NUVIA	Technical Report	Document Ref. 72618/TR/002 Issue 2 Date 06/11/14 Page 1 of 17 Author [redacted]
Radiological Monitoring at Queen Elizabeth Olympic Park 18th August -12th September 2014		

Revision details:

Issue	Reason for re-issue	Date of re-issue
2	Change in site plan for Appendix 7.5 and correction to location of survey area on 29th August 2014 survey report: part of foul network "2" monitored, not "1" as previously stated on original survey report.	06/11/14

Signatures		
Author(s): [redacted]	**Date:**	7/11/14
Checked: [redacted]	**Date:**	7/11/14
Approved: [redacted]	**Date:**	7/11/14

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@nuvia.co.uk
www.nuvia.co.uk

CONTENTS

1 INTRODUCTION

During the site excavation of the Queen Elizabeth Olympic Park, as part of the original enabling works, several discrete areas of low levels of radioactively contaminated spoil were discovered. This radioactive material was present due to the former use of part of the site as a landfill along with the former industries located in this part of East London, some of which incorporated processes which concentrated Naturally Occurring Radioactive Material (NORM) to elevated levels. The work that has historically been completed in dealing with this radioactive legacy is documented elsewhere.

Balfour Beatty is contracted to start the transformation of the main stadium in Queen Elizabeth Olympic Park to a legacy structure. A number of operations in this transformation will involve the disturbance of earth groundwork and consequently may carry a risk, albeit low, of revealing radioactively contaminated soil resulting in potential exposure to operatives. Drilling, piling and excavation operations may reveal the presence of radioactively contaminated soil since they will be penetrating through the "marker layer" which demarcates the transition between materials that are known to be free from contamination and materials whose historical provenance is unknown.

The radiological prior risk assessment 72618/PRA/001 (Issue 3) identified the controls to be implemented for groundwork operations within Queen Elizabeth Olympic Park. This forms the basis of controls as described in method statement 72618/MS/001 (Issue 3) to ensure that personnel exposure from ionising radiations is minimised and dose uptake is maintained at levels that are As Low As Reasonably Practicable (ALARP).

The role of Nuvia Health Physics was to provide a watching brief and carry out periodic radiological re-assurance monitoring of excavated material and plant, machinery and equipment.

2 SCOPE OF WORK

The scope of Nuvia's work included:

- Radiation Protection Advice including the preparation of Radiological Risk Assessments and Method statements associated with Nuvia's work on the site.
- Provision of suitably qualified and experienced radiation monitoring personnel on site to provide a "watching brief".
- Additional consultancy as required including the determination of appropriate monitoring hold points

3 EQUIPMENT USED FOR SITE RADIOLOGICAL MONITORING

The radiation monitoring equipment used during the monitoring was (test certificates in Appendix 7.1):

- Mini-Rad 1000 - s/n 930
- Mini-Rad 1000 - s/n 932
- Mini-Monitor 900 c/w 44b probe- s/n 036745/1045
- Electra rate meter c/w DP6 probe– s/n 2061/1767
- Electra rate meter c/w 3" NaI probe – s/n 6635/1761
- Electra rate meter c/w 3" NaI probe – s/n-199/2436
- Electra rate meter c/w 3" NaI probe – s/n-6310/2438

4 MONITORING METHODOLOGY

The radiological monitoring was conducted using a combination of the above radiation monitoring equipment by a trained surveyor. Where possible, the monitoring consisted of a walkover of all accessible areas of the planned excavations, prior to excavation commencement.

Areas subject to monitoring are in shown in Appendix 7.2 - 7.5: Selected monitoring was also undertaken of:

- the excavated pits and trenches;
- excavator bucket and;
- spoil heaps;
- lorry monitoring.

5 MONITORING RESULTS

Results were recorded on survey report forms- see Appendix 7.6.

6 CONCLUSION

Method statement 72618/MS/001(Issue3) identifies a key hold point at a threshold of 1300 Counts Per Second (CPS) (relating to Ra-226 at an activity concentration of 0.5Bq/g) for walkover surveys or a measurement average for lorry monitoring of more than 300CPS. Monitored materials above these hold points could potentially be subject to radioactive substances legislation.

