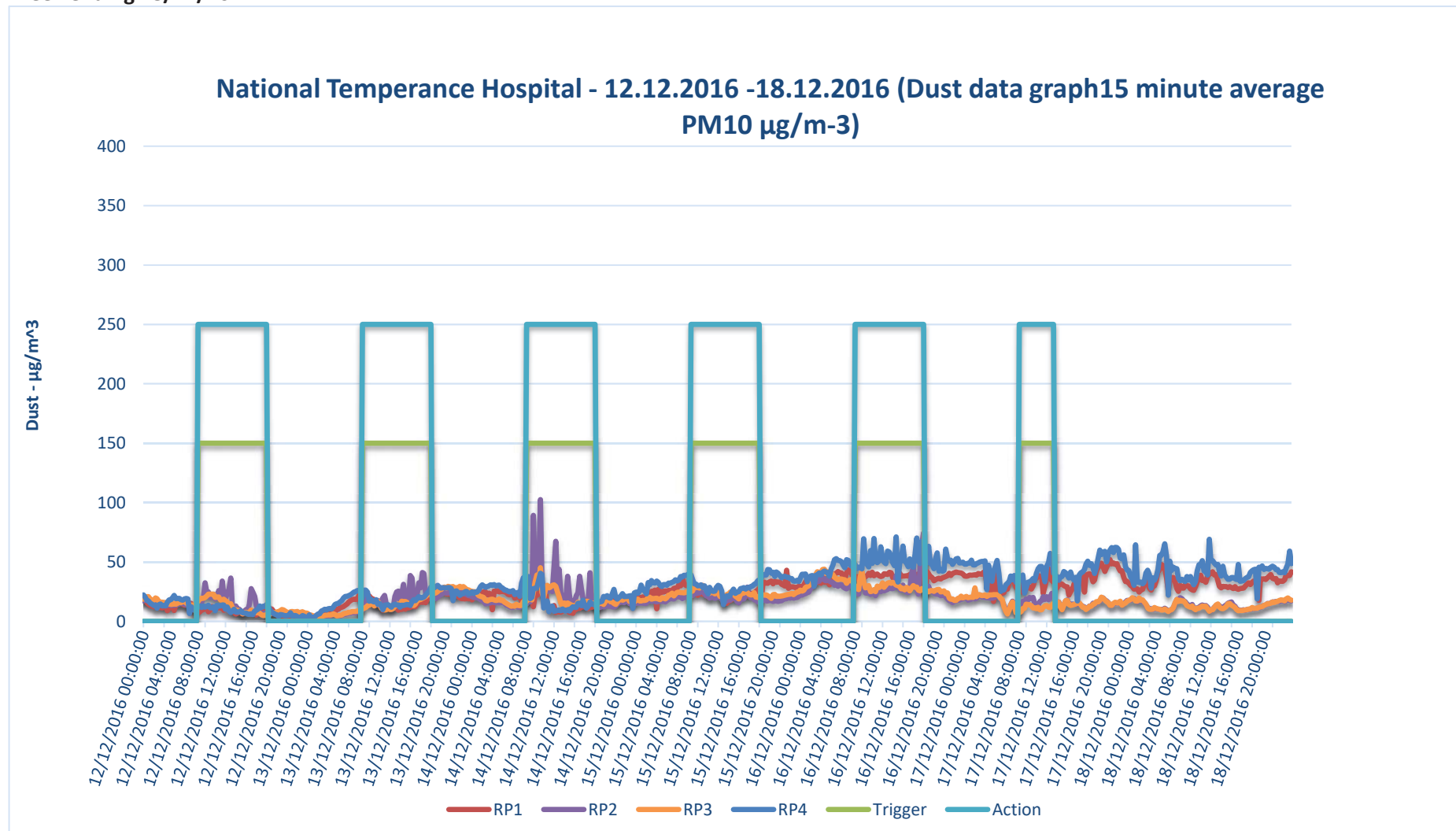
4.0 Dust (PM10) Monitoring Graphs
Week ending 04/12/16



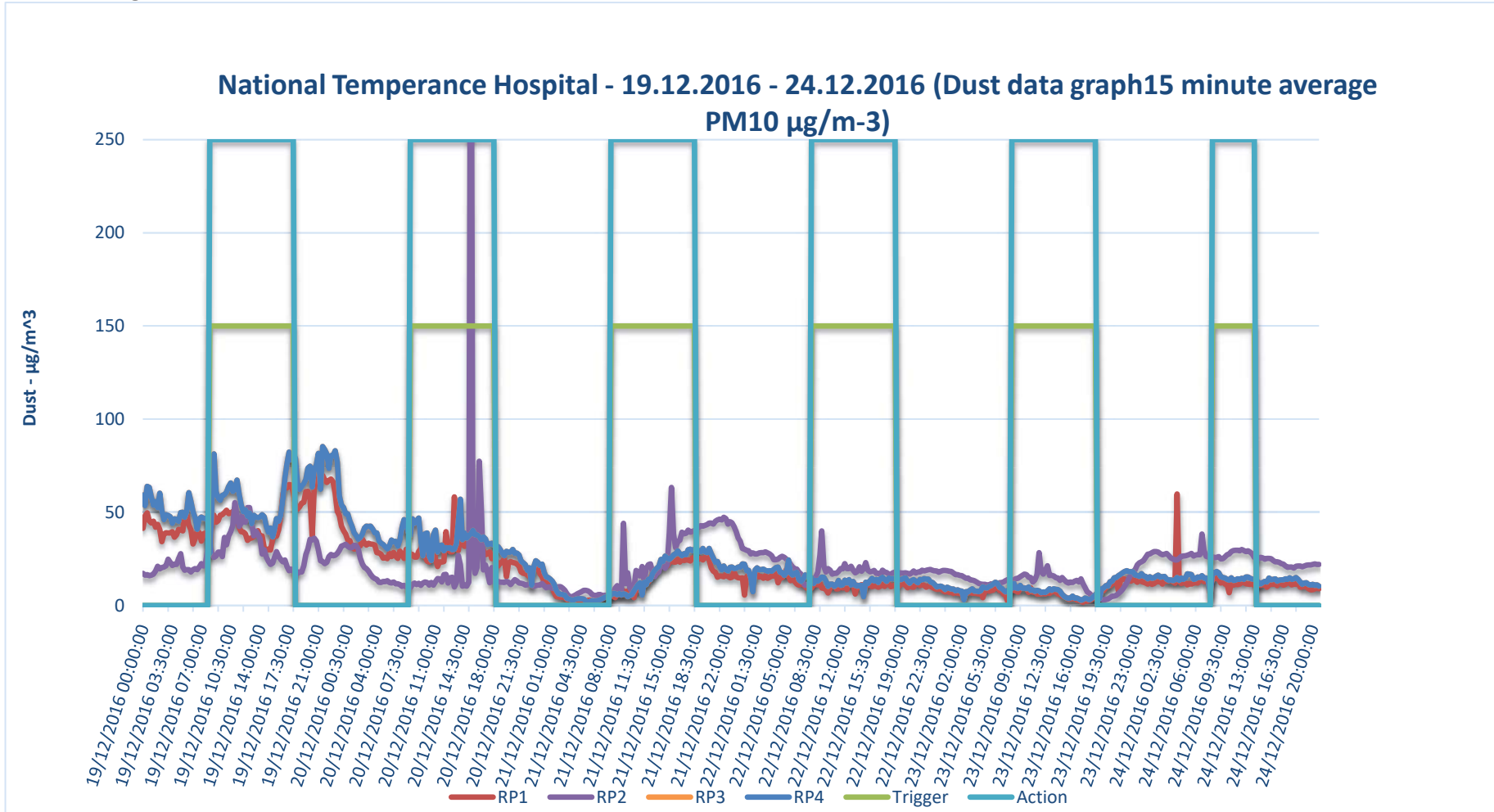
Week ending 11/12/16



Week ending 18/12/16



Week ending 25/12/16



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, RP4 from 28 November 2016 to 24 December 2016.

PM10 concentrations were low at positions RP1 RP3 and RP4 with no exceedance of either the trigger or action level. There was one isolated exceedance of the trigger and action level PM10 concentration limits at position RP2 in this monitoring period. This occurred on 20 December at 15:15. The Keltbray site team maintain a file record of any such exceedance events together with the results of their investigation of the site works at the time the exceedance occurred. Keltbray communicate this to all stakeholders.

The works in this period were predominantly as follows:

- Internal scaffold erection
- External scaffold erection
- Asbestos removal
- Asbestos soft strip
- Roof strip and roof dismantling
- Removal of waste from site

These activities are unlikely to generate sufficient airborne dust particles to cause exceedances of the PM10 trigger and action concentration levels at position RP2. The Keltbray site team responded to this alert and concluded, following investigation and inspection of the site and the activities that were undertaken at the time of the alert that the source was not the National Temperance Hospital site. All operatives on site continue to routinely proactively assess their site work activities for dust generation and the implementation of remedial action to mitigate dust as required.

Unattended Dust (PM10) Monitoring Report

Monitoring Period: 26 December 2016 to 29 January 2017

Project No. EEMC/065/2016

Report No EEMC-DMR-065/007-NTH, HS2

Client: Keltbray Limited

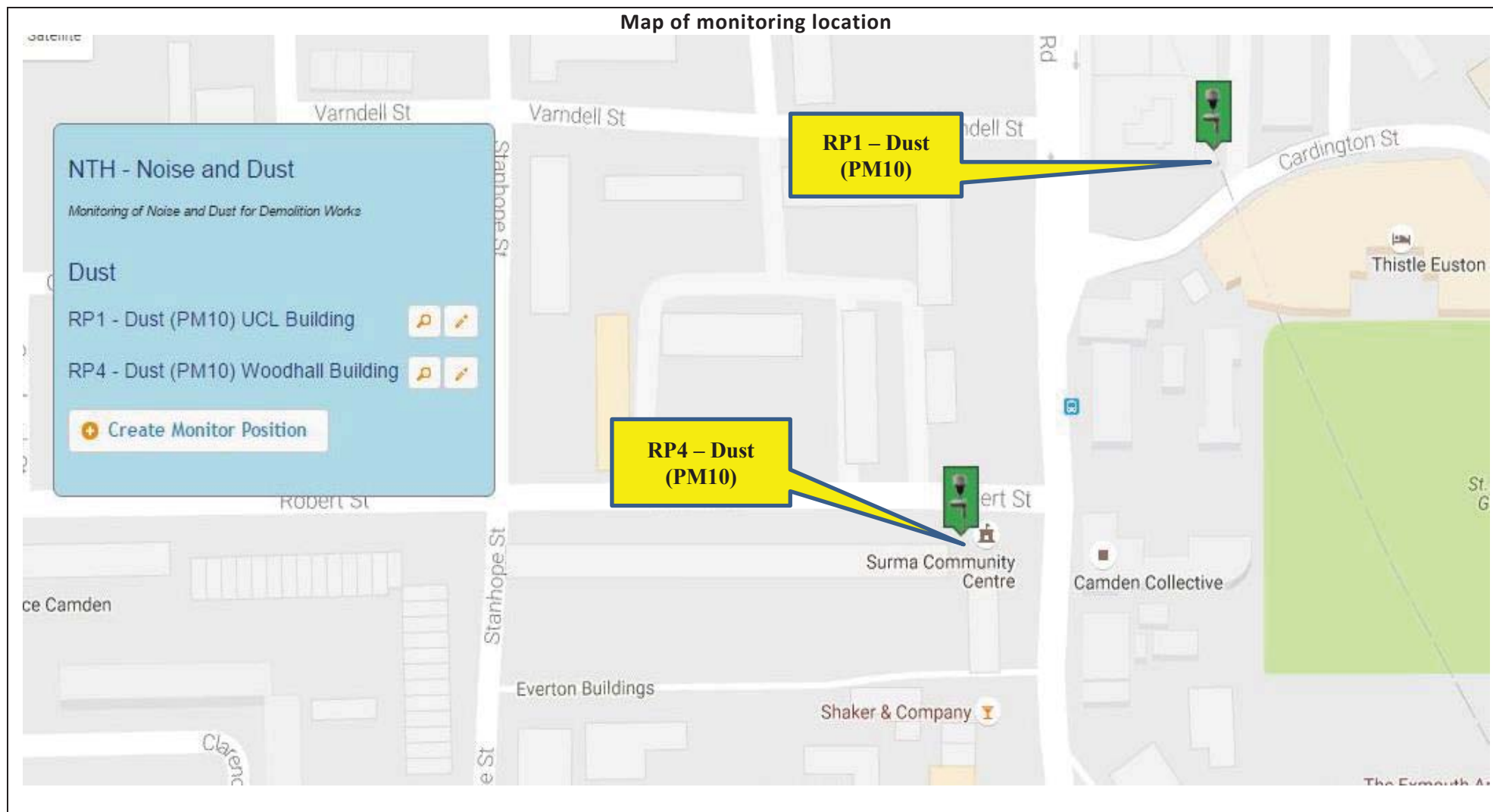
Title: EEMC/065/007 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4
Report No.07

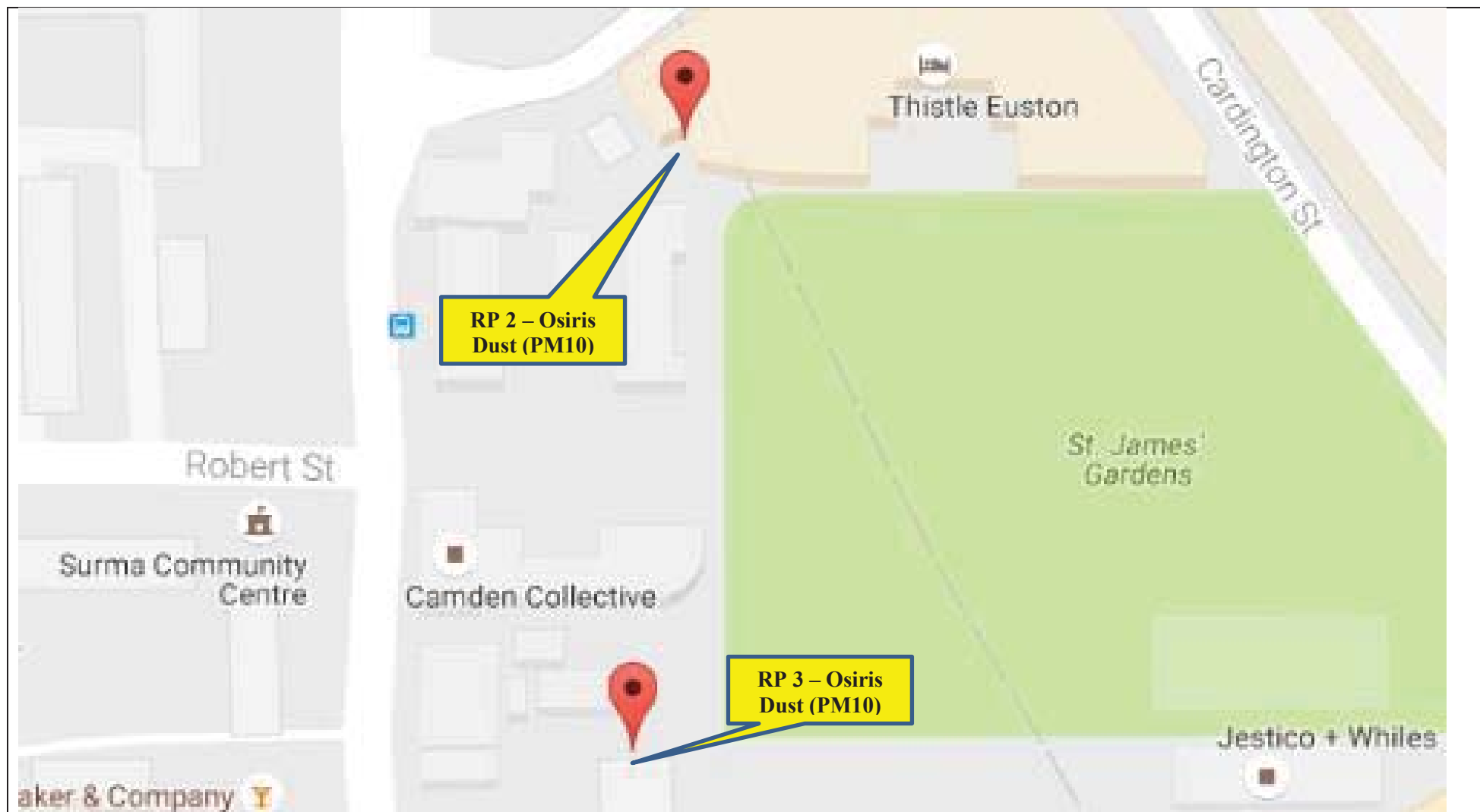
Monitoring Period: 26 December 2016 – 29 January 2017

Details of Dust (PM10) at Receptor Points

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
Manufactures last calibration date:	25/01/2016 ES – 642 – SN – U10897 (See appendix 1)
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3764
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location





Photograph of dust monitor @ RP1



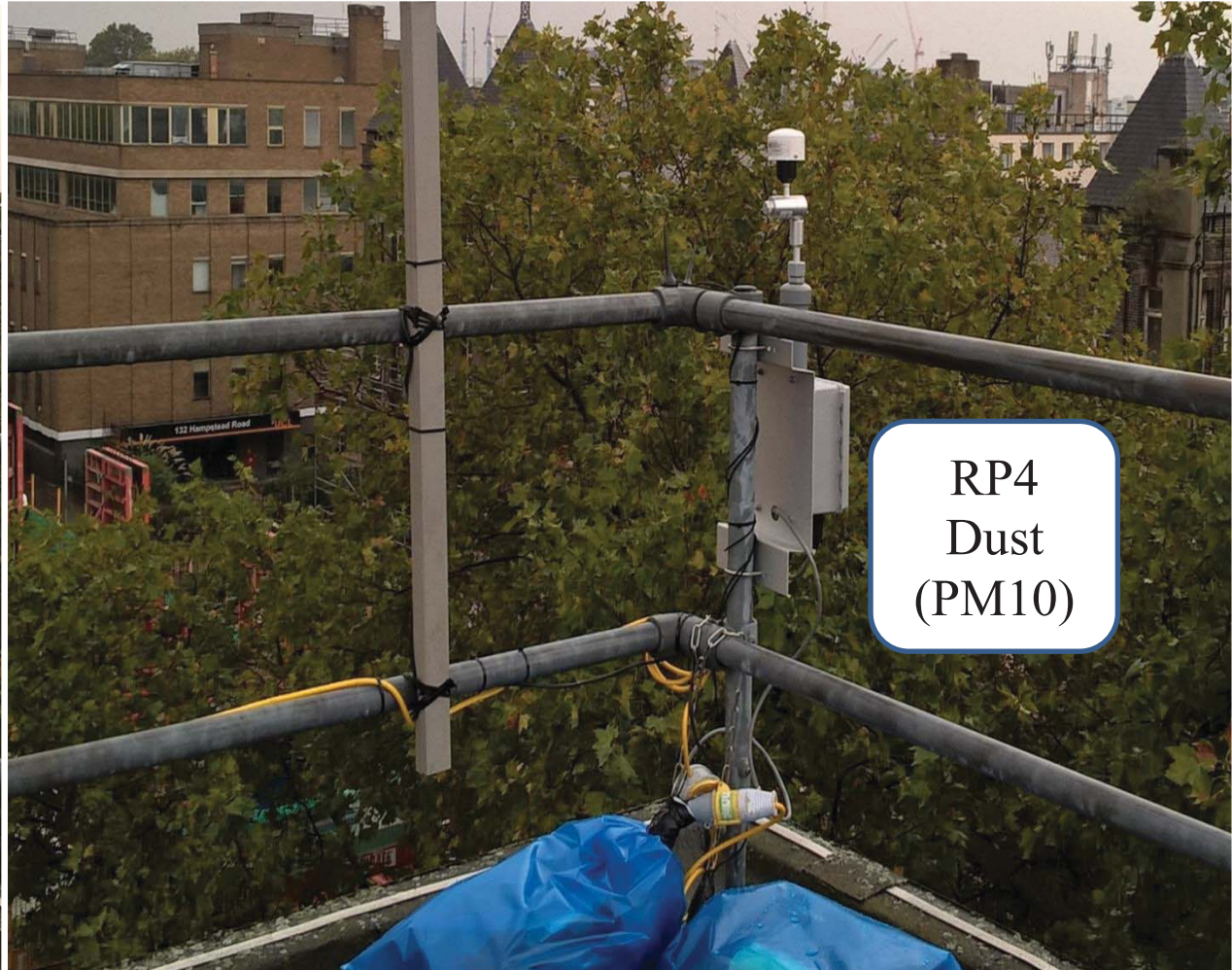
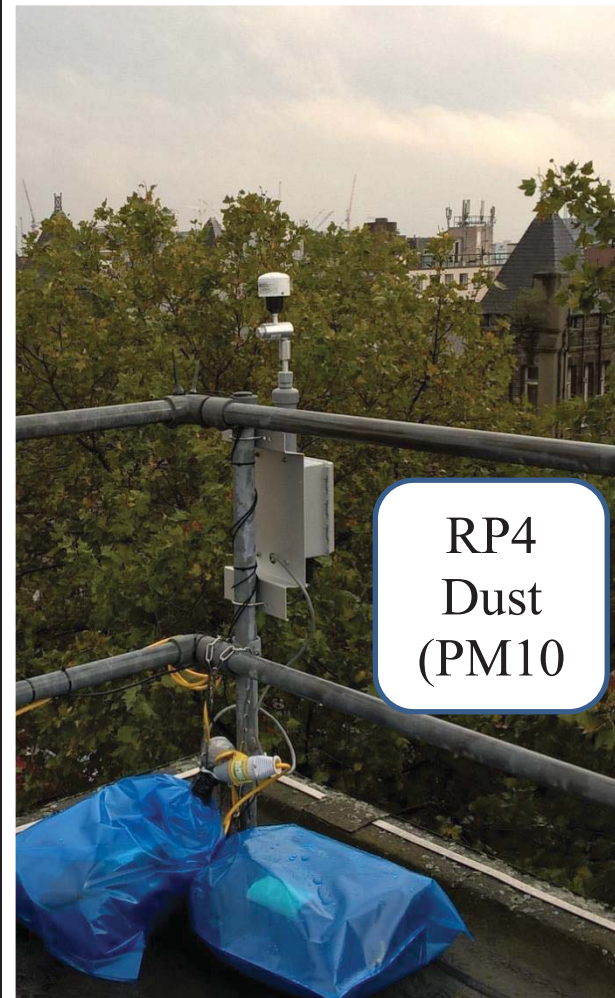
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 26 December 2016 to 29 January 2017 at positions RP1, RP2, RP3, RP4 and is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays. From the 23 December to the 4 January the NH site was shut for the Christmas and New Year break. The activities following the 4 January were limited to general site housekeeping, maintenance of scaffolds and hoarding installations, office and site facilities servicing and deliveries.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