The site's background radiation readings for the monitors used was:

- Electra rate meter c/w 3" NaI probe detector is ~300 CPS,
- Electra rate meter c/w DP6 is ~5CPS
- Mini Instruments 900 c/w 44b probe is ~8CPS ,
- Min Rad 1000 is ~0.1µSv/h

Given the above background readings, there were only four areas that showed slightly elevated, readings, but all were well below the 1300CPS for surface monitoring and averaged 300CPS lorry monitoring threshold. (NB: the below readings include background):

- On 18th August, spoils near trench between S03-T027 and S03T026, gave a response 300 to 700 CPS. The trench itself provided a response of 300-400 CPS.
- On 22nd August, of 19 lorries monitored, one lorry (transfer ticket number 50961) had a localised elevated reading of 500CPS which when averaged over the load was 251CPS. This is below the action level (300CPS) required for further segregation/investigation.
- On 1st September, at the Podium level spoils laydown area near man-hole S03T023 (surface water), a small area of approximately 3mx2m showed an elevated response of 500-1000CPS with an associated dose rate of 0.2-0.5µSv/h.
- On 2nd September, at the podium level spoils from SW0311 to SW0312 used for backfilling had a response of 300-800CPS.

It should be noted that changes to the survey geometry (as in the cases above) can result in variations to the counts detected.

As such, no areas monitored to date, have been identified as being likely to contain material that is likely to be subject to radioactive substances legislation. In addition, the radiological risk to workers (and by extension to members of the public) from this work has been judged to be negligible.

7 APPENDICES

7.1 Radiation Monitor Test certificates

UKAS CALIBRATION 0210

NUVIA

Certificate Number: 1337711GW

Date of Issue: 11 September 2013

Page 1 of 1 Pages

Certificate of Calibration

Issued By: Nuvia Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.rpiservices.co.uk

Customer:	Nuvia Limited (Harwell)	Postal Code:	OX11 0QJ
Instrument:	Electra	Serial No:	5230
Detector:	Generic 3" NaI	Serial No:	2438
Reason:	Annual recalibration.		
Conditions:	Atmospheric Pressure 1003mBar, Temperature 24°C, Relative Humidity 51%.		
Method:	The detector was positioned in a collimated beam of gamma radiation		
Orientation:	The instrument was mounted horizontally with the beam normal to its front face. Manufacturers stated sensitivity is 4500 cps / uSv/h.		

CALIBRATION RESULTS

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading	Meter Fluctuation
Background	N/A	0.09 µSv/h	110 cps	
^{137}Cs	N/A	0.5 µSv/h	1555 cps	
^{137}Cs	N/A	1.0 µSv/h	3230 cps	
^{137}Cs	N/A	2.5 µSv/h	8490 cps	
^{137}Cs	N/A	5.0 µSv/h	16900 cps	
^{137}Cs	N/A	7.5 µSv/h	25100 cps	
^{137}Cs	N/A	10 µSv/h	33400 cps	
^{137}Cs	N/A	10000 µSv/h	----	Overload - PASSED

Comment:

Calibrated By: [redacted] Approved By: [redacted]

Notes:

1. Ambient dose equivalent H*(10) rates are derived from measurements made by a dosemeter calibrated at the NPL, and assume that an air kerma of 1 Gy = 1.2 Sv for ^{137}Cs, 1.15 Sv for ^{60}Co and 1.74 Sv for ^{241}Am.
2. The uncertainty of H*(10) rates 2 µSv/h and higher is ±3%, below 2 µSv/h is ±6% and background is ±10%. The uncertainty in the H*(10) rate from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibrium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instrument the user should be familiar with its characteristics (energy dependence, directional dependance, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software: GammaCal.exe: v1.9.13 Profile:

UKAS CALIBRATION
0210

NUVIA

Certificate Number:
1418667GW

Date of Issue:
29 April 2014

Page 1 of 1 Pages

Certificate of Calibration

Issued By: Nuvia Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.rpiservices.co.uk

Customer: Nuvia Limited (Harwell) **Postal Code:** OX110QJ

Instrument: Mini Instrument 1000R **Serial No:** 930

Reason: Annual recalibration.

Conditions: Atmospheric Pressure 993mBar, Temperature 22°C, Relative Humidity 37%.

Method: The instrument was positioned in a collimated beam of gamma radiation

Orientation: The instrument was mounted horizontally with the beam normal to its front face.