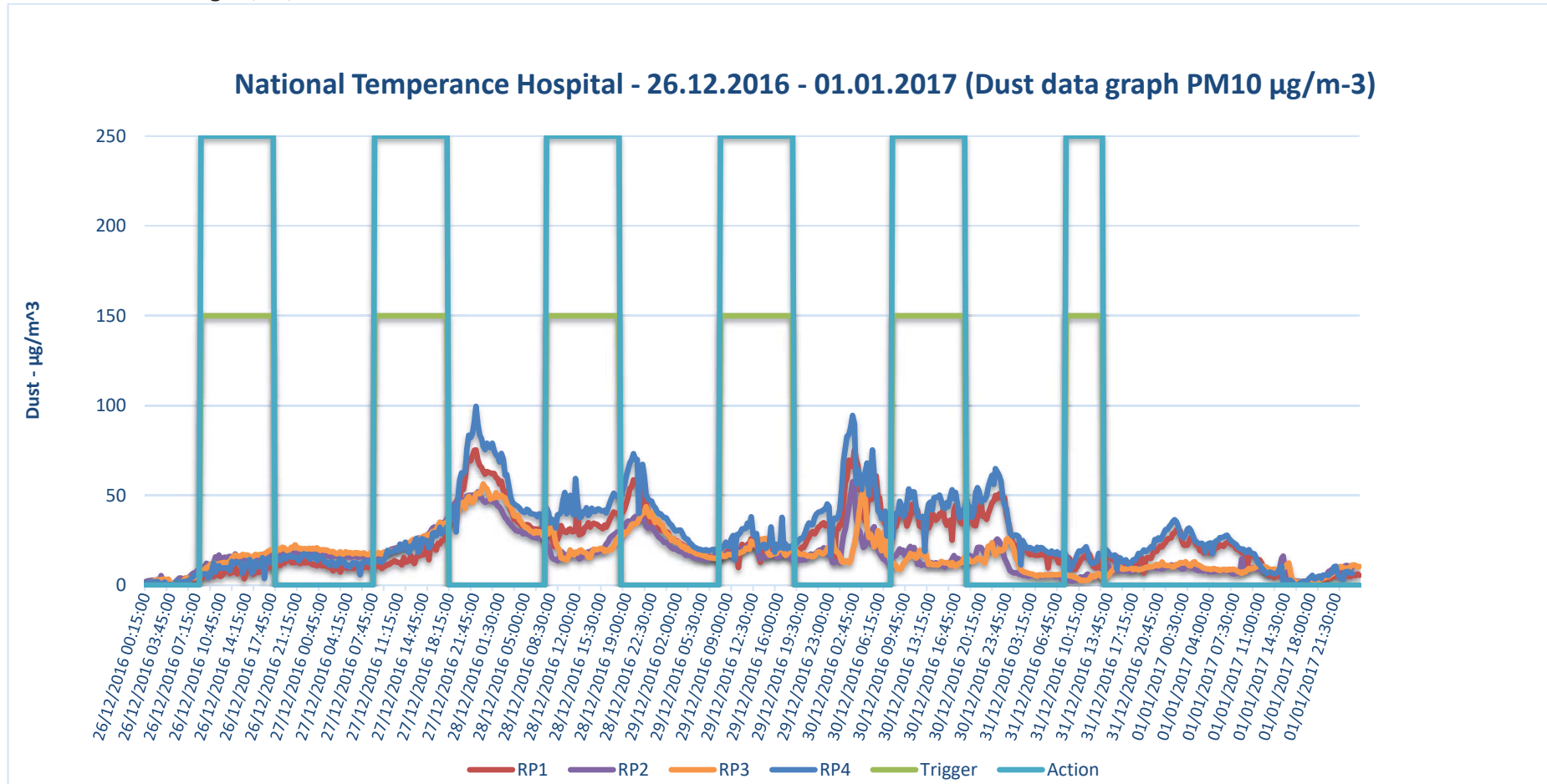
The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

Trigger Level: 150micrograms/m³ (150µg/m³)

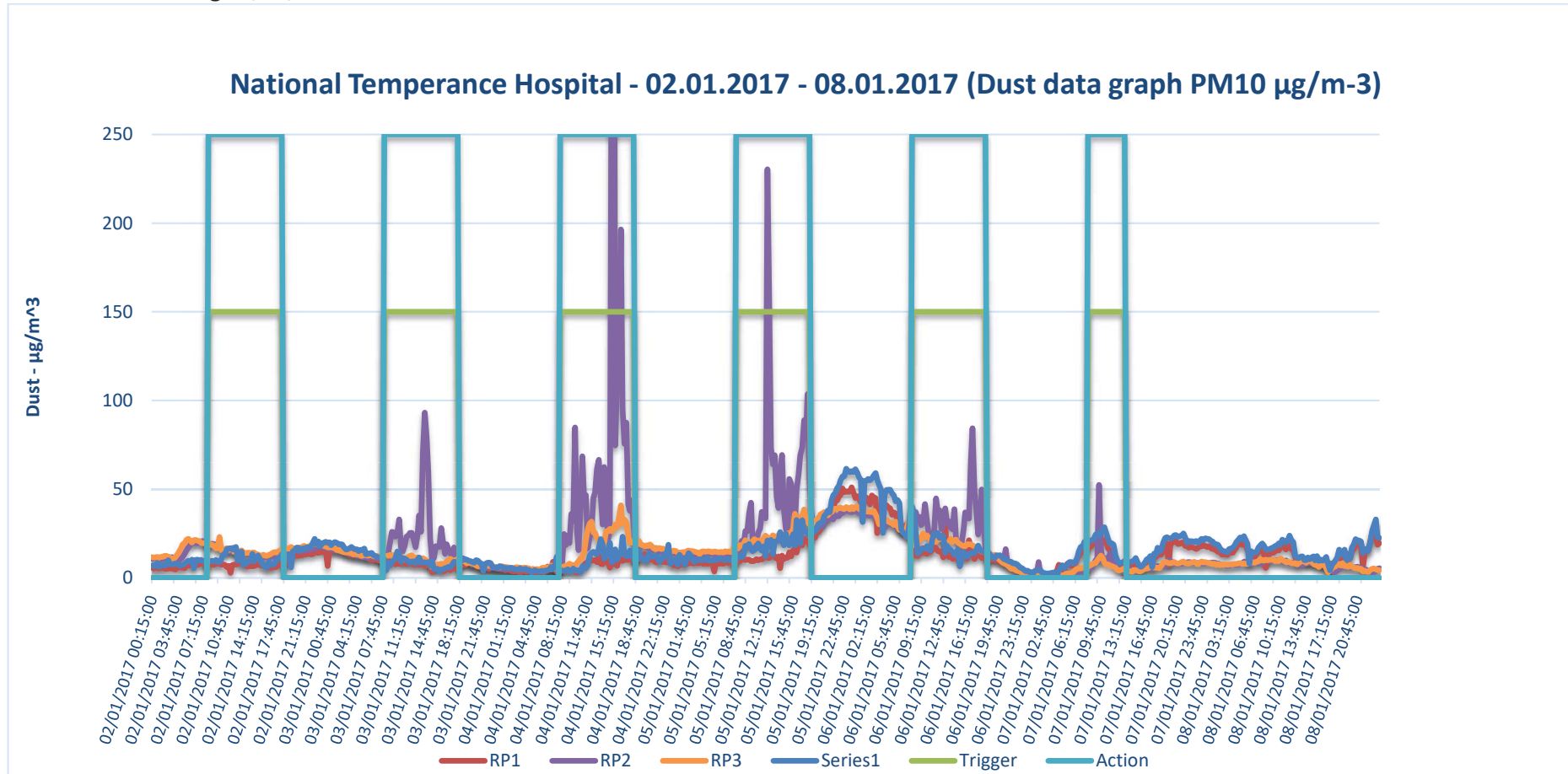
Action level: 250micrograms/m³ (250µg/m³)

4.0 Dust (PM10) Monitoring Graphs

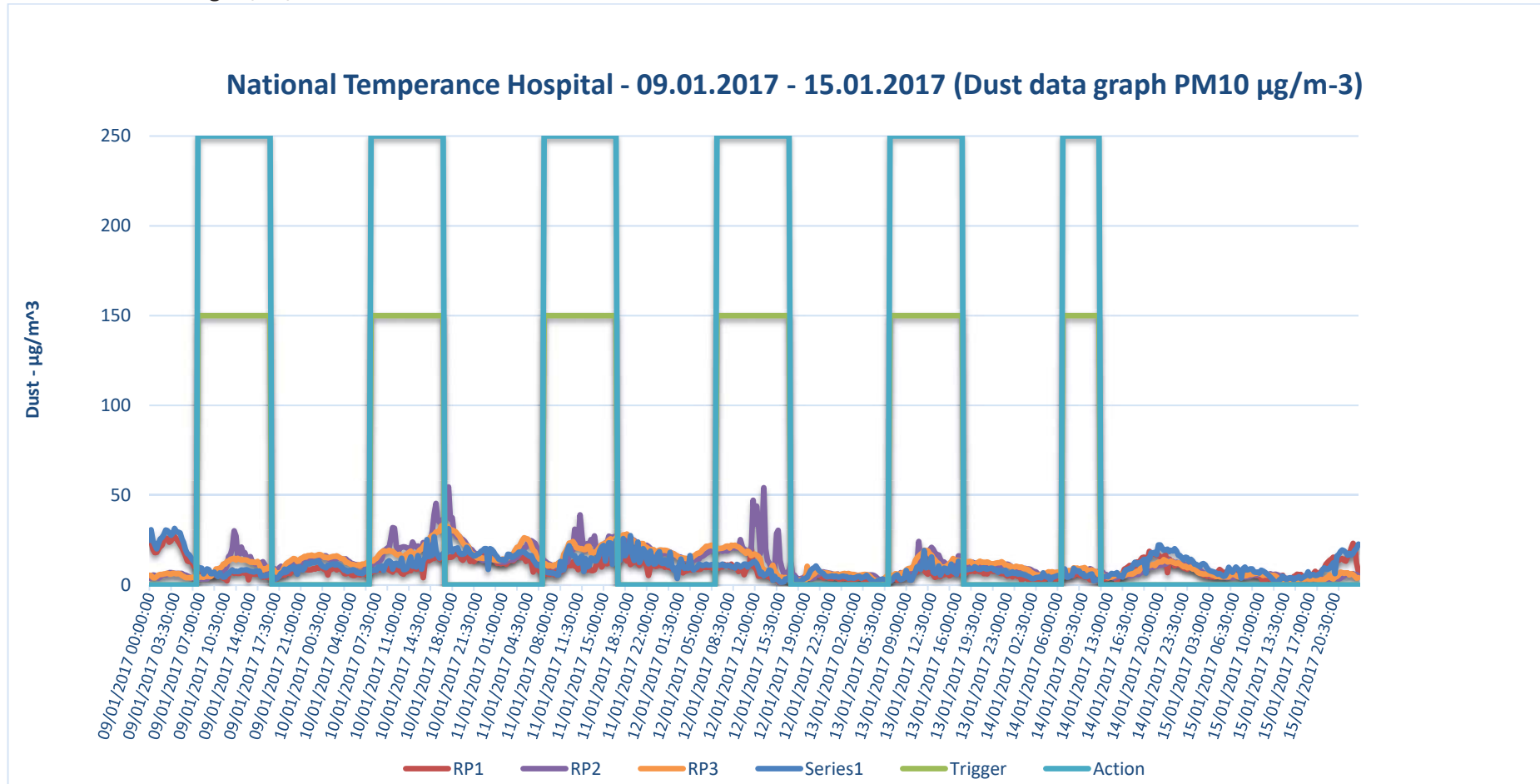
Week ending 01/01/17



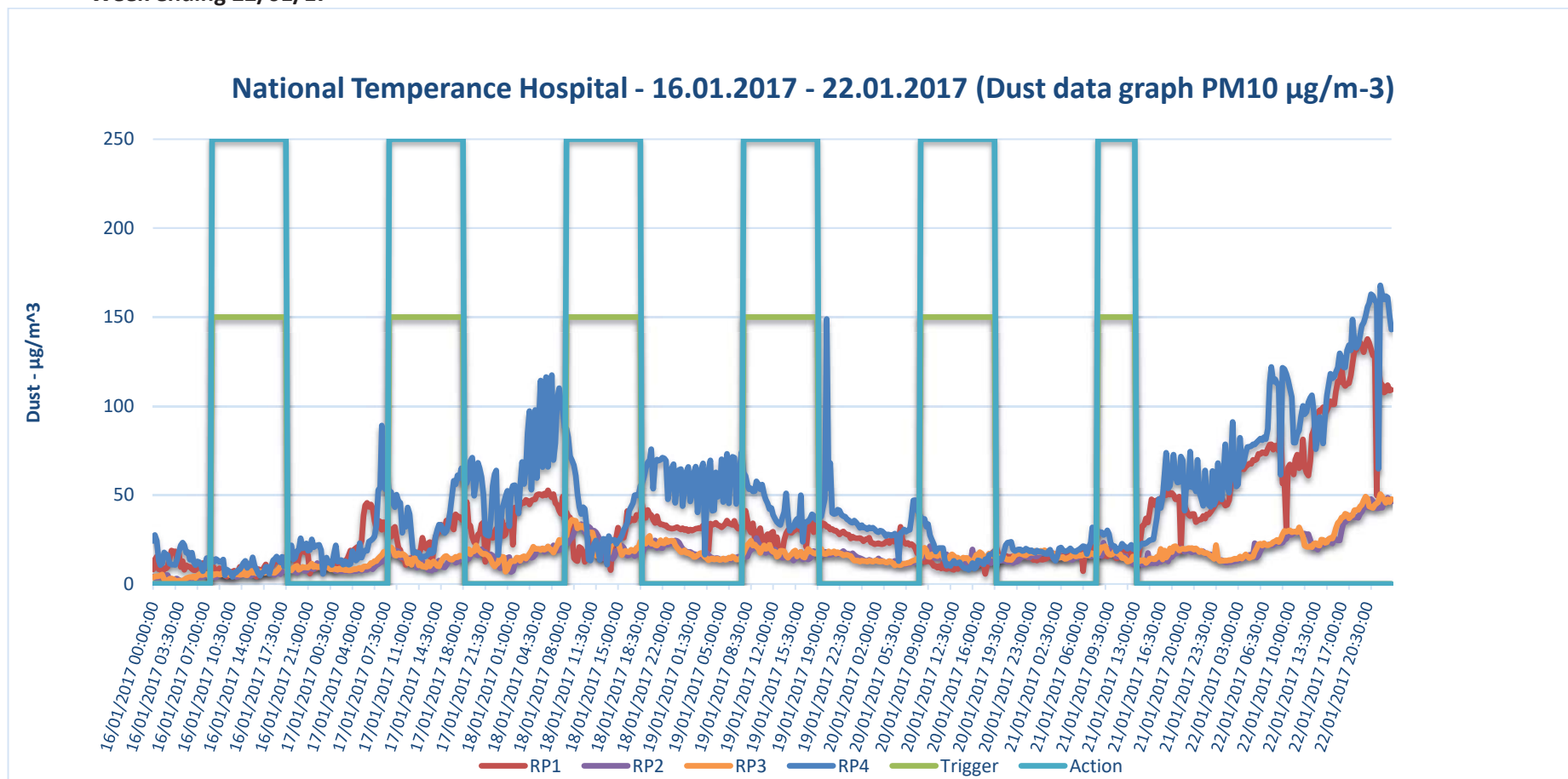
Week ending 08/01/17



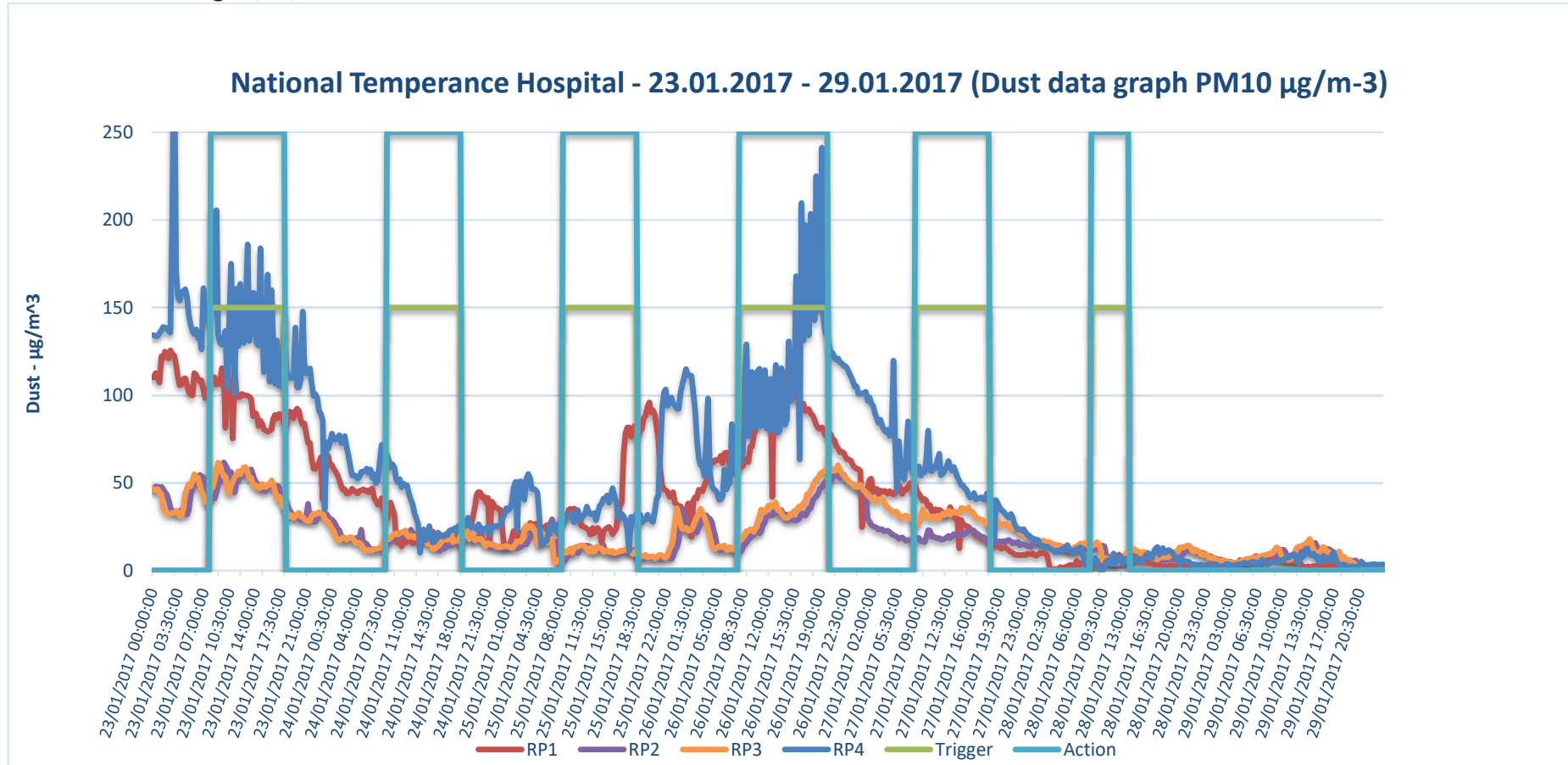
Week ending 15/01/17



Week ending 22/01/17



Week ending 29/01/17



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, RP4 from 26 December 2016 to 29 January 2017.