CALIBRATION RESULTS

Applied Nuclide	Instrument Range	Applied Dose rate H*(10)	Observed Reading	Meter Fluctuation
^{137}Cs	N/A	10 mSv/h	FSD	Overload - PASSED
Background	N/A	0.09 µSv/h	0.1 µSv/h	

Applied Nuclide	Instrument Range	Applied Dose rate H*(10)	Observed Reading Total Uncertainty	Meter Fluctuation If greater than ±10%	Instrument Response
^{137}Cs	N/A	500 µSv/h	400 µSv/h ±6.1%		0.80
^{137}Cs	N/A	50 µSv/h	40 µSv/h ±6.1%		0.80
^{137}Cs	N/A	5 µSv/h	4 µSv/h ±6.1%		0.80
^{137}Cs	N/A	0.5 µSv/h	0.4 µSv/h ±13.2%		0.80
^{60}Co	N/A	50 µSv/h	55 µSv/h ±6.1%		1.10
^{241}Am	N/A	50 µSv/h	45 µSv/h ±7.2%		0.90

Calibrated By: [redacted] **Approved By:** [redacted]

Notes:

1. Ambient dose equivalent H*(10) rates are derived from measurements made by a dosemeter calibrated at the NPL, and assume that an air kerma of 1 Gy = 1.2 Sv for ^{137}Cs, 1.15 Sv for ^{60}Co and 1.74 Sv for ^{241}Am.
2. The uncertainty of H*(10) rates 2 µSv/h and higher is ±3%, below 2 µSv/h is ±6% and background is ±10%. The uncetainty in the H*(10) rate from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instrument the user should be familiar with its characteristics (energy dependence, directional dependence, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software; GammaCal.exe: v1.9.13 Profile: 1000R 0-1mSv/h - With Uncertainties

UKAS CALIBRATION 0210

NUVIA

Calibration Certificate

Certificate Number: 1410137CH

Date of Issue: 03 Mar 2014

Page 1 of 1 Pages

Issued By: Nuvia Limited, B351, OX11 0TQ
Tel: 01235 514906 Fax: 01235 514963 Web: www.rpiservices.co.uk

Customer: Nuvia Ltd **Postal Code:** OX11 0TQ

Barcode: 2000003784
Detector: Thermo Fisher Scientific (NET) DP6AD - Alpha / Beta Probe **Serial No:** 1767

Barcode: 2000002646
Ratemeter: Thermo Fisher Scientific (NET) Electra 1A **Serial No:** 2061

Reason: Calibration after repair - To probe foil.

Method: The detector's EHT was as received.
The detector was exposed to the surface of a number of standard sources, whose activi areas were matched to that of the probe (100 cm²), and the respective responses were then noted below.

Orientation: The detector was positioned with its active face parallel to the source at a distance of 3mm.

CALIBRATION RESULTS

Additional Tests	Method	Result
Condition	The instrument was subjected to a pre-calibration inspection of battery state, mechanical condition, connecting lead, detector condition.	PASS
Light Leakage	The detector was exposed to a 500W lamp, as required by NPL GPG No.14 (4.8), and any variation in response was noted.	PASS
β Rejection	The instrument was set to the Alpha range and exposed to a ^{90}Sr/Y β source. As required by NPL GPG No.14 (4.7) the response should be lessthan 1% of the response of that from an alpha source of a similar emission rate.	PASS
Uniformity	A standard 10 point uniformity test was performed on the detector using a small ^{90}S/Y β source as required by NPL GPG No.14 (4.11).	PASS
U Disc (α) #1	A uranium check disc serial number A4 was applied to the detector.	52 cps (α)
U Disc (β) #1	A uranium check disc serial number A4 was applied to the detector.	2638 cps (β)
Detector EHT #1	The EHT was measured using a high impedance probe. The instrument meter was switched to EHT and its reading noted.	861 Volts 865 Volts

Response To Contamination *As required by NPL GPG No.14 (4.8)*

Applied Isotope	Source ID	Surface Emission Rate s^{-1}	Instrument Range	Mean Response cps	Fluctuation (See notes)	2π Efficiency %
^{36}Cl	J01/WEA573	3516	Beta	1342	-	38
^{241}Am	J01/WEA576	3708	Alpha	1281	-	35
β Background	-	-	Beta	5.83	-	-
α Background	-	-	Alpha	0.2	-	-

Linearity Response *As required by NPL GPG No.14 (4.10)*

Applied Isotope	Source ID	Surface Emission Rate s^{-1}	Instrument Range	Response cps
^{241}Am	HP431	21	Alpha	8.10
^{241}Am	HP433	164	Alpha	67.9
^{241}Am	HP435	1731	Alpha	645

Comment: All readings were acquired using the integrate mode timed for 30secs.