The measured and recorded data PM10 concentrations show an exceedance of the trigger level at RP2 on the 5 January and at RP4 on the 23 and 26 January. An exceedance of the action level occurred on the 4 January at position RP2. The Keltbray site team maintain a file record of these exceedance events together with the results of their investigation of the site works at the time the exceedance occurred. Keltbray communicate this to all stakeholders.

However, the works in this period were predominantly as follows:

- General site housekeeping
- Maintenance of scaffolds and hoarding installations
- Office and site facilities servicing and deliveries

There was very little actual demolition activity in this period on the NTH site.

The activities itemized above are not likely to generate sufficient airborne dust particles to cause exceedances of the PM10 trigger and action concentration levels. The Keltbray site team responded to alerts and concluded, following investigation and inspection of the site and the activities that were undertaken at the time of the alert that the source was not the National Temperance Hospital site. It is known that due to high pressure and still wind conditions during January 2017 that general particulate pollution in London was high and this is indicated in the graph for the final week of this period.

All operatives on site continue to routinely assess their work activities for dust generation and assess the implementation of practicable remedial measures to mitigate dust as required.

Unattended Dust (PM10) Monitoring Report

Monitoring Period: 30 January to 26 February 2017

Project No. EEMC/065/2016

Report No EEMC-DMR-065/008-NTH, HS2

Client: Keltbray Limited

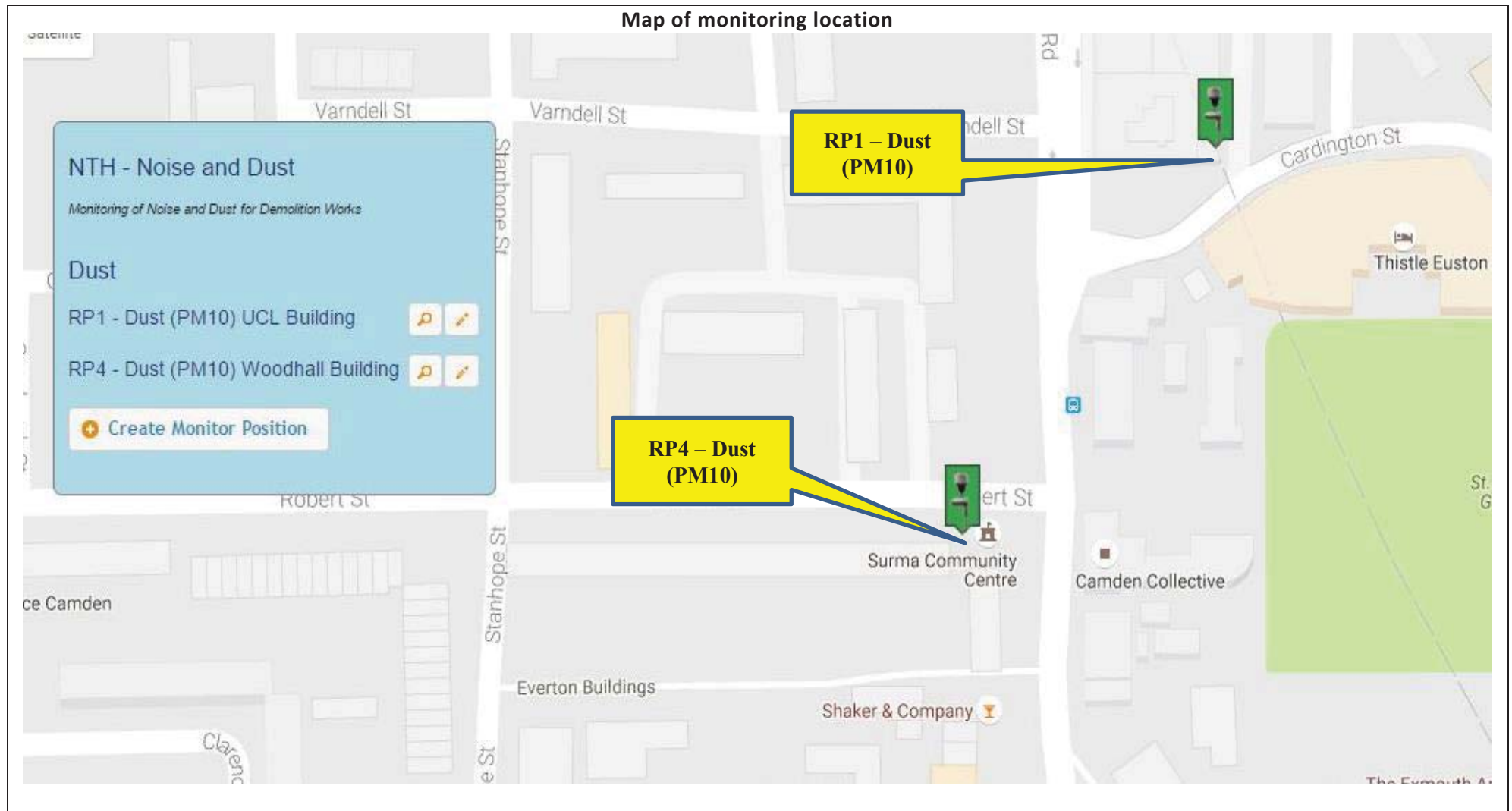
Title: EEMC/065/008 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4
Report No.08

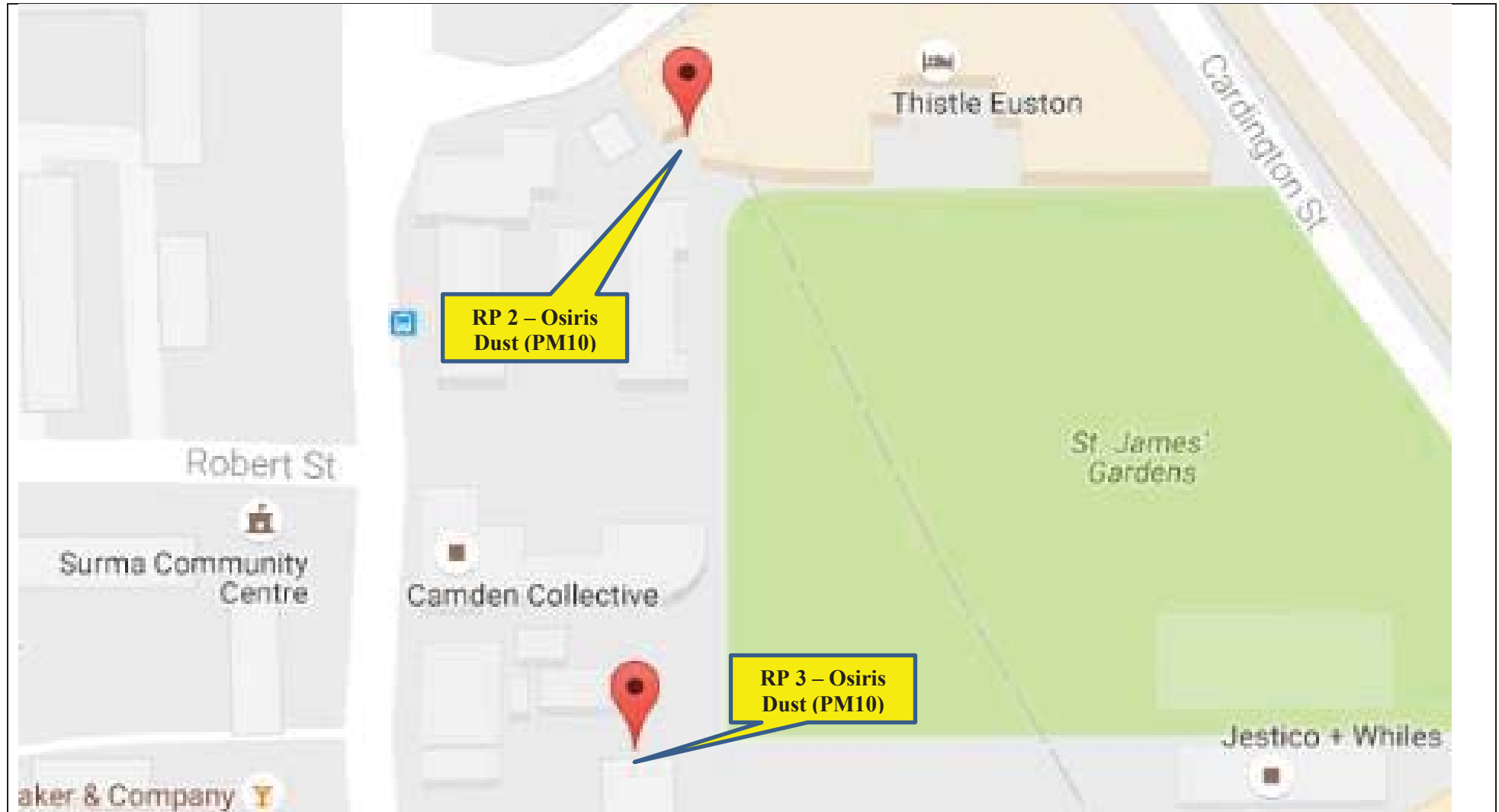
Monitoring Period: 30 January - 26 February 2017

Details of Dust (PM10) at Receptor Points (RP)

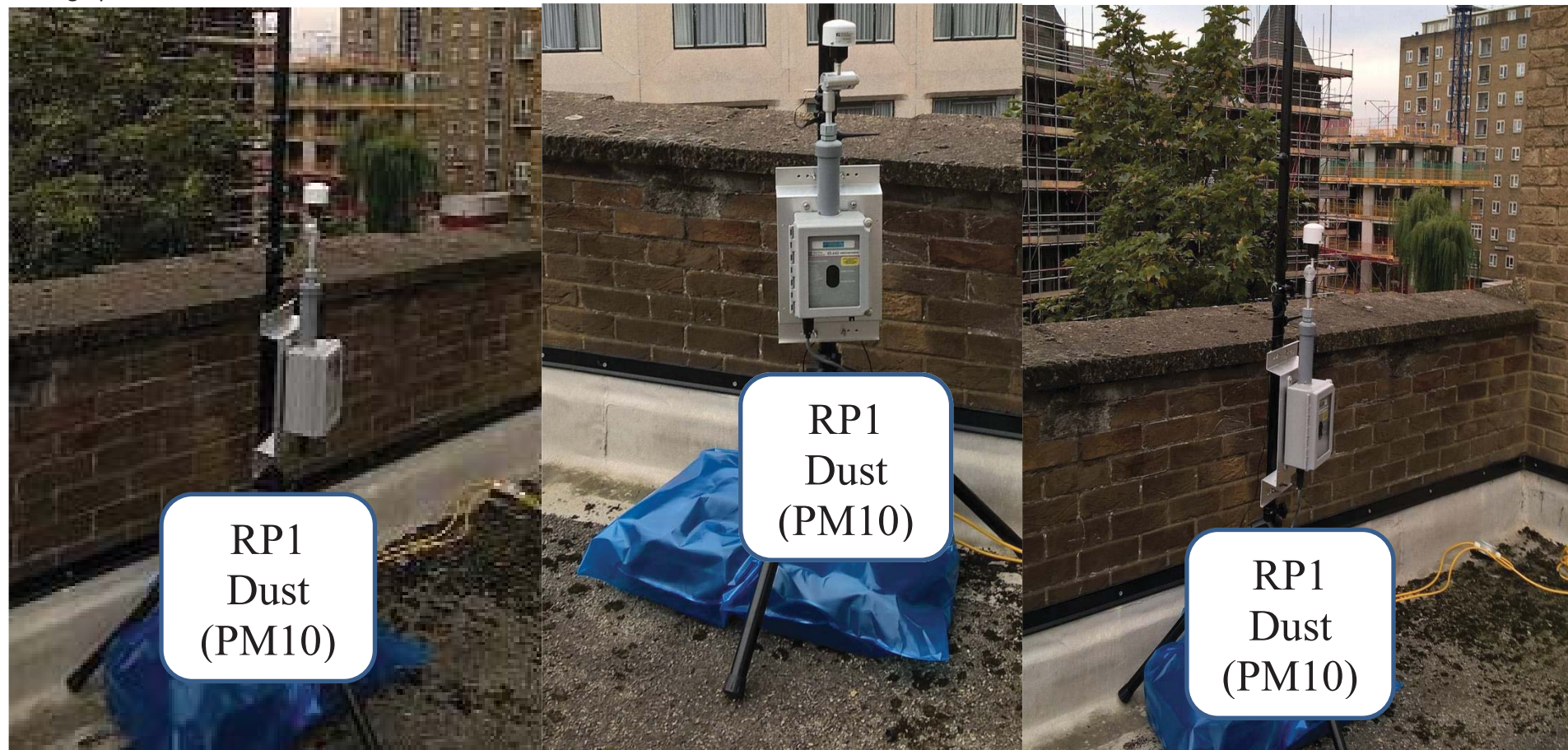
ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
Manufactures last calibration date:	25/01/2016 ES – 642 – SN – U10897 (See appendix 1)
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3765
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location





Photograph of dust monitor @ RP1



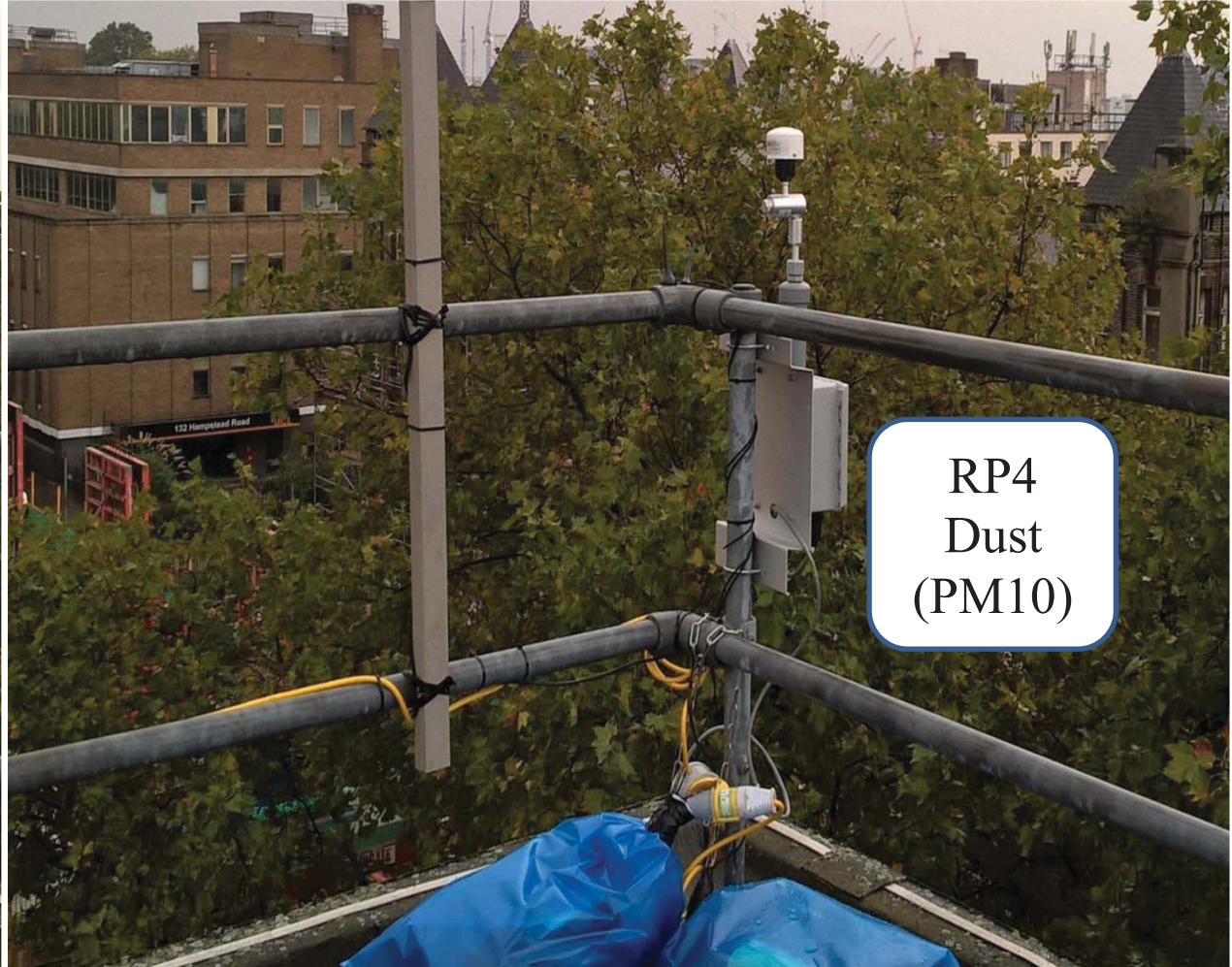
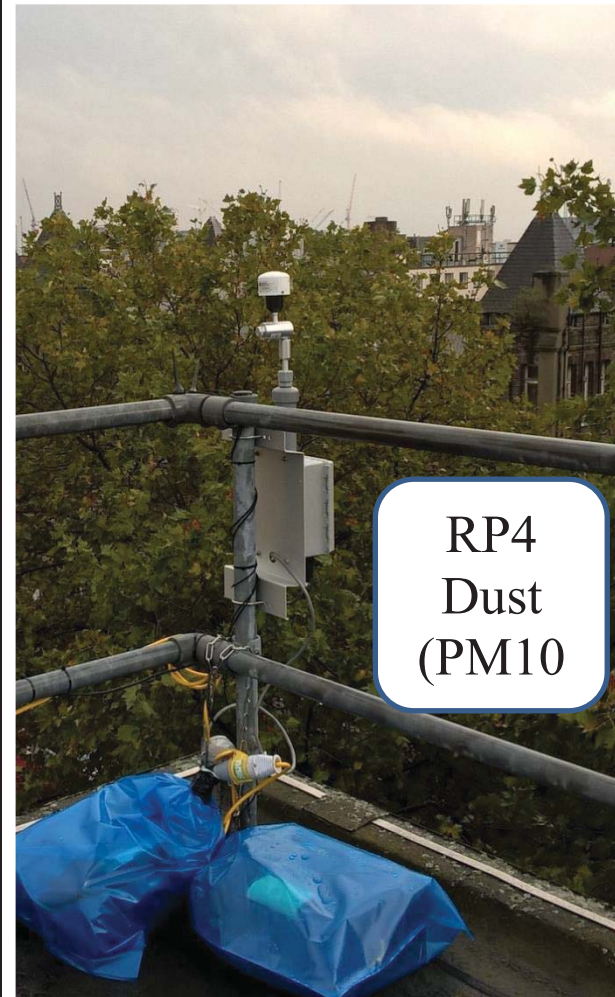
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 26 30 January to 26 February 2017 at positions RP1, RP2, RP3, RP4 and is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

Activities in this period included the following:

- Striking internal scaffold to the courtyard
- Striking external scaffold to Hampstead Road and Cardington Street
- Post-asbestos soft strip to the ground floor
- Demolition of walls and floor slab to the third floor of building North
- Demolition of main building Party Wall (chimney and roof)
- Demolition of main building West second and third floors
- Demolition of main building East third and second floor
- Temporary weathering to party wall
- Cranage twice a week

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

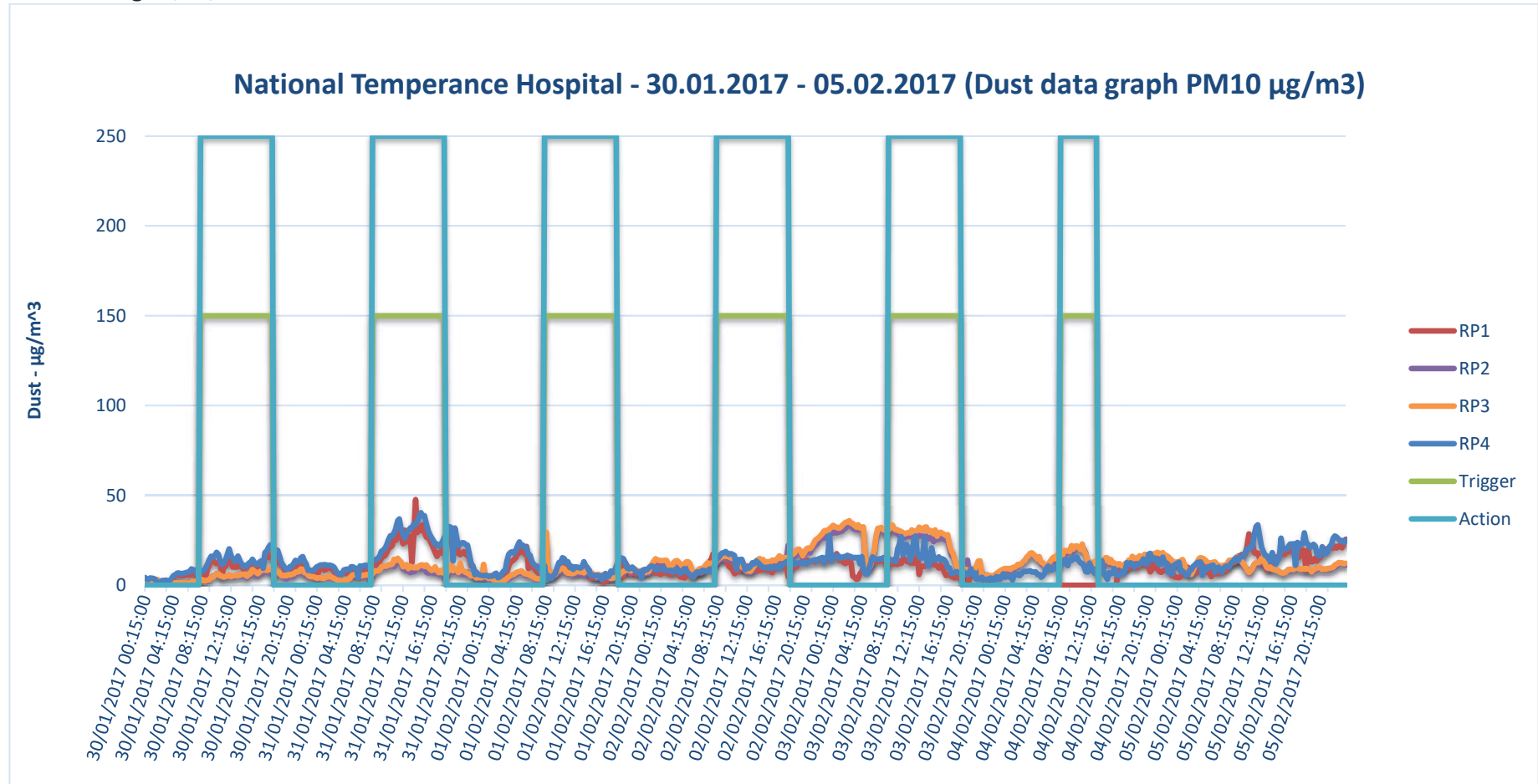
The agreed PM10 trigger and action levels for PM10 concentrations in 15minutes periods are:

Trigger Level: 150micrograms/m³ (150µg/m³)

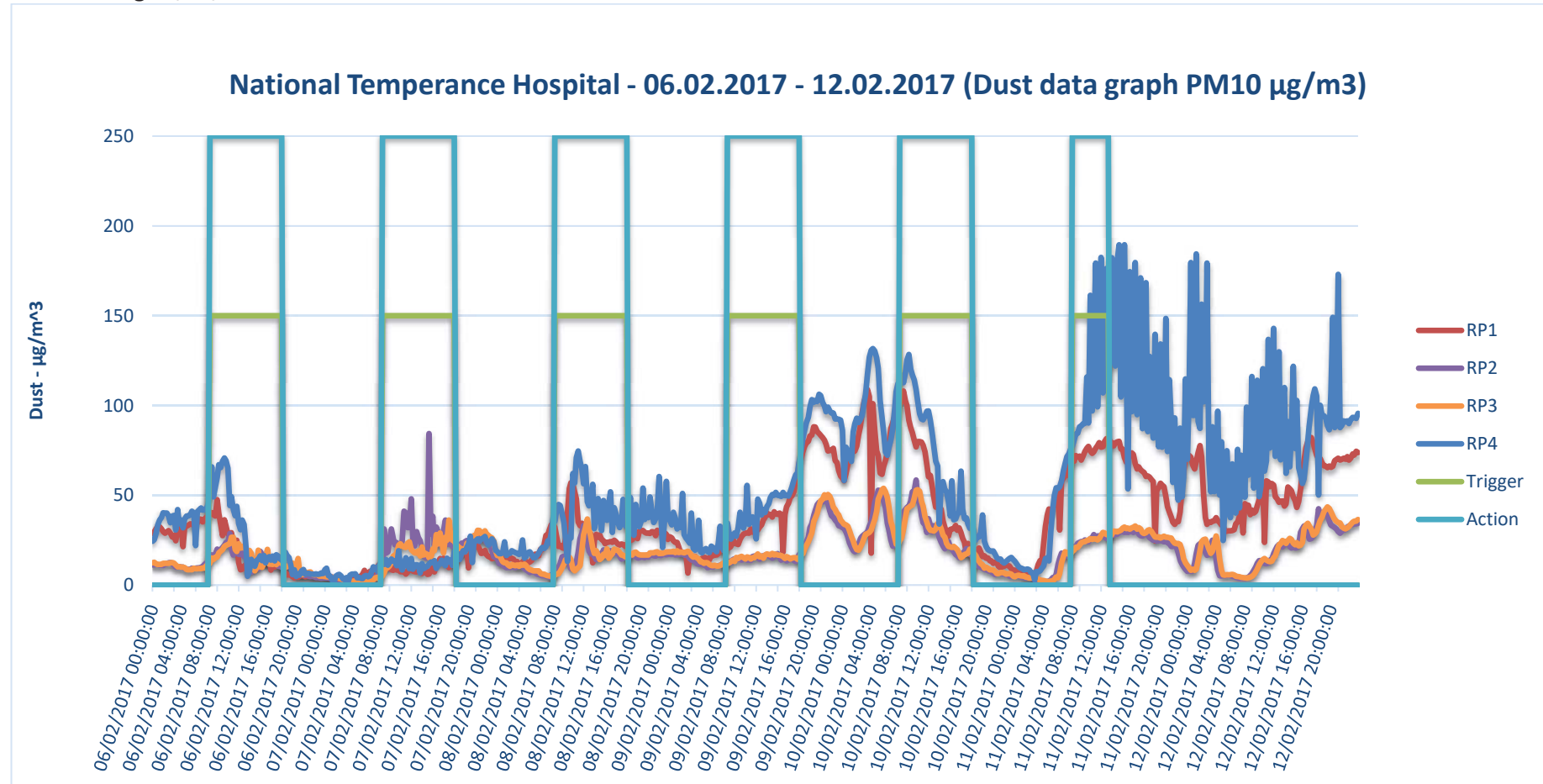
Action level: 250micrograms/m³ (250µg/m³)

4.0 Dust (PM10) Monitoring Graphs

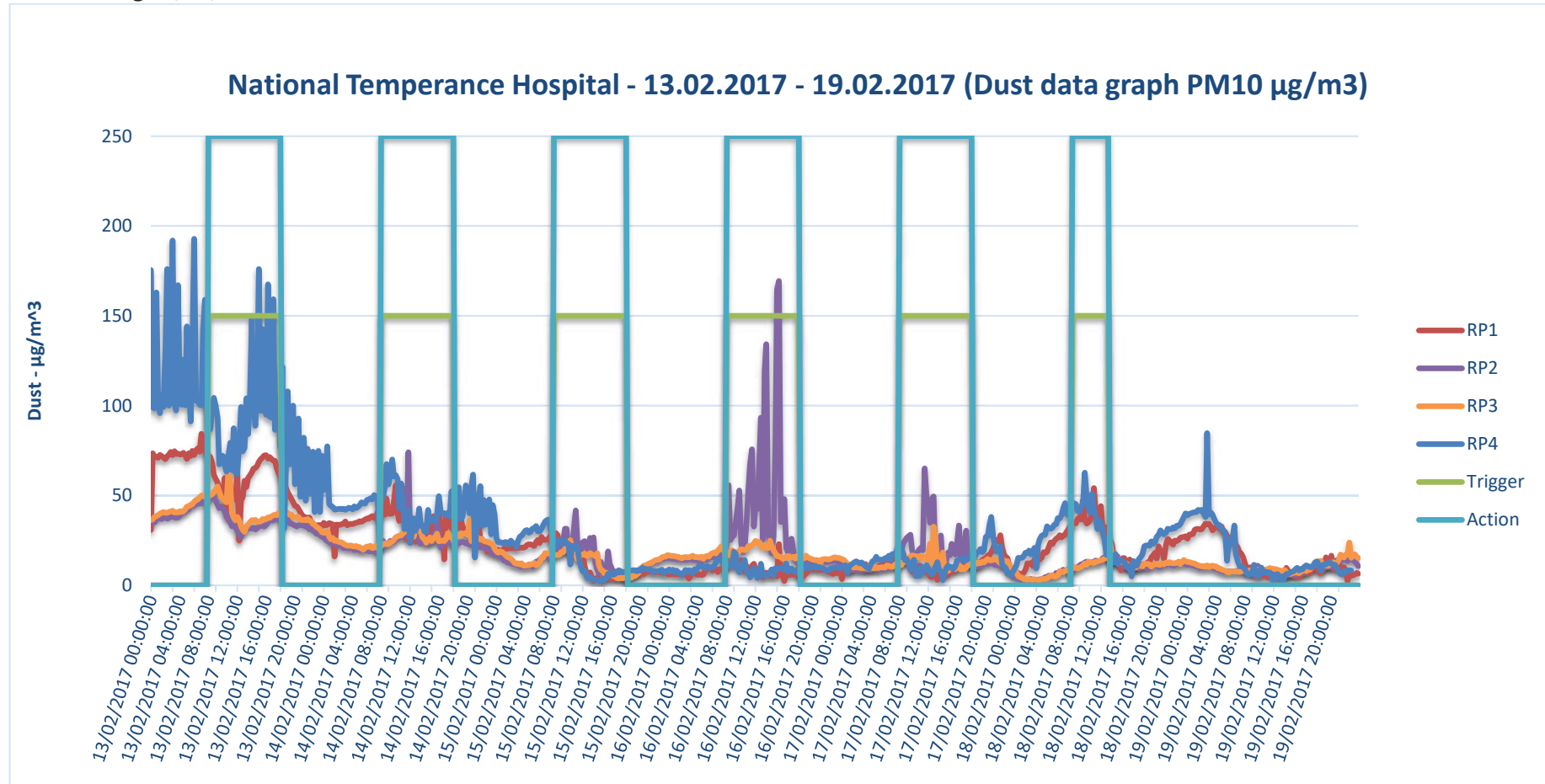
Week ending 05/02/17



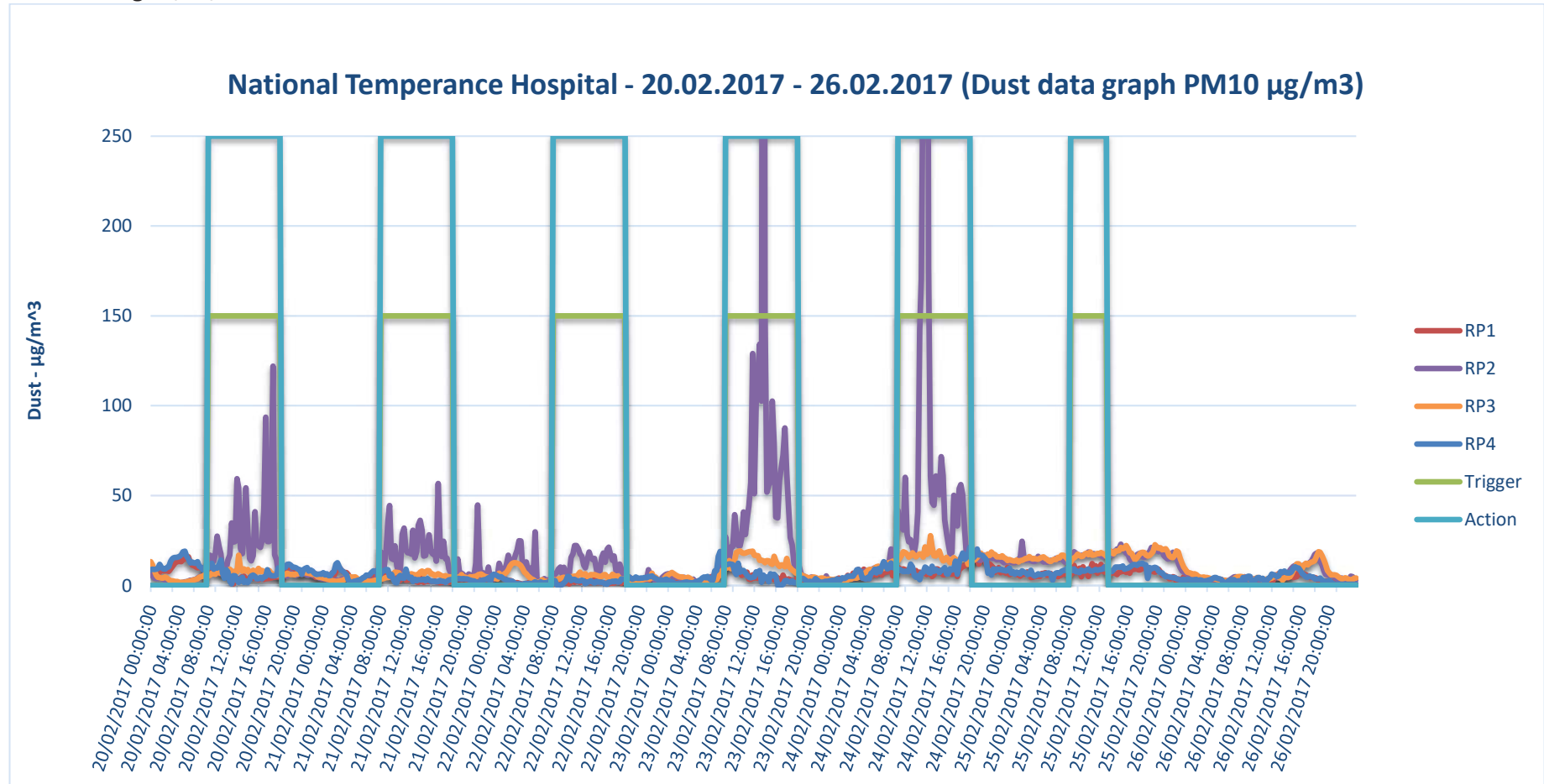
Week ending 12/02/17



Week ending 19/02/17



Week ending 26/02/17



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, and RP4 from 30 January to 26 February 2017.

The graphs presented in section 4 show that PM10 concentrations in the first week were low at all measurement positions with no exceedance of either the trigger or action level. From 9 January to 14 January PM10 concentrations at all positions were elevated and this can be attributed to a London wide pollution event that occurred caused by the prevailing climatic conditions at that time. The PM10 concentrations exceeded the trigger level on numerous occasions during this event. There were other exceedances of both the trigger and action level during this period on the 16th 23rd and 24th February 2017 at position RP2.

The works activities in this period included the following:

- Striking internal scaffold to the courtyard
- Striking external scaffold to Hampstead Road and Cardington Street
- Post-asbestos soft strip to the ground floor
- Demolition of walls and floor slab to the third floor of building North
- Demolition of main building Party Wall (chimney and roof)
- Demolition of main building West second and third floors
- Demolition of main building East third and second floor
- Temporary weathering to party wall
- Cranage twice a week

These activities are unlikely to generate sufficient airborne dust particles to cause exceedances of the PM10 trigger and action concentration levels at position RP2. The Keltbray site team logged and responded to these action level alerts and concluded, following investigation and inspection of the site and the activities that were undertaken at the time of the alert and the dust control mitigation measures being used that the source was unlikely to be activities at the National Temperance Hospital site. All operatives on site continue to routinely proactively assess their site work activities for dust generation and the implementation of remedial action to mitigate dust as required. It is possible that the cause of alerts at RP2 is the adjacent Lovell site, or possibly the location near RP2 being used for smoking breaks. The site management will respond to determine and clarify the cause of any further action level exceedance alerts that occur at position RP2.

Unattended Dust (PM10) Monitoring Report

Monitoring Period: 27 February to 26 March 2017

Project No. EEMC/065/2016

Report No. EEMC-DMR-065/009-NTH, HS2

Client: Keltbray Limited

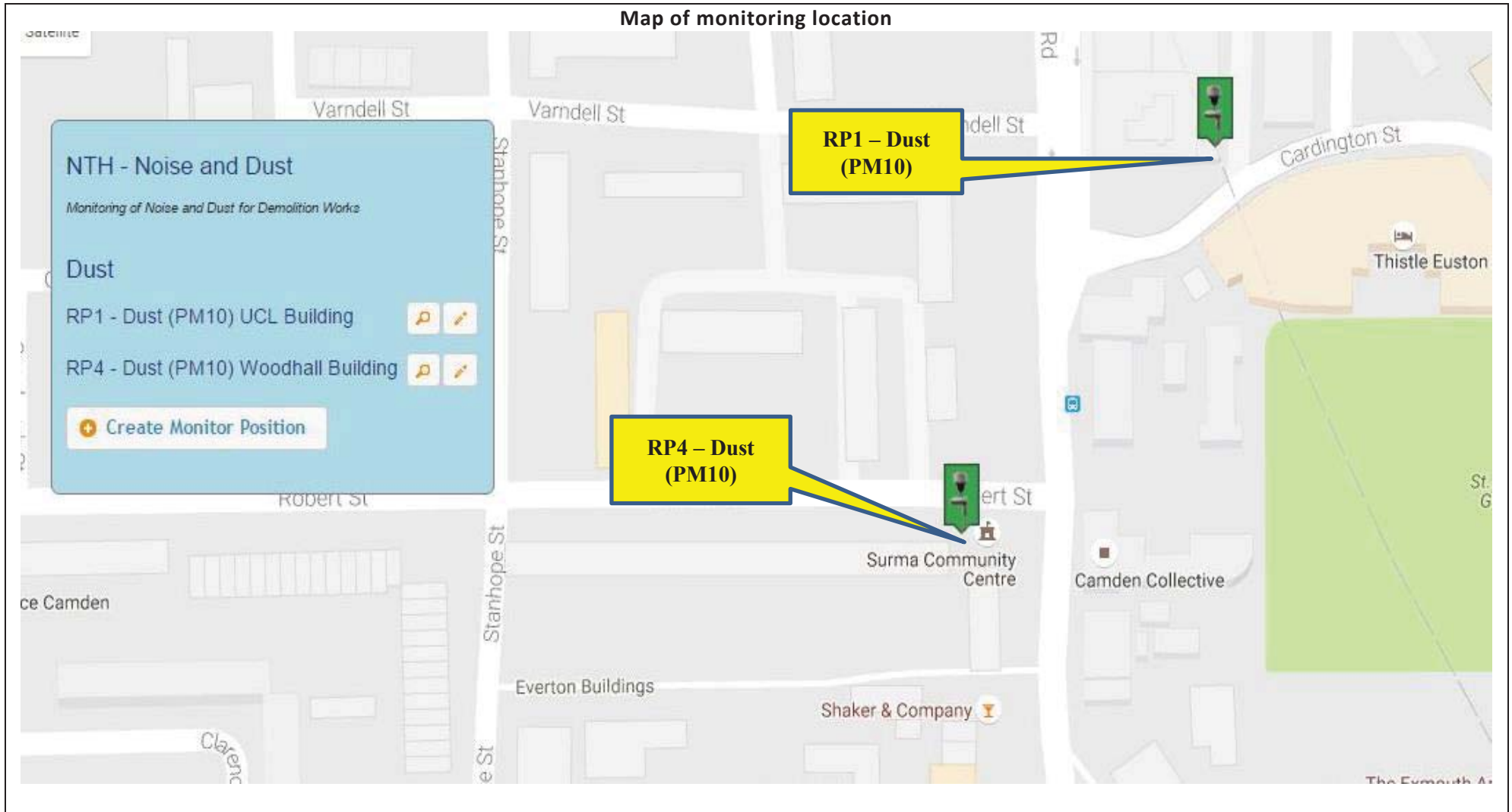
Title: EEMC/065/009 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4
Report No.09