Calibrated By: [redacted] **Approved By:** [redacted]

Notes:
1. The instrument meets the equirements of NPL GPG 14, demonstrating its fitness for use.
2. The surface emission rate of each source was measured using a transfer standard instrument to compare it with the emission rate from a NPL [illegible]
3. The uncertainty of surface emission rates is ±4.9%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements
4. The instrument and probe have been tested as a unit and should be always used together.
5. The user should be familiar with the instrument operating instructions and probe characteristics before use.
6. These tests were performed as a requirement of Section 19 of the Ionising Radiation Regulations 1999.
7. If the fluctuation of the observed reading was greater than ±10% of the mean reading, then the minimum and maximum observed readings have been stated.
8. Key: n/a - Not applicable, n\ - Not UKAS accredited. Calibrations marked 'Not UKAS accredited' in this certificate have been included for completeness. #2 - Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.
9. The calibration was done on the date of issue of the certificate.
10. Efficiencies are calculatedas the ratio, expressed as a percentage of the response to emission rate without background subtraction.

UKAS CALIBRATION 0210

NUVIA

Certificate Number: 1408234GW

Date of Issue: 17 February 2014

Page 1 of 1 Pages

Certificate of Calibration

Issued By: Nuva Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.rpiservices.co.uk

Customer:	Nuva Limited (Harwell)	**Postal Code:**	OX11 0QJ
Instrument:	MiniInstrument 1000R	**Serial No:**	932
Reason:	Annual recalibration.		
Conditions:	Atmospheric Pressure 1009mBar, Temperature 24°C, Relative Humidity 51%.		
Method:	The instrument was positioned in a collimated beam of gamma radiation		
Orientation:	The instrument was mounted horizontaly with the beam normal to its front face.		

CALIBRATION RESULTS

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading	Meter Fluctuation
^{137}Cs	N/A	10 mSv/h	FSD	Overload - PASSED
Background	N/A	0.09 µSv/h	0.1 µSv/h	

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading Total Uncertainty	Meter Fluctuation If greater than ±10%	Instrument Response
^{137}Cs	N/A	500 µSv/h	500 µSv/h ±6.1%		1.00
^{137}Cs	N/A	50 µSv/h	50 µSv/h ±6.1%		1.00
^{137}Cs	N/A	5 µSv/h	5 µSv/h ±6.1%		1.00
^{137}Cs	N/A	0.5 µSv/h	0.5 µSv/h ±13.2%		1.00
^{60}Co	N/A	50 µSv/h	60 µSv/h ±6.1%		1.20
^{241}Am	N/A	50 µSv/h	55 µSv/h ±7.2%		1.10

Calibrated By: [redacted] **Approved By:** [redacted]

Notes:

1. Ambient dose equivalent H*(10) rates are derived from measurements made by a dosemeter calibrated at the NPL, and assume that an air kerma of 1 Gy = 1.2 Sv for ^{137}Cs, 1.15 Sv for ^{60}Co and 1.74 Sv for ^{241}Am.
2. The uncertainty of H*(10) rates 2 µSv/h and higher is ±3%, below 2 µSv/h is ±6% and background is ±10%. The uncertainty in the H*(10) rate from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibrium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instrument the user should be familiar with its characteristics (energy dependence, directional dependence, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software; GammaCal.exe: v1.9.13 Profile: 1000R 0-1mSv/h - With Uncertainties

UKAS CALIBRATION 0210

NUVIA

Certificate Number: 1407199GW

Date of Issue: 12 February 2014

Page 1 of 1 Pages

Certificate of Calibration

Issued By:	Nuvia Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.rpiservices.co.uk
Customer:	Nuvia Limited (Harwell) **Postal Code:** OX11 0QJ
Instrument:	Mini 900 **Serial No:** 036745
Detector:	Mini 44B **Serial No:** 1045
Reason:	Annual recalibration.
Conditions:	Atmospheric Pressure 1009mBar, Temperature 24°C, Relative Humidity 51%.
Method:	The instrument HT was adjusted to ensure that it was on the ^{55}Fe X-ray plateau by using a ^{55}Fe source 3 mm from the end of the probe. The cap was removed. This ensures that the low energy threshold is less than 5 keV. The overload trip setting was adjusted correspondingly.
Orientation:	For the the ^{137}Cs linearity checks, the detector was mounted with the beam normal to its end window, with the cap fitted. The measurement quantity used was ambient dose equivalent rate, H*(10).
Usage:	The instrument is suitable for the detection of X-radiation hot spots for energies in excess of 5 keV.