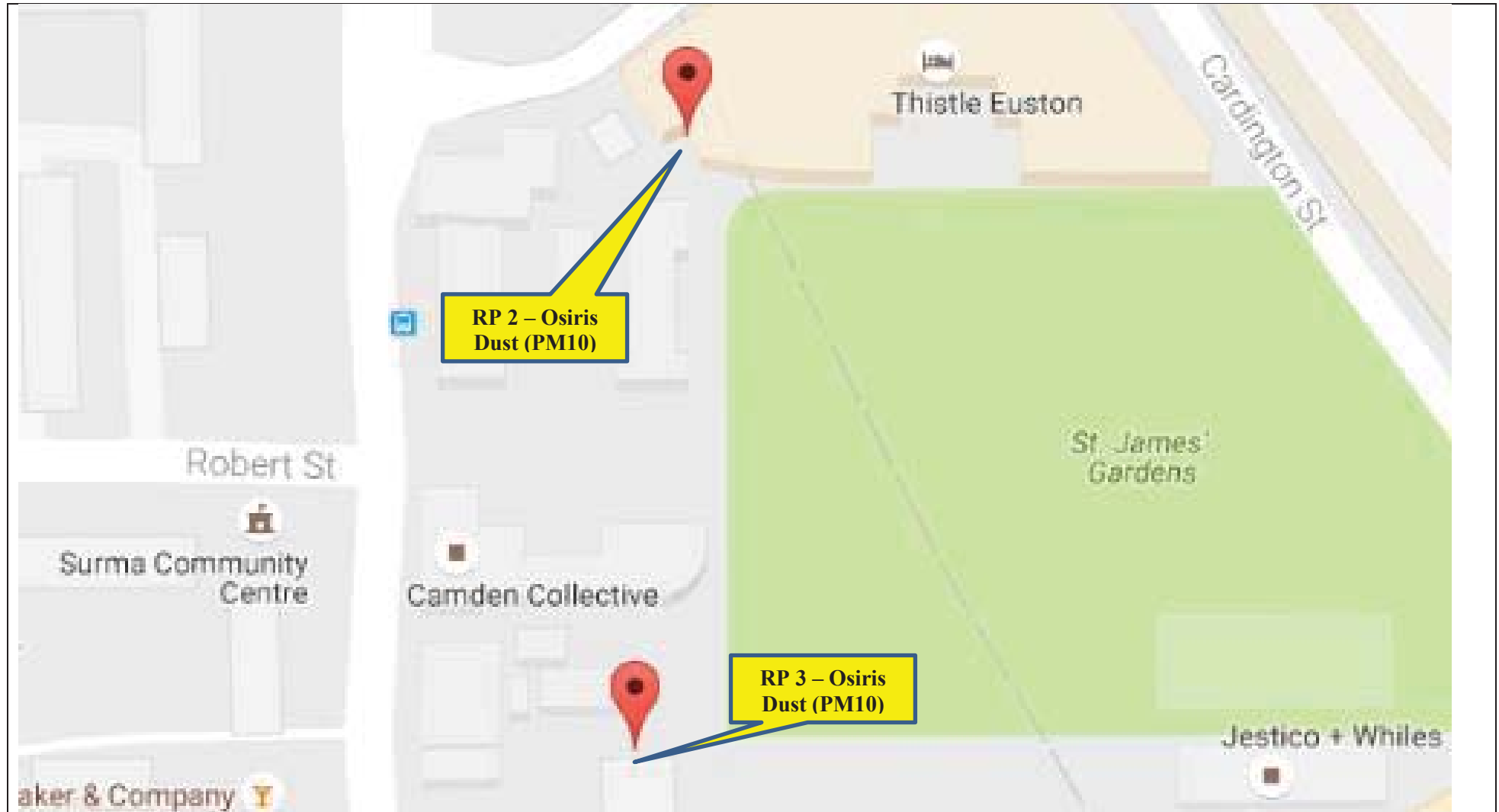
Monitoring Period: 27 February - 26 March 2017

Details of Dust (PM10) at all Receptor Points (RP)

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
Manufactures last calibration date:	25/01/2016 ES – 642 – SN – U10897 (See appendix 1)
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3765
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location





Photograph of dust monitor @ RP1



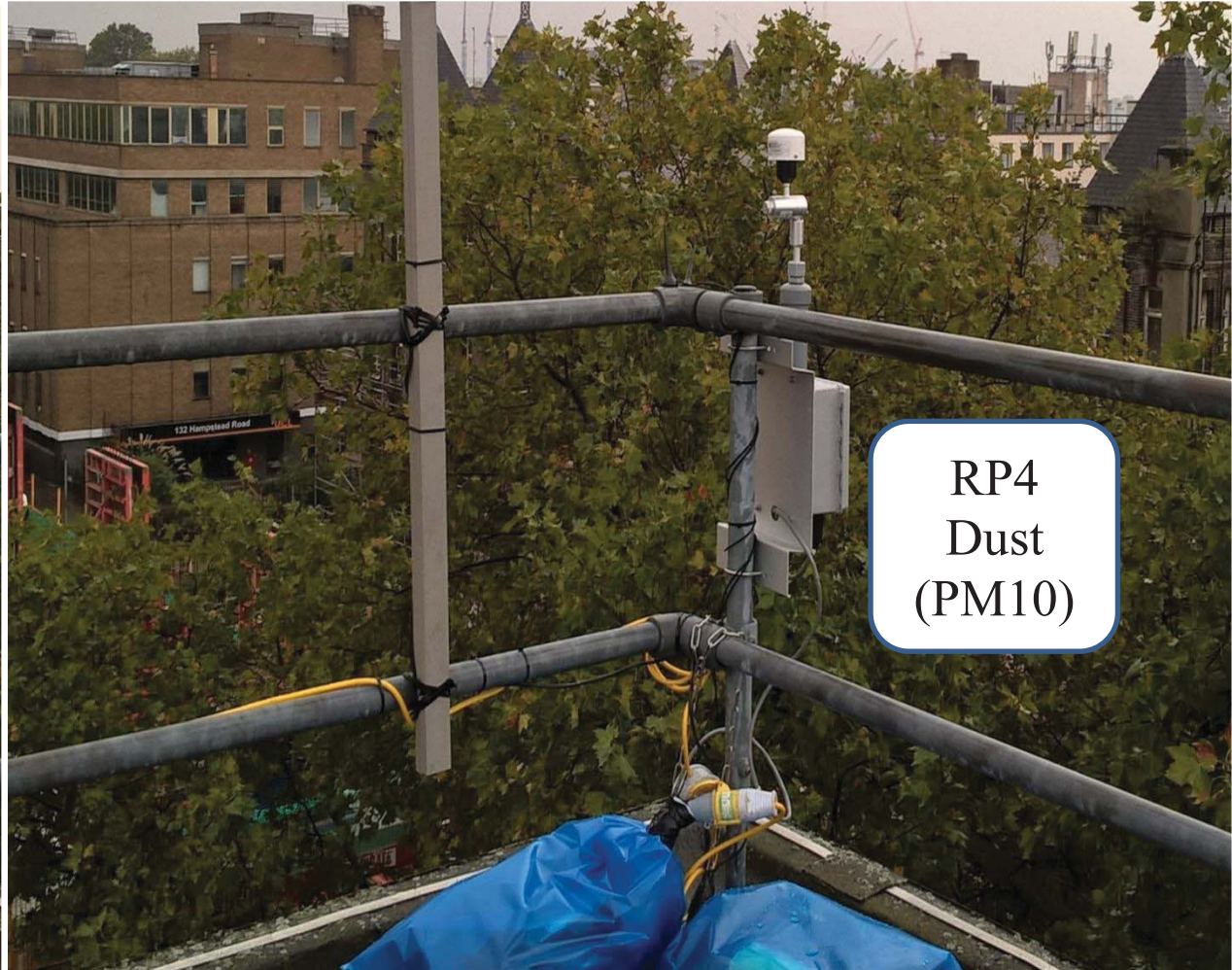
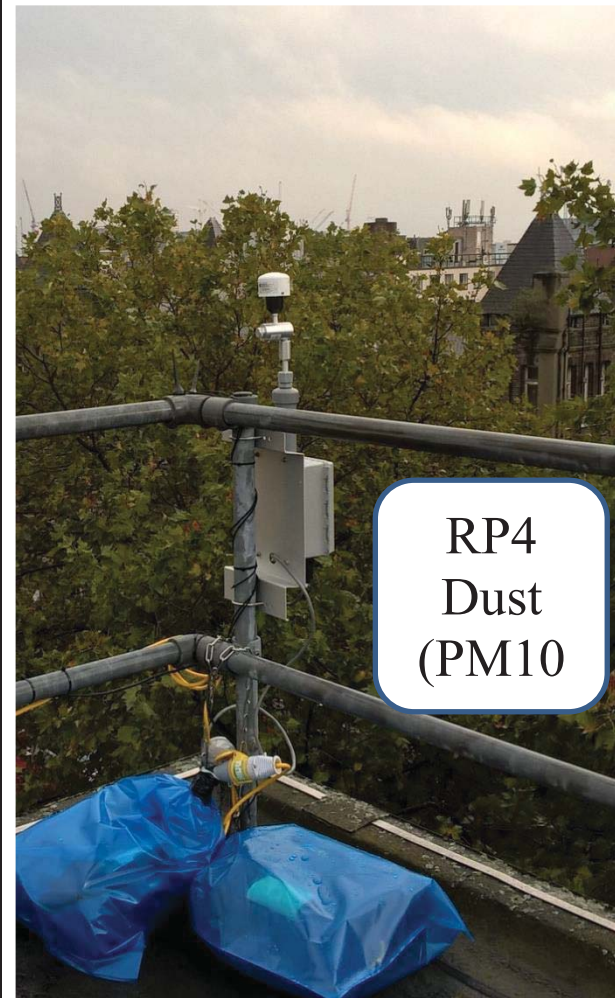
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 27 February to 26 March 2017 at positions RP1, RP2, RP3, RP4 and is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

Activities in this period included the following:

- External scaffold being dismantled daily as the demolition progresses
- Post-asbestos soft strip of the last few rooms on the ground floor
- Demolition of main building North 2nd floor
- Demolition of main building Party Wall 2nd and 3rd floor
- Demolition of main building West 2nd and 1st floor
- Demolition of main building East 2nd and 1st floor
- Temporary weather protection to party wall roof, 3rd and 2nd floors
- Roof strip to the remaining parapets
- Core five holes in the basement to self-drain (over 1 day)
- Concrete 200m³ of vaults under Hampstead Rd
- Disconnection of UKPN service on Cardington St
- Scaffold works for link bridge to CTU – independent scaffold

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

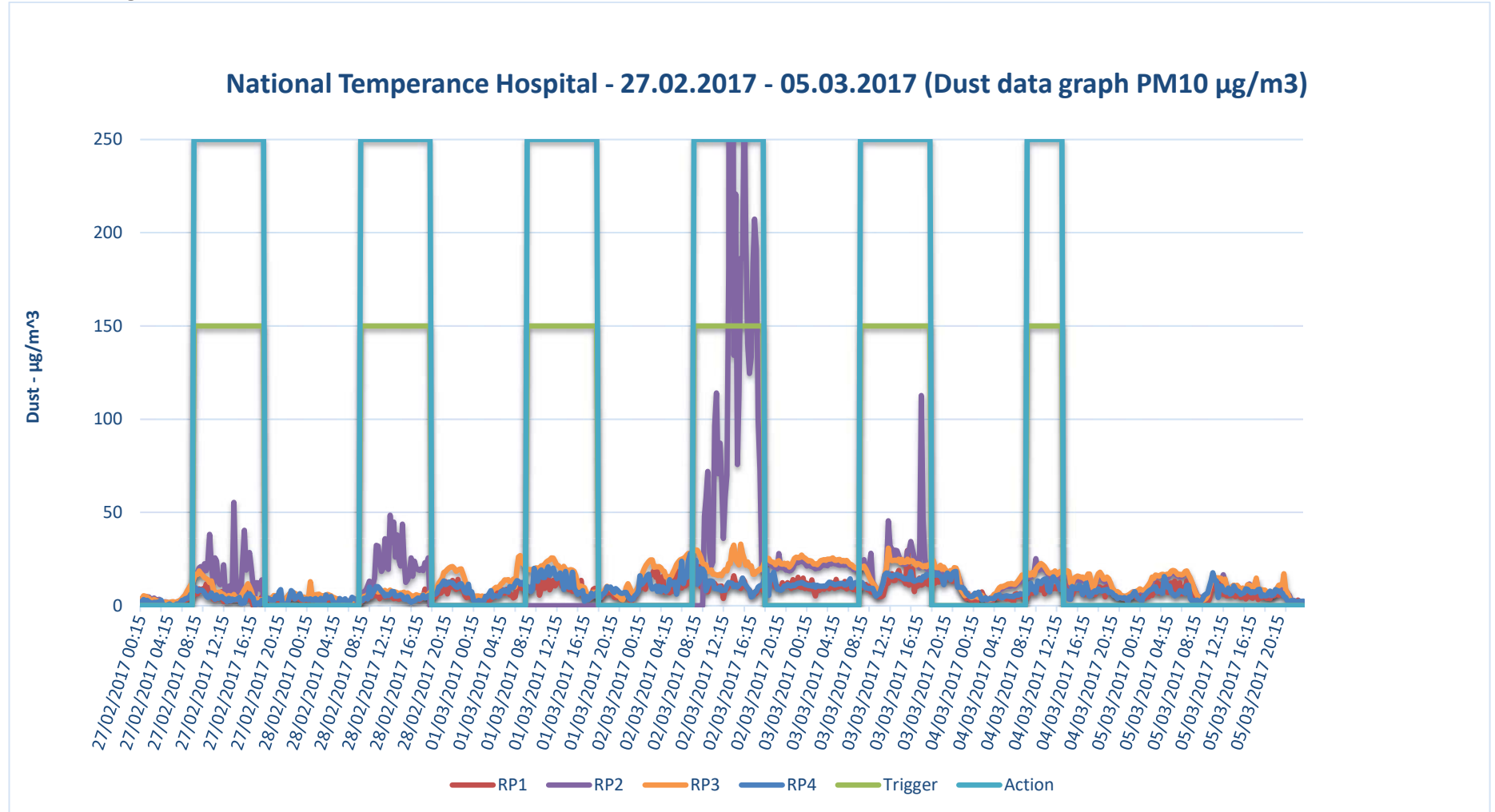
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15 minutes periods are:

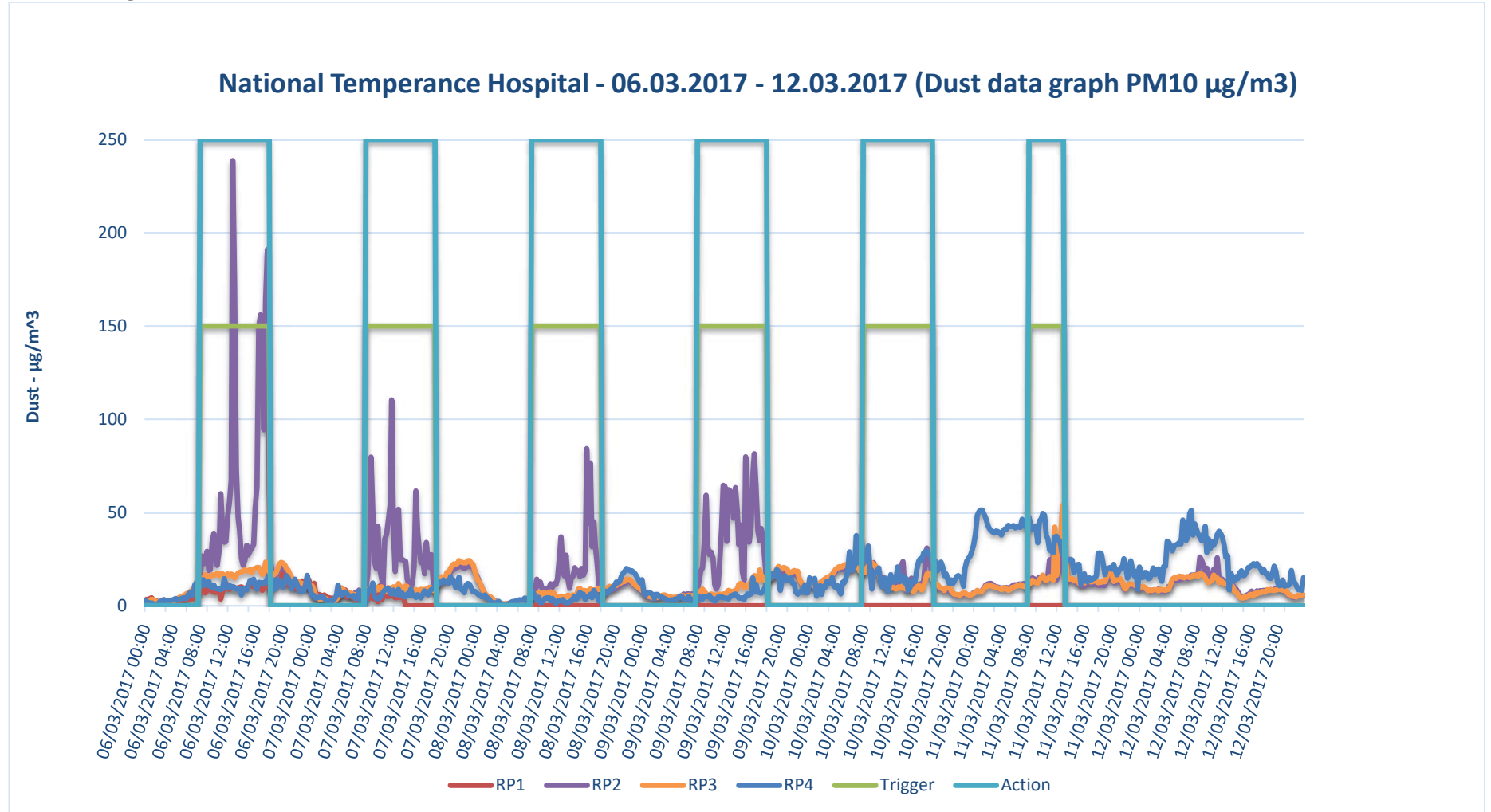
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

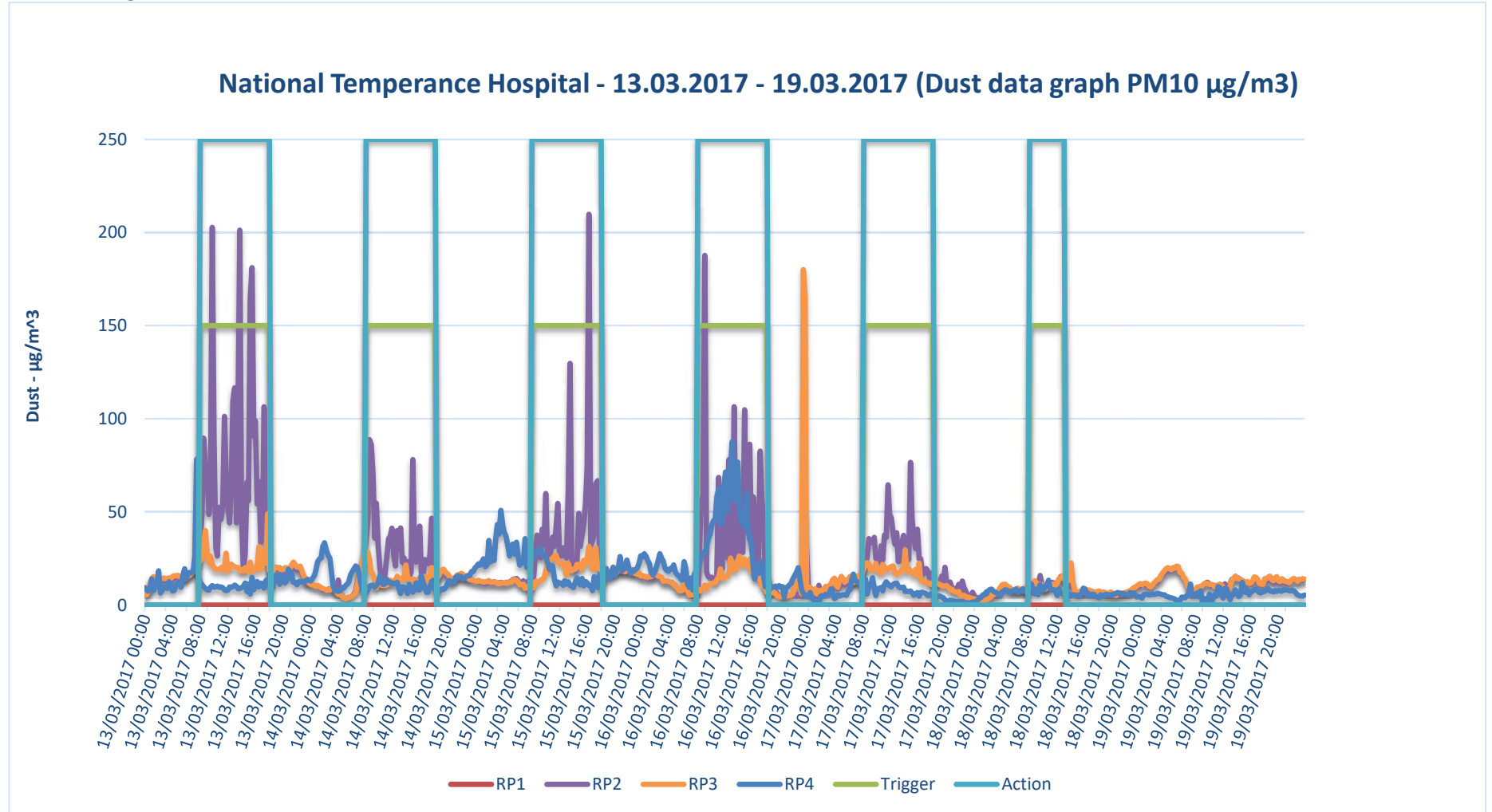
4.0 Dust (PM10) Monitoring Graphs
 Week ending 05/03/17



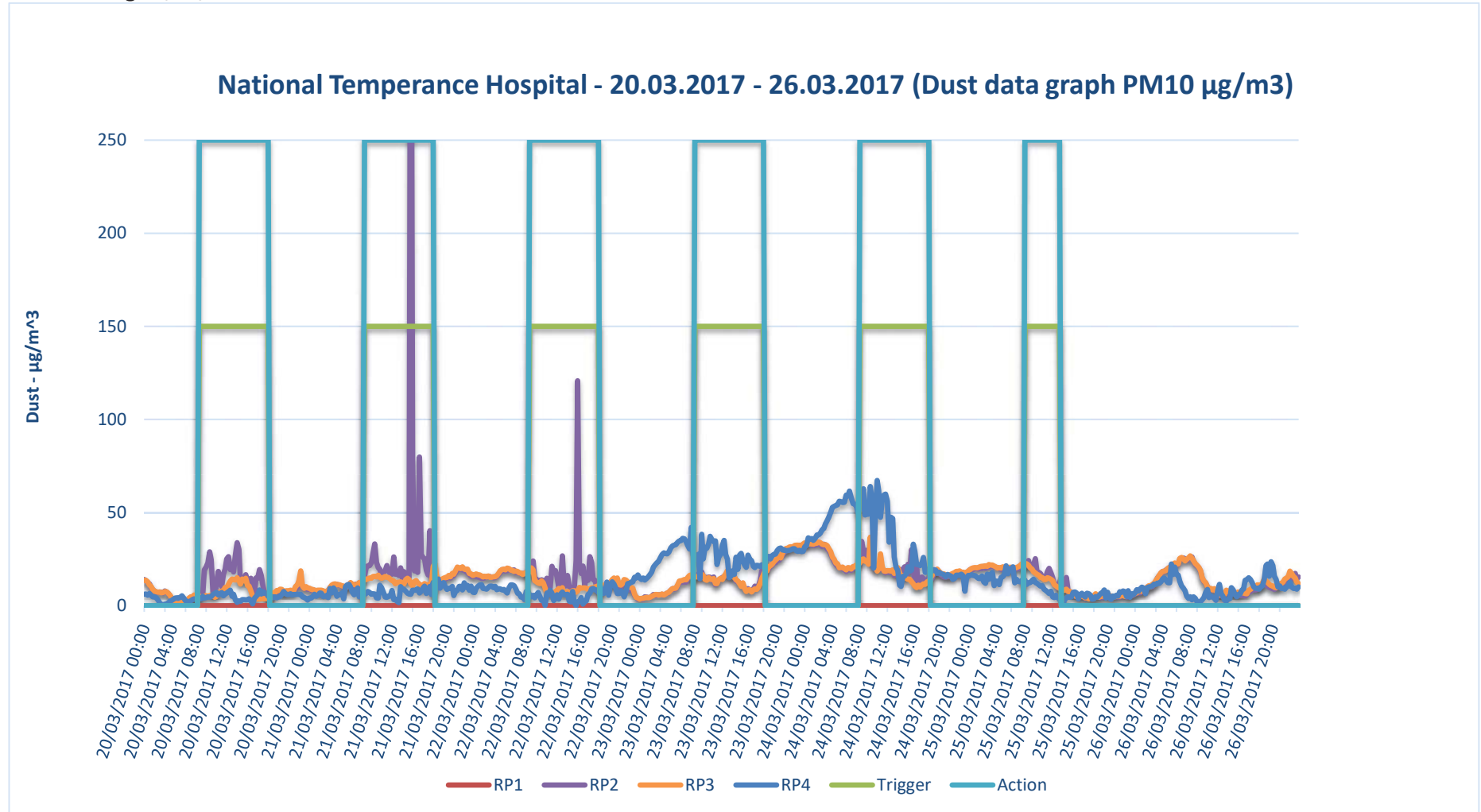
Week ending 12/03/17



Week ending 19/03/17



Week ending 26/03/17



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, RP4 from 27 February to 26 March 2017.

Graphs presented in section 4 show that there were several exceedances of the trigger and action levels in this measurement period at RP2 at the Euston Thistle Hotel area. There was one exceedance but outside of working hours on 17 March that came from RP3. Trigger level exceedances at position RP2 occurred on 6, 13, 15, 16 March and action level exceedances on 2 and 21 March.

Works in this period were as page 9 of this report

These activities are unlikely to generate sufficient airborne dust particles to cause the exceedances of the PM10 trigger and action concentration levels measured and recorded at position RP2. The Keltbray site team logged and responded to these action level alerts and concluded, following investigation and inspection of the site and the activities that were undertaken at the time of the alert and the dust control measures being used that the source was unlikely to be activities at the National Temperance Hospital site. All operatives on site continue to routinely proactively assess their site work activities for dust generation and the implementation of remedial action to mitigate dust as required. It may be that the cause of alerts at RP2 that the location is being used for smoking breaks nevertheless the exceedances are occurring during normal daytime working hours of the site. Position RP2 will be investigated further and reviewed.

Unattended Dust (PM10) Monitoring Report

Monitoring Period: 27 March to 30 April 2017

Project No. EEMC/065/2016

Report No. EEMC-DMR-065/010-NTH, HS2

Client: Keltbray Limited

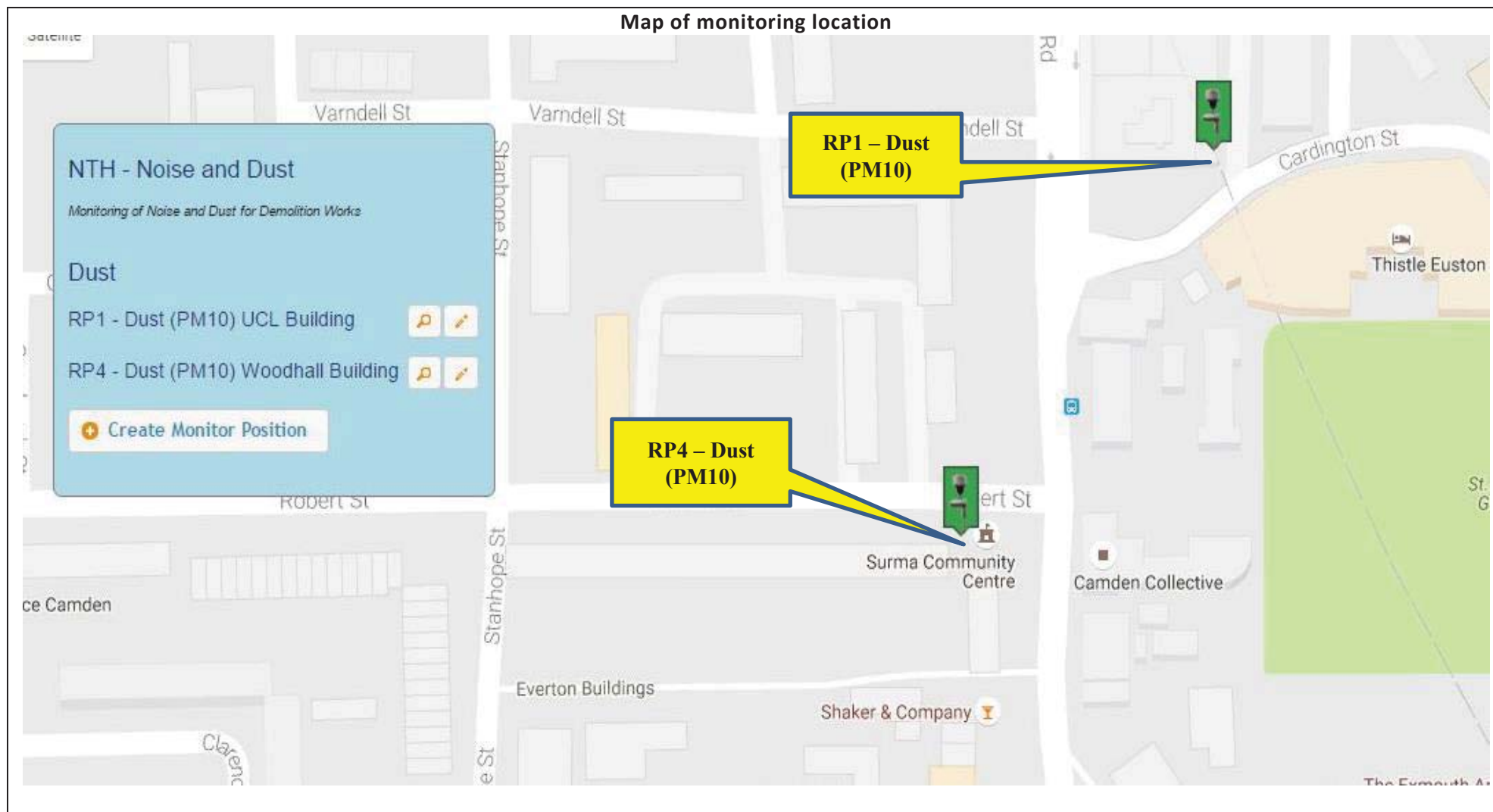
Title: EEMC/065/010 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP1, RP2, RP3, RP4
Report No.10

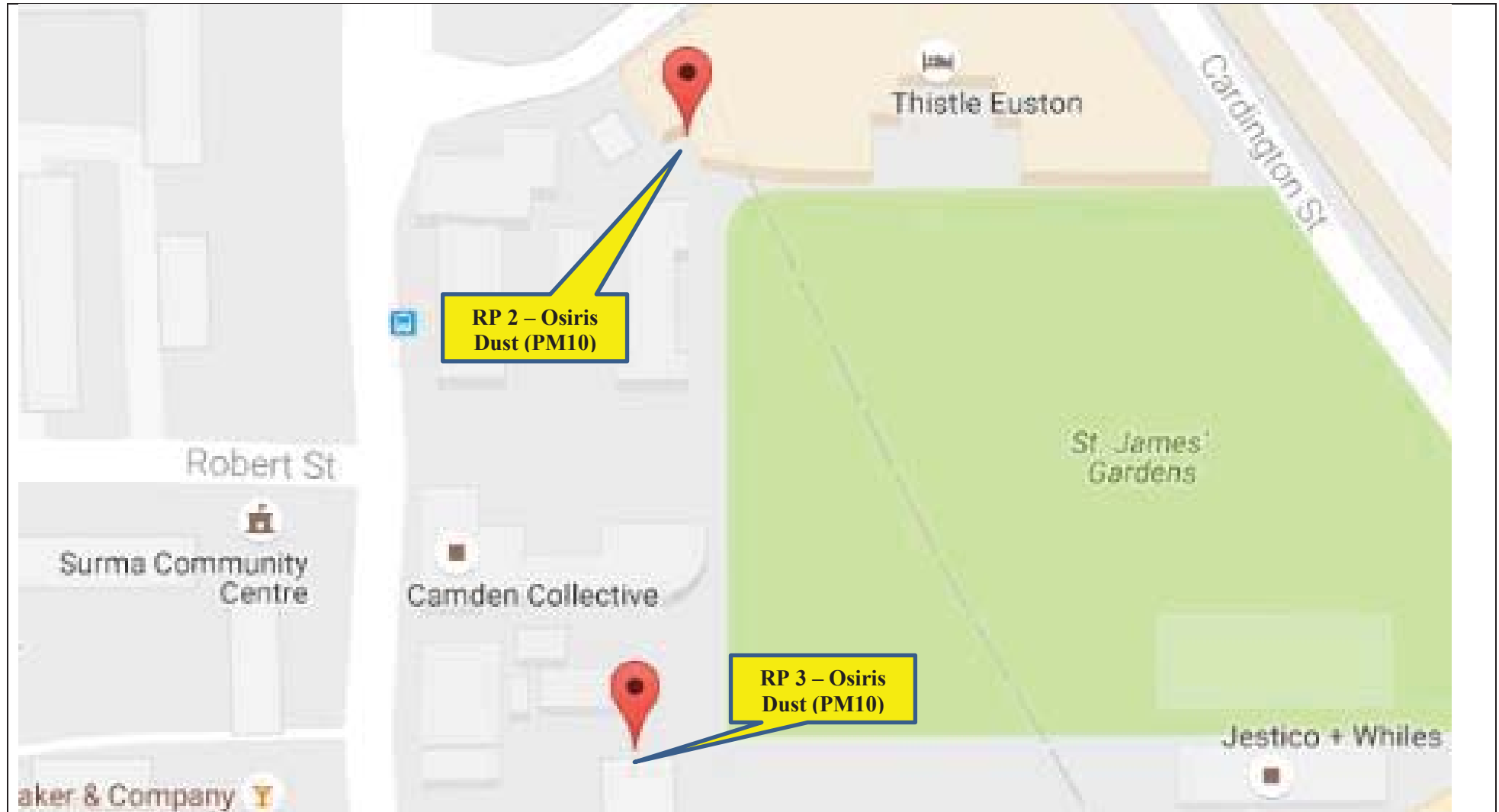
Monitoring Period: 27 March - 30 April 2017

Details of Dust (PM10) at all Receptor Points RP1, RP2, RP3 and RP4

ID Reference	RP1
Location:	132 Hampstead Road (Second floor terrace)
Instrument:	MetOne ES-642
Serial Number:	U10897
Installation Date:	28/10/2016
Manufactures last calibration date:	25/01/2016 ES – 642 – SN – U10897 (See appendix 1)
ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3765
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location





Photograph of dust monitor @ RP1



Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP2



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 27 March to 30 April 2017 at positions RP1, RP2, RP3, RP4 and is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

Activities in this period included the following:

- Internal and external scaffold, dismantled daily as the demolition progresses
- Post-Asbestos soft strip to the Cardington Street vaults
- Demolition of main building north, including ground floor slab and walls
- Demolition of main building party wall, including breaking out ground floor slab
- Demolition of main building west on 1st floor slab and wall at ground level with large machine
- Demolition of main building, east; backfilling and demolishing of RC frame
- Temporary weathering to party wall, ground floor to 1st
- Cutline to link bridge

2.0 Instrumentation

Two MetOne ES-642 Dust (PM10) units, one at RP1 and RP4 and two Osiris Dust (PM10) units one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

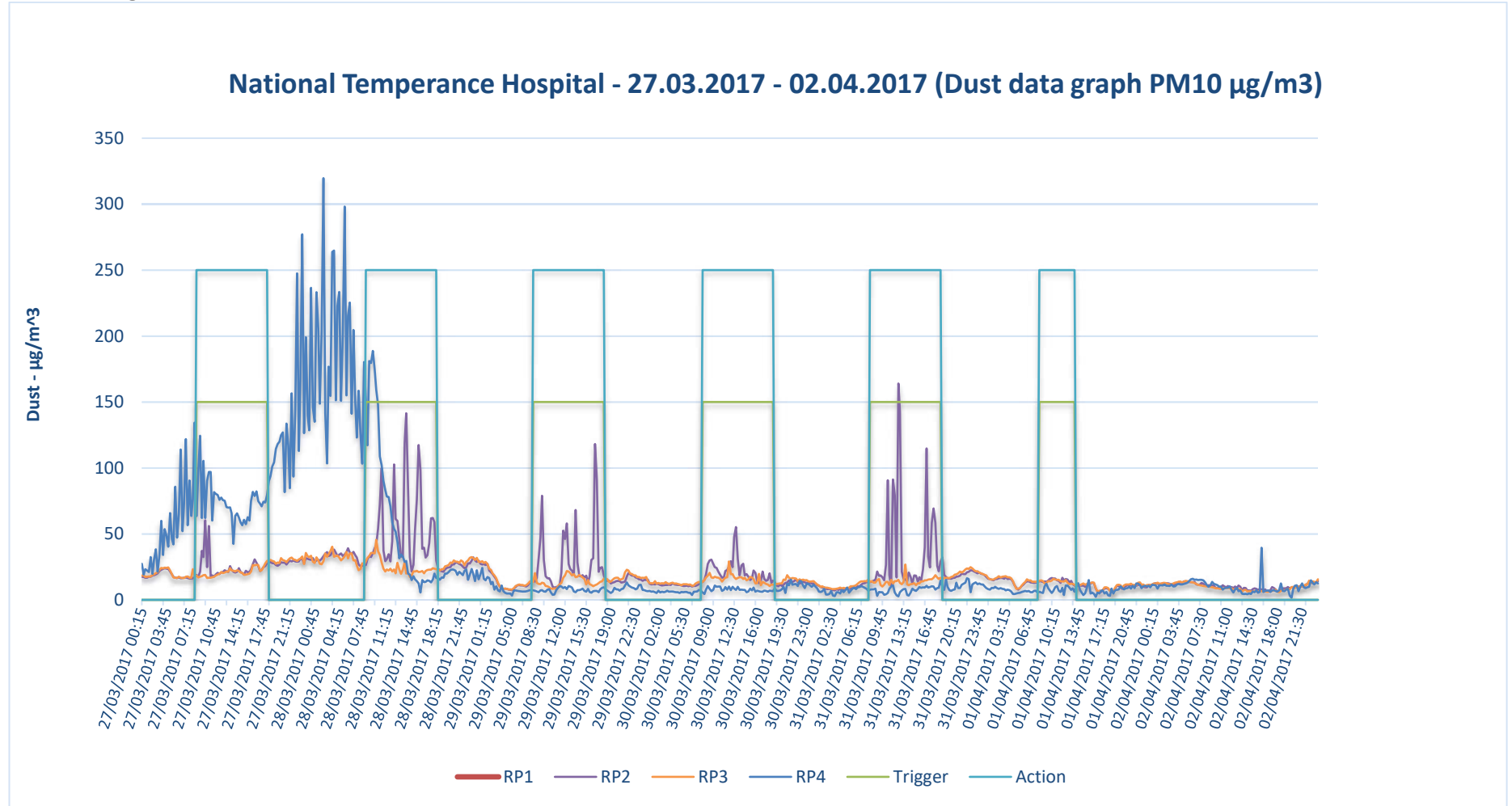
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15 minute periods are:

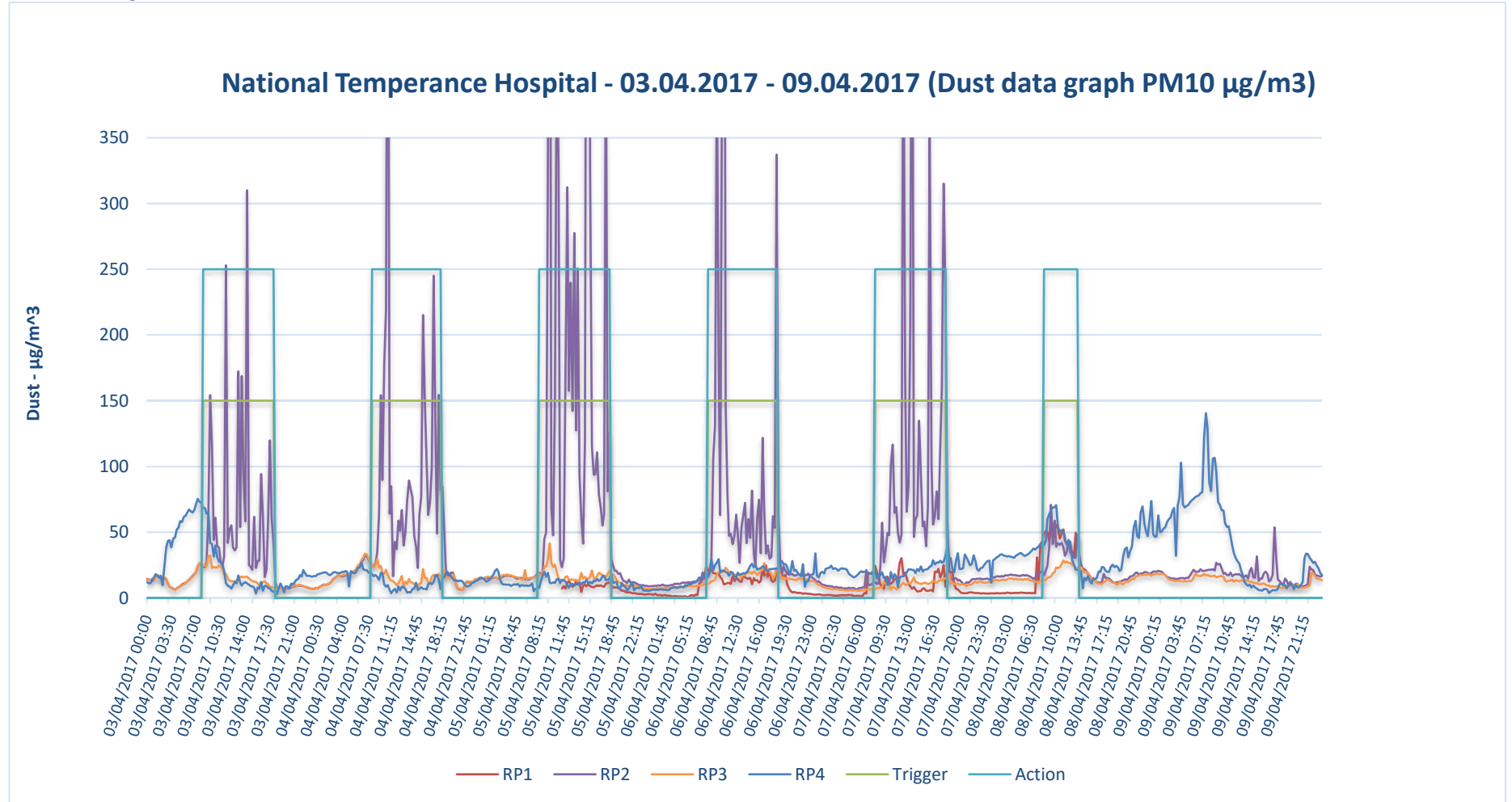
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

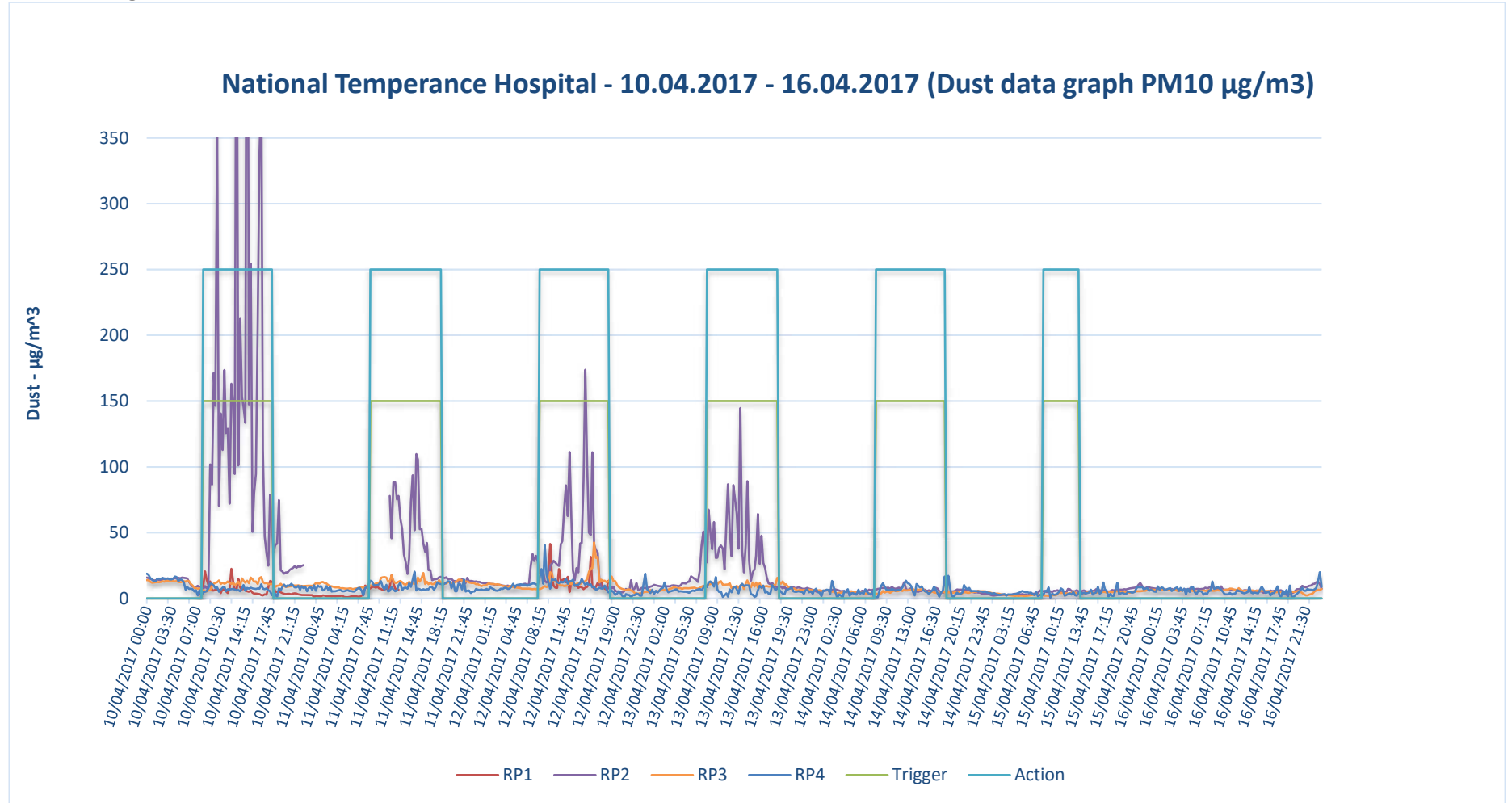
4.0 Dust (PM10) Monitoring Graphs
 Week ending 02/04/17



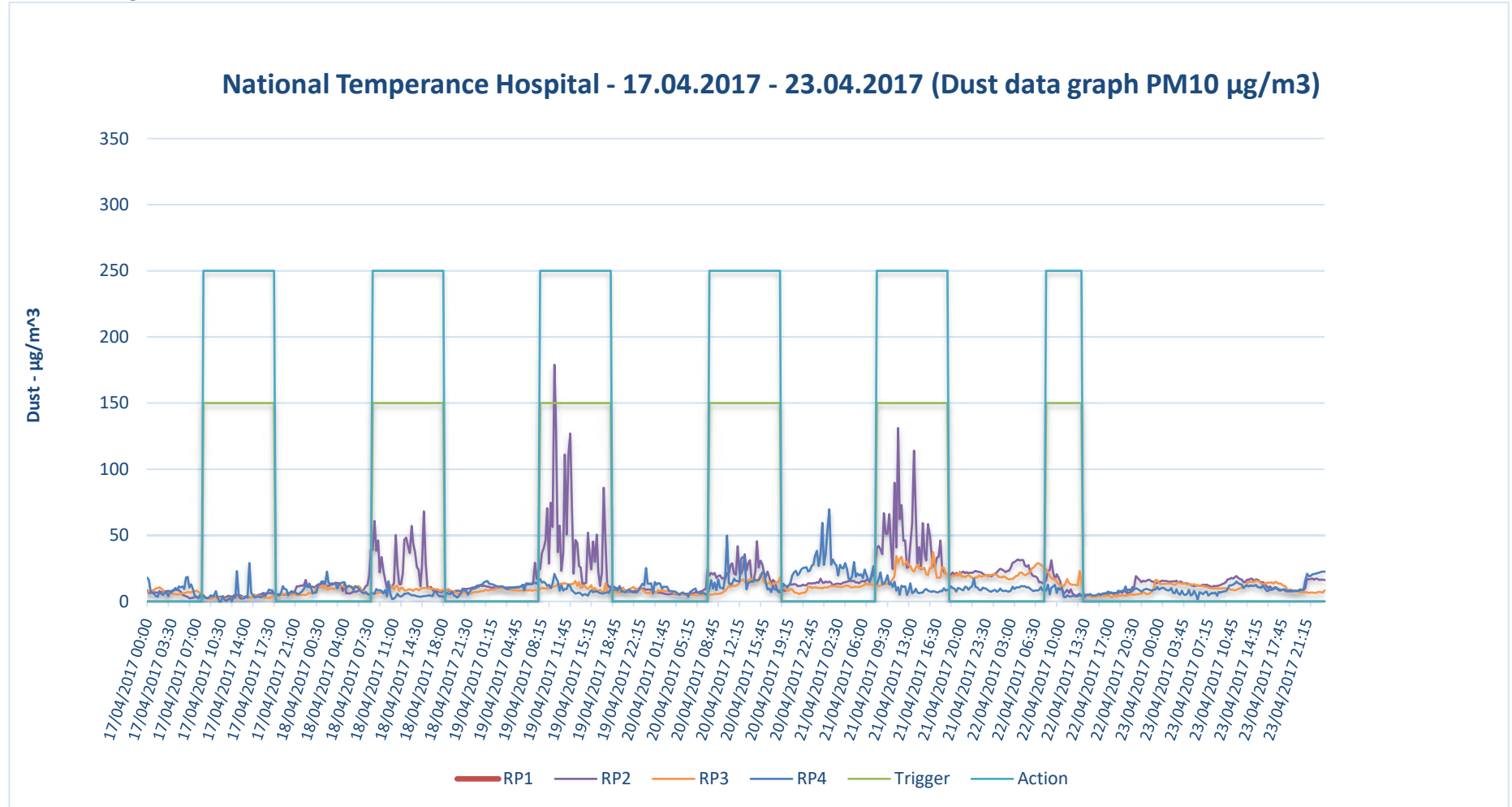
Week ending 09/04/17



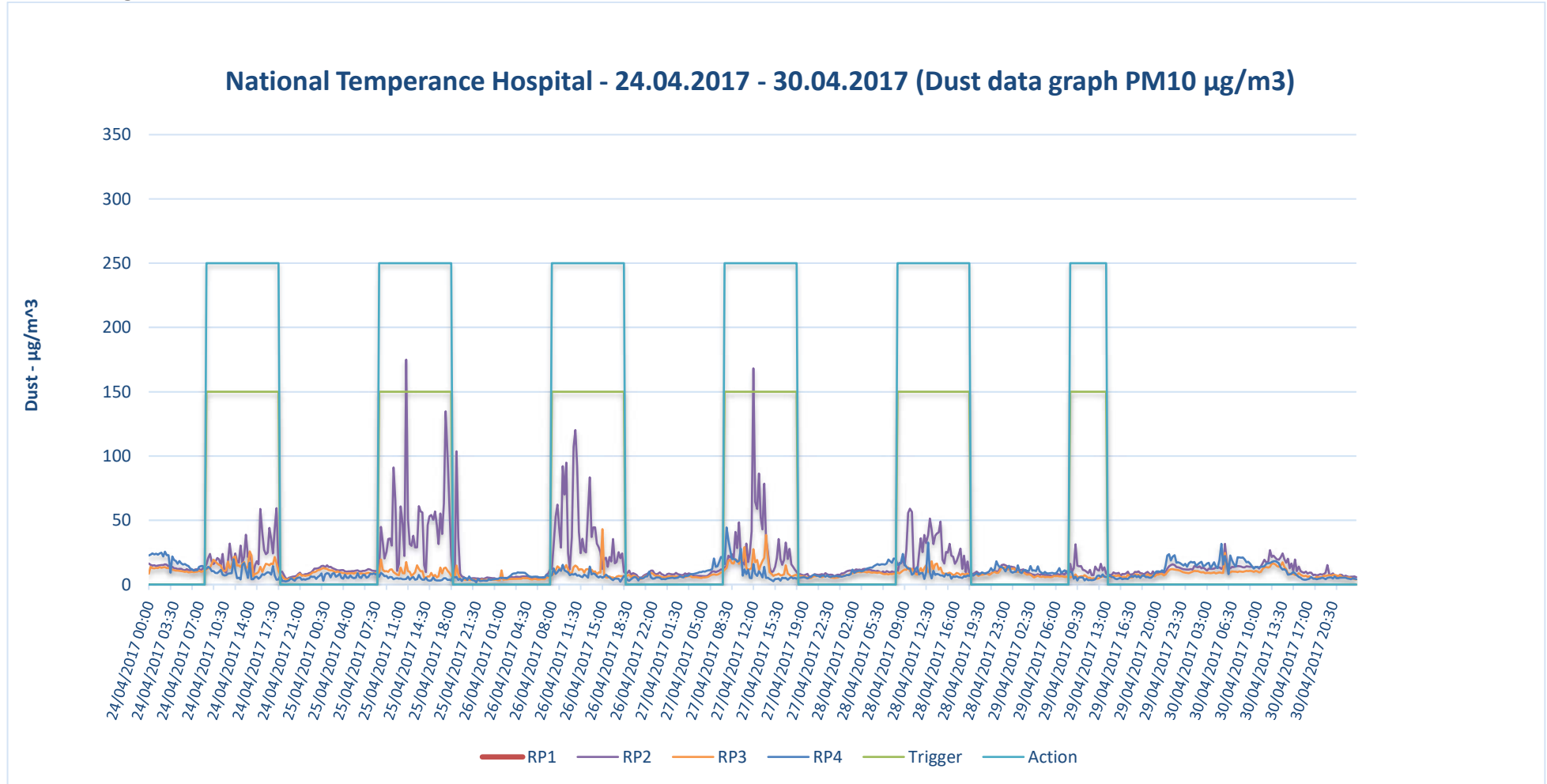
Week ending 16/04/17



Week ending 23/04/17



Week ending 30/04/17



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP1, RP2, RP3, RP4 from 27 March to 30 April 2017. Due to a system outage, no data was recorded for the RP1 position during the periods shown on the graphs in section 4.0, this will be rectified shortly with the relocation of the RP1 monitor. Also, there was no data recorded on the 11th of March for a short period of time at position RP2.

The graphs presented in section 4 show that there were several exceedances of the action levels in the measurement period at RP2 at the Euston Thistle Hotel area. Action level exceedances occurred on 3, 4, 5, 6, 7 and 10 April.

These dust action level exceedances were investigated by the site management. It transpired that the cause of the exceedances was a DustBoss water spray dust suppression unit being located close to the monitor. The air samples taken by the monitor were therefore saturated and this overwhelmed the capacity of the unit to drive off the moisture from the sample leading to false high readings. Corrective action has now been implemented.

There was a prolonged period of exceedance at position RP3 on 27 and 28 March, this was primarily outside of working hours and due to an air pollution event across London.

In addition, there were several exceedances of the trigger level at RP2 and the site management continue to monitor the situation at RP2.

Works in this period were as page 9 of this report. These activities are unlikely to generate sufficient airborne dust particles to cause the exceedances of the PM10 trigger and action concentration levels measured and recorded at position RP2. The Keltbray site team logged and responded to these trigger and action level alerts, as above,

All operatives on site continue to routinely proactively assess their site work activities for dust generation and the implementation of remedial action to mitigate dust as required.

Unattended Dust (PM10) Monitoring Report

Monitoring Period: 1 May to 31 May 2017

Project No. EEMC/065/2016

Report No. EEMC-DMR-065/011-NTH, HS2

Client: Keltbray Limited

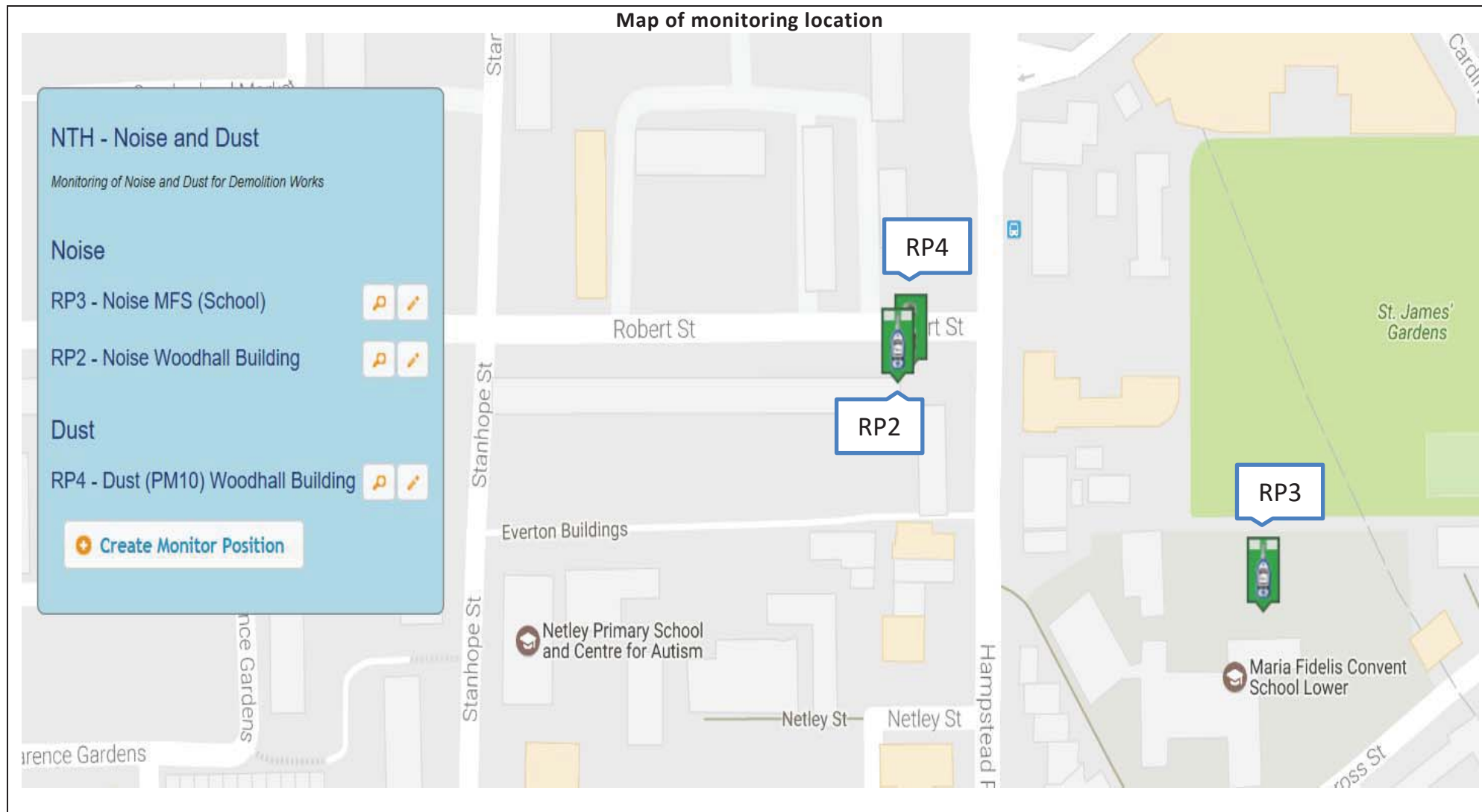
Title: EEMC/065/011 – National Temperance Hospital
Unattended Dust (PM10) Monitoring at RP2, RP3, RP4
Report No.11

Monitoring Period: 1 May – 31 May 2017

Details of Dust (PM10) at all Receptor Points (RP)

ID Reference	RP2
Location:	First floor level, Thistle Hotel (St. James Gardens Elevation)
Instrument:	Osiris 3764
Serial Number:	TNO3764
Installation Date:	18/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP3
Location:	First floor level, Maria Fidelis School (Rear of Classroom No. 55)
Instrument:	Osiris 3765
Serial Number:	TNO3765
Installation Date:	12/10/2016
Manufactures last calibration date:	05/10/2016; OS – 10941 (See appendix 1)
ID Reference	RP4
Location:	Terrace of Woodhall block (Hampstead Road/Robert Street intersection)
Instrument:	MetOne ES-642
Serial Number:	T20194
Installation Date:	13/10/2016
Manufactures last calibration date:	07/08/2015 ES – 642 – SN – T20194 (See appendix 1)

Map of monitoring location



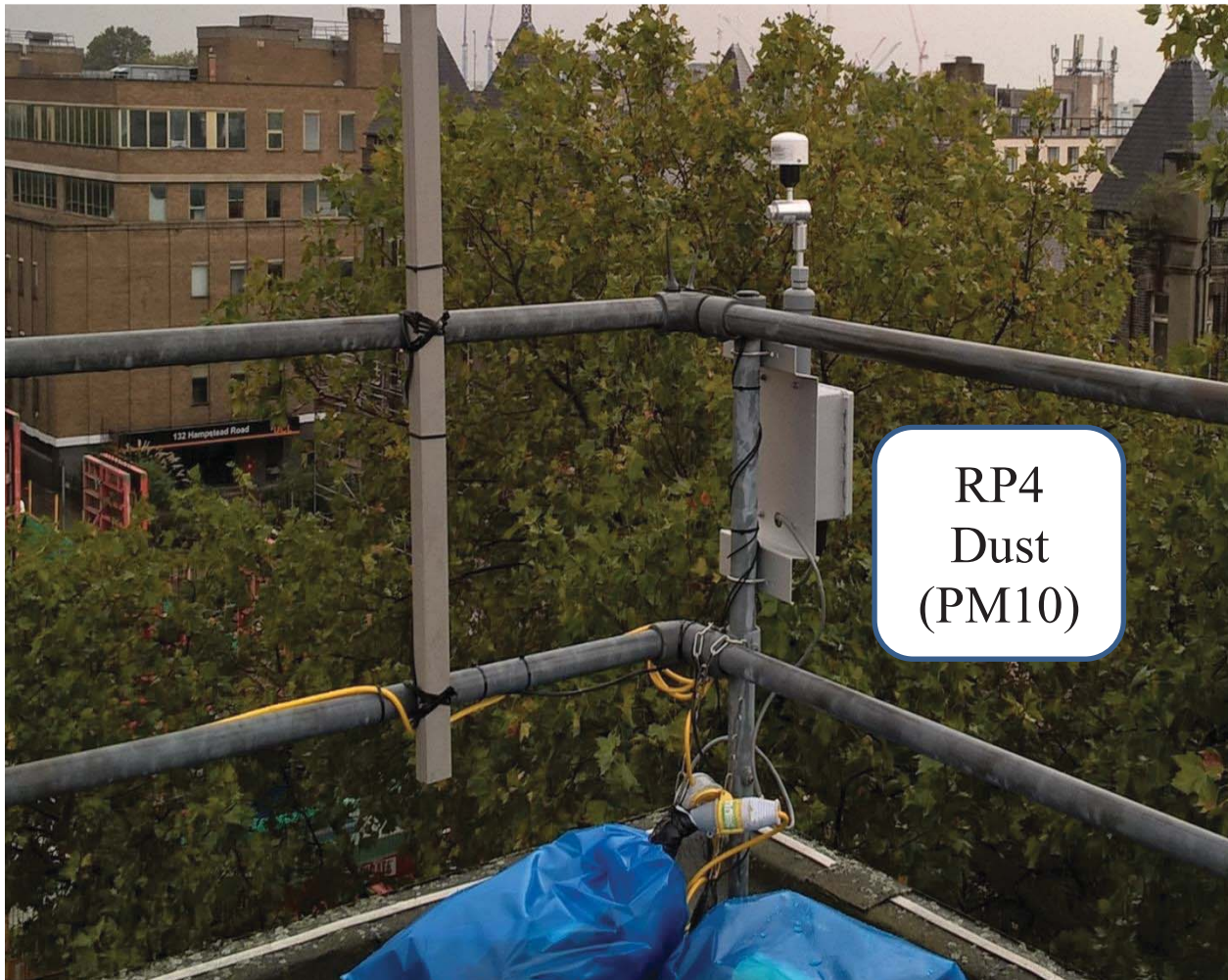
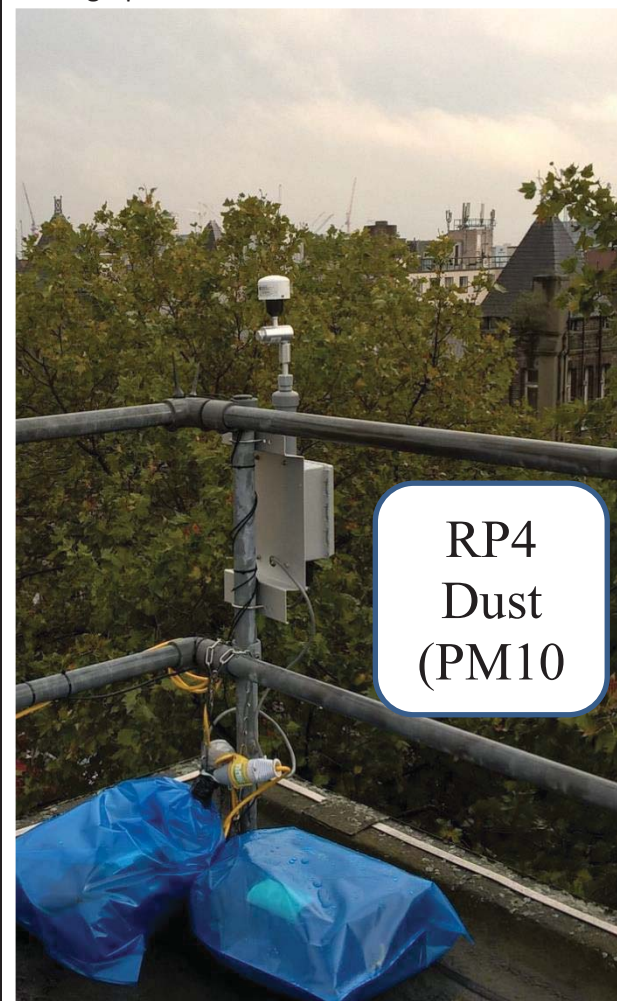
Photograph of dust monitor @ RP2



Photograph of dust monitor @ RP3



Photograph of dust monitor @ RP4



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited were appointed by Keltbray to undertake dust (PM10) monitoring during the demolition phase at the National Temperance Hospital project, in London Borough of Camden (LBC). This report presents the measured and recorded unattended dust (PM10) monitoring data.

The report details the results for concentrations of PM10 particulates measured and recorded in the period 1 May to 31 May 2017 at positions RP2, RP3, RP4. This report is to be read in conjunction with the clients Dust Management Plan (DMP) submitted for the National Temperance Hospital and the agreed Dust (PM10) trigger alert levels.

Site operations are limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours Saturday with no works on Sundays or public holidays.

Keltbray Ltd have been carrying out site operations in compliance with the clients DMP (Dust Management Plan) and in line with the applicable Mayor of London Supplementary Planning Guidance 'Control of Dust in Construction and Demolition Sites, July 2014'.

Activities in this period included the following:

- External Scaffold dismantled on Cardington street and Hampstead road
- Basement backfill of main building North
- Party wall weather proofing complete
- Basement backfill of main building West
- Basement backfilling of main building East
- Concrete 200m³ in vaults under Cardington street
- Demolition of link bridge to the Insull wing
- Tunnel demolition and backfill
- Demobilizing the site

2.0 Instrumentation

One MetOne ES-642 Dust (PM10) unit at RP4 and two Osiris Dust (PM10) units, one at RP2 and RP3 are housed in weather-proof environmental enclosures and installed at various site elevation as agreed with Camden Council. Each system is fitted with a 3G modem to allow data-streaming. The monitors record PM10 (micrograms/m³) contiguously over 15-minute average periods.

3.0 Methodology

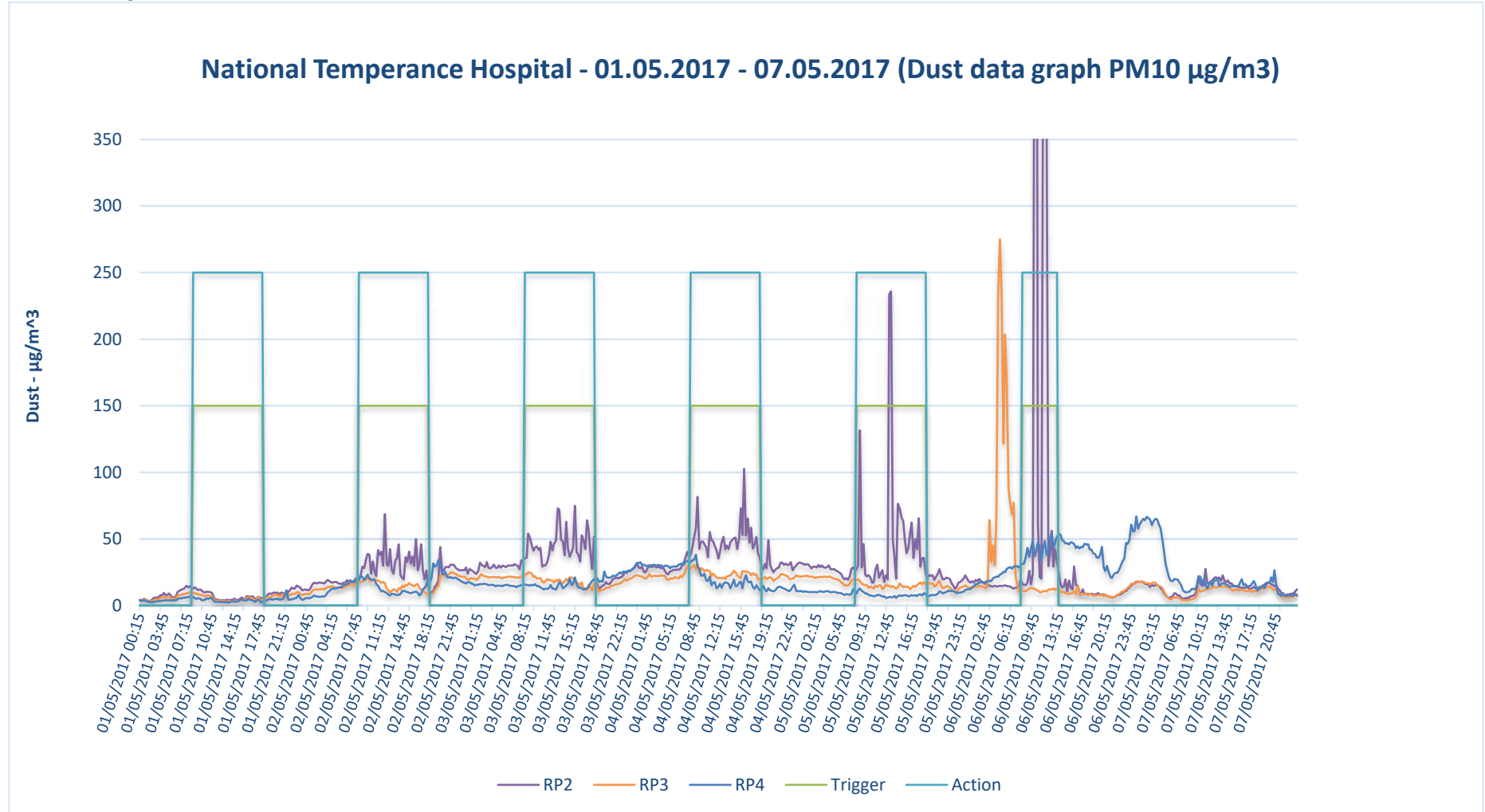
Keltbray requested (EEMC) Limited to undertake unattended Dust (PM10) monitoring at four locations outside the site boundaries but close enough to capture any impacts related to demolition works. Keltbray agreed these locations with officers from LBC. The PM10 monitoring will be continuous for the duration of the demolition and associated works.

The agreed PM10 trigger and action levels for PM10 concentrations in 15 minutes periods are:

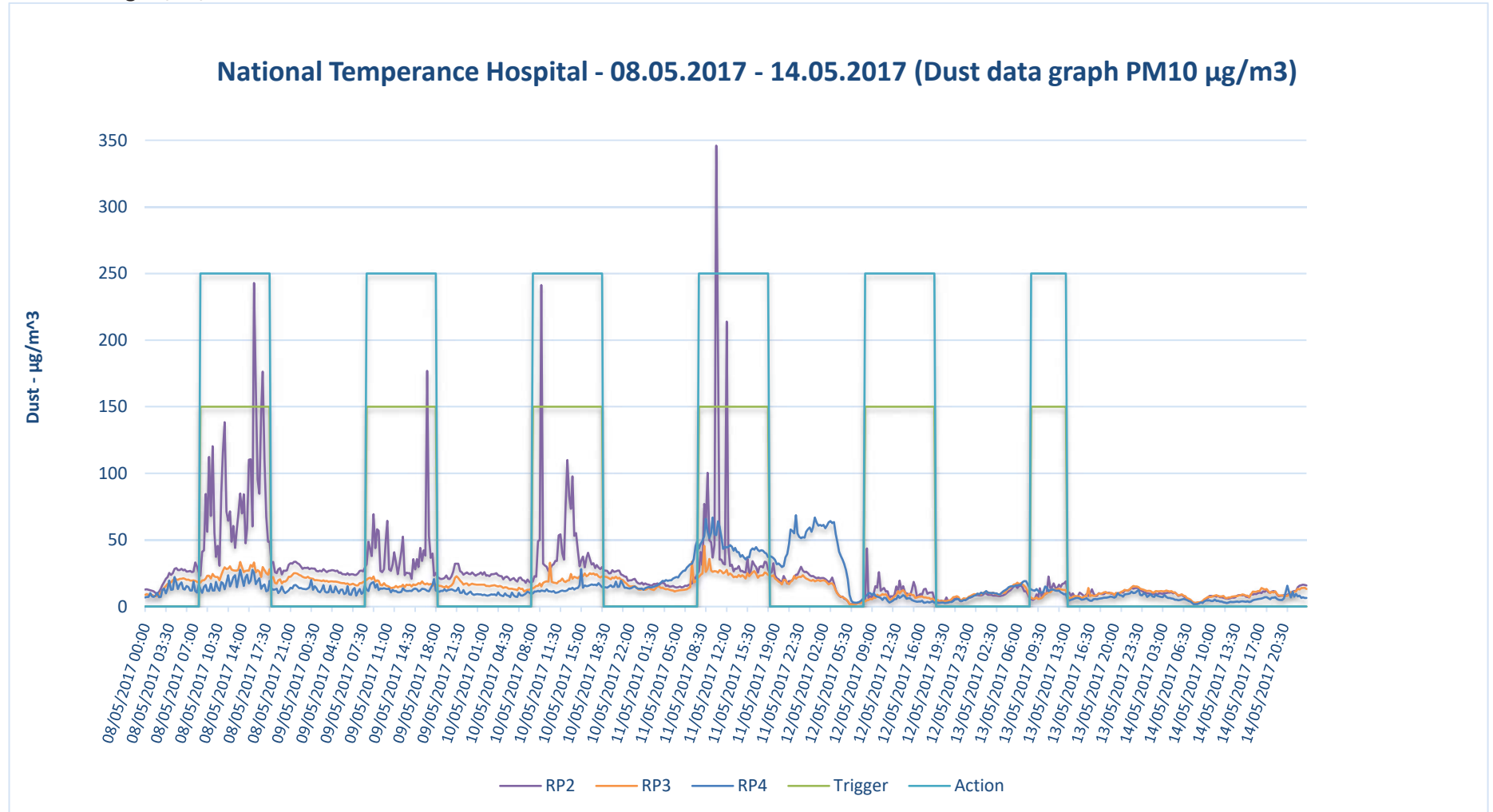
Trigger Level: 150micrograms/m³ (150µg/m³)

Action level: 250micrograms/m³ (250µg/m³)

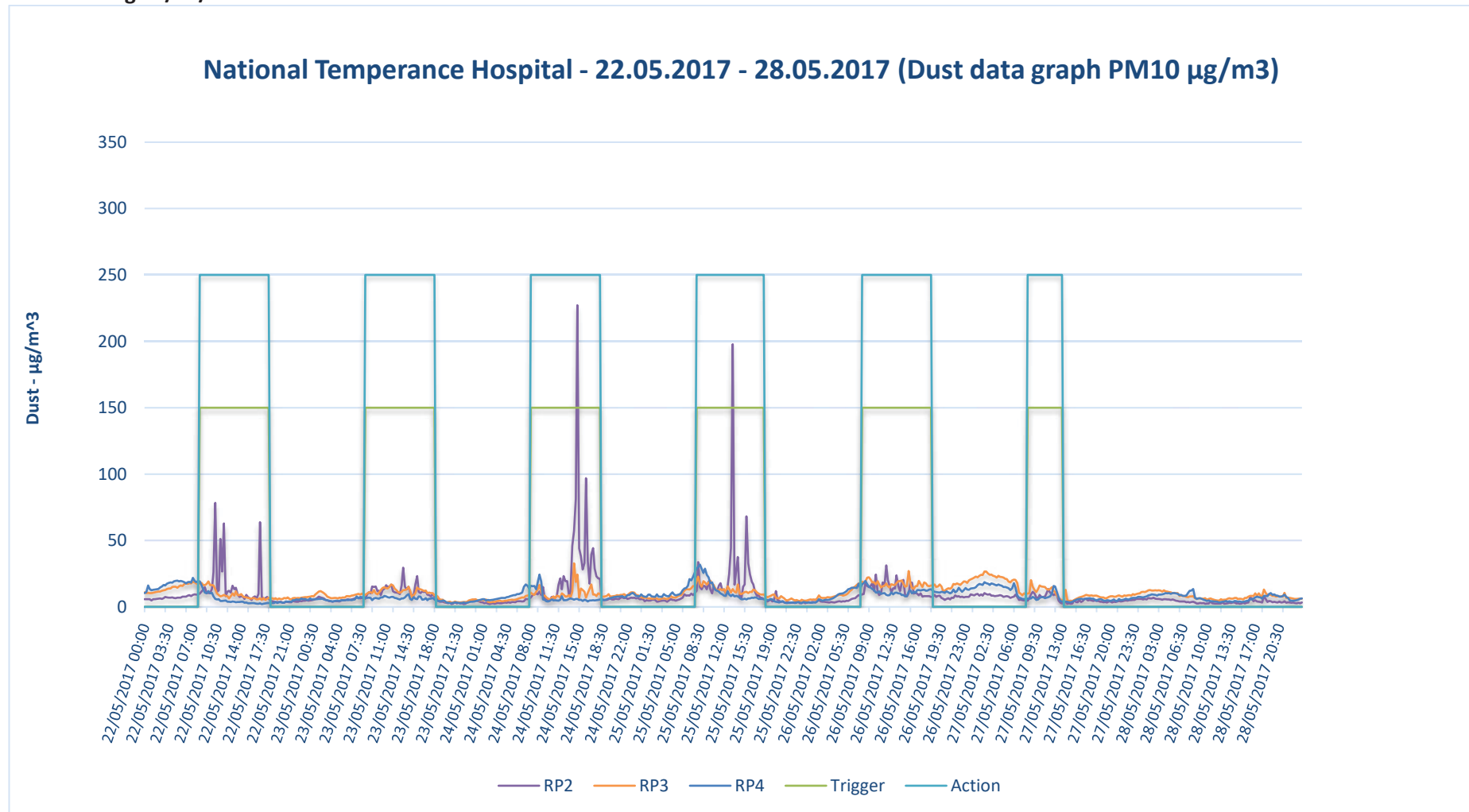
**4.0 Dust (PM10) Monitoring Graphs
Week ending 07/05/17**



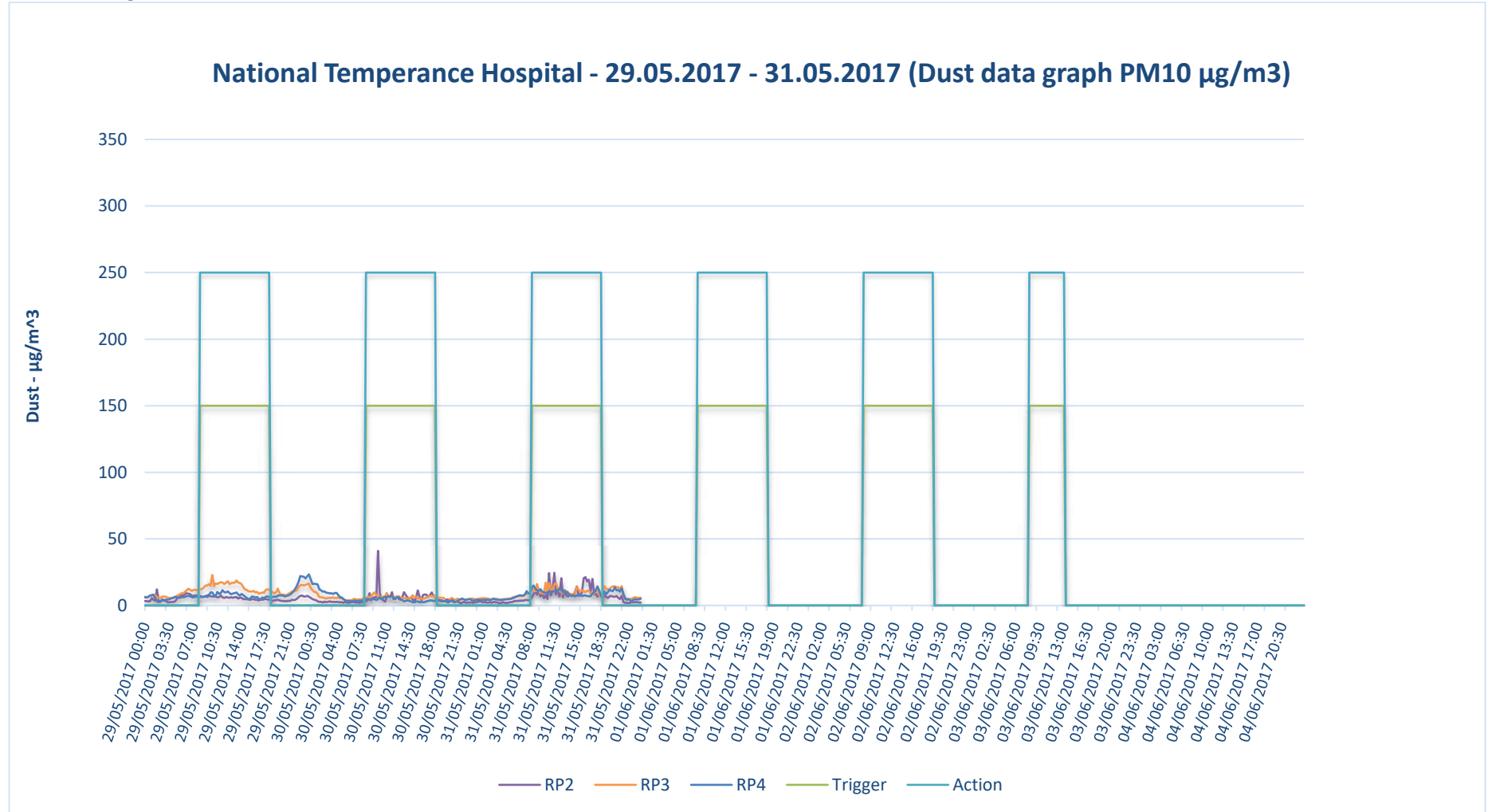
Week ending 14/05/17



Week ending 28/05/17



Week ending 31/05/17



5.0 Discussion

Unattended Dust (PM10) monitoring has been undertaken at the National Temperance Hospital project. This report presents the measured and recorded dust (PM10) concentration data downloaded from the web interface at monitoring positions RP2, RP3, RP4 from 1 May to 31 May 2017.

Graphs in section 4 indicate several exceedances of the trigger and action levels occurred at RP2 at the Euston Thistle Hotel area in this measurement period. The trigger level exceedances at position RP2 were recorded on 5, 8, 9, 10, 24 and 25 May. Action level exceedances occurred on 6 and 11 May. There were no exceedances at positions RP3 and RP4 between 08.00 and 18.00, but there was an isolated exceedance at position RP3 on 6 May but outside of working hours.

Works in this period were as page 7 of this report. These activities are unlikely to generate sufficient airborne PM10 particulates to cause the exceedances of the PM10 trigger and action concentration levels measured and recorded at position RP2. The Keltbray site team logged and responded to these action level alerts and concluded, following investigation and inspection of the site and the activities that were undertaken at the time of the alert and the dust control measures being used that the source was unlikely to be activities at the National Temperance Hospital site.

All operatives on site continued to routinely proactively assess their site work activities for dust generation and the implementation of remedial action to mitigate dust as required.

6. Complaints

There have been no dust related complaints received directly throughout the project by either the Keltbray project team at NTH or by (EEMC) Ltd.

High Speed Two (HS2) Limited,
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

www.gov.uk/hs2