CALIBRATION RESULTS

Overload Response

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading	
^{137}Cs	N/A	10000 µSv/h	FSD	Overload - PASSED

Linearity Response

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading	Fluctuations	Background Corrected Response
^{137}Cs	N/A	5 µSv/h	400 cps		79 cps / µSv/h
^{137}Cs	N/A	10 µSv/h	800 cps		80 cps / µSv/h
^{137}Cs	N/A	20 µSv/h	1600 cps		80 cps / µSv/h

Low Energy Response

Applied Nuclide	Instrument Range	Applied Activity	Observed Reading	Fluctuations
^{55}Fe (TS348)	N/A	60 kBq	60 cps	

Background Response

Applied Nuclide	Instrument Range	Observed Reading	Fluctuations
Background	N/A	5 cps	

Calibrated By: [redacted] Approved By: [redacted]

Notes:

1. The air kerma rate has been measured by a dosemeter calibrated at the NPL.
2. The uncertainty in the air kerma rate 2 µGy/h and higher is ±3%, below 2 µGy/h is ±6% and background is ±10%. The uncertainty from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibrium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instument the user should be familiar with its characteristics (energy dependence, directional dependence, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software; GammaCal.exe v1.9.13 Profile:

UKAS CALIBRATION 0210

NUVIA

Certificate Number: 1348258GW

Date of Issue: 25 November 2013

Page 1 of 1 Pages

Certificate of Calibration

Issued By: Nuvia Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.nlservices.co.uk

Customer:	Nuvia Limited (Harwell)	**Postal Code:**	OX11 0QJ
Instrument:	Electra	**Serial No:**	6635
Detector:	Generic 3" NaI	**Serial No:**	1761
Reason:	Annual recalibration.		
Conditions:	Atmospheric Pressure 1009mBar, Temperature 24°C, Relative Humidity 51%.		
Method:	The detector was positioned in a collimated beam of gamma radiation		
Orientation:	The instrument was mounted horizontally with the beam normal to its front face. Manufacturers stated sensitivity is 4500 cps / uSv/h.		

CALIBRATION RESULTS

Applied Nuclide	Instrument Range	Applied Doserate H*(10)	Observed Reading	Meter Fluctuation
Background	N/A	0.09 µSv/h	138 cps	
^{137}Cs	N/A	0.5 µSv/h	1620 cps	
^{137}Cs	N/A	1.0 µSv/h	3350 cps	
^{137}Cs	N/A	2.5 µSv/h	8910 cps	
^{137}Cs	N/A	5.0 µSv/h	17300 cps	
^{137}Cs	N/A	7.5 µSv/h	25500 cps	
^{137}Cs	N/A	10 µSv/h	33300 cps	
^{137}Cs	N/A	10000 µSv/h	----	Overload - PASSED

Calibrated By: [redacted] **Approved By:** [redacted]

Notes:

1. Ambient dose equivalent H*(10) rates are derived from measurements made by a dosemeter calibrated at the NPL, and assume that an air kerma of 1 Gy = 1.2 Sv for ^{137}Cs, 1.15 Sv for ^{60}Co and 1.74 Sv for ^{241}Am.
2. The uncertainty of H*(10) rates 2 µSv/h and higher is ±3%, below 2 µSv/h is ±6% and background is ±10%. The uncertainty in the H*(10) rate from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibrium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instrument the user should be familiar with its characteristics (energy dependence, directional dependence, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software; GammaCal.exe: v1.9.13 Profile:

UKAS CALIBRATION 0210

NUVIA

Certificate Number: 1337712GW

Date of Issue: 11 September 2013

Page 1 of 1 Pages

Certificate of Calibration

Issued By: Nuvia Limited - A56 Winfrith, DT2 8WQ Tel: (01305) 755221 www.piservices.co.uk

Customer:	Nuvia Limited (Harwell)	**Postal Code:**	OX11 0QJ
Instrument:	Electra	**Serial No:**	199
Detector:	Generic 3" NaI	**Serial No:**	199

Reason: Annual recalibration.

Conditions: Atmospheric Pressure 1009mBar, Temperature 24°C, Relative Humidity 51%.

Method: The detector was positioned in a collimated beam of gamma radiation

Orientation: The instrument was mounted horizontally with the beam normal to its front face. Manufacturers stated sensitivity is 4500 cps / uSv/h.

CALIBRATION RESULTS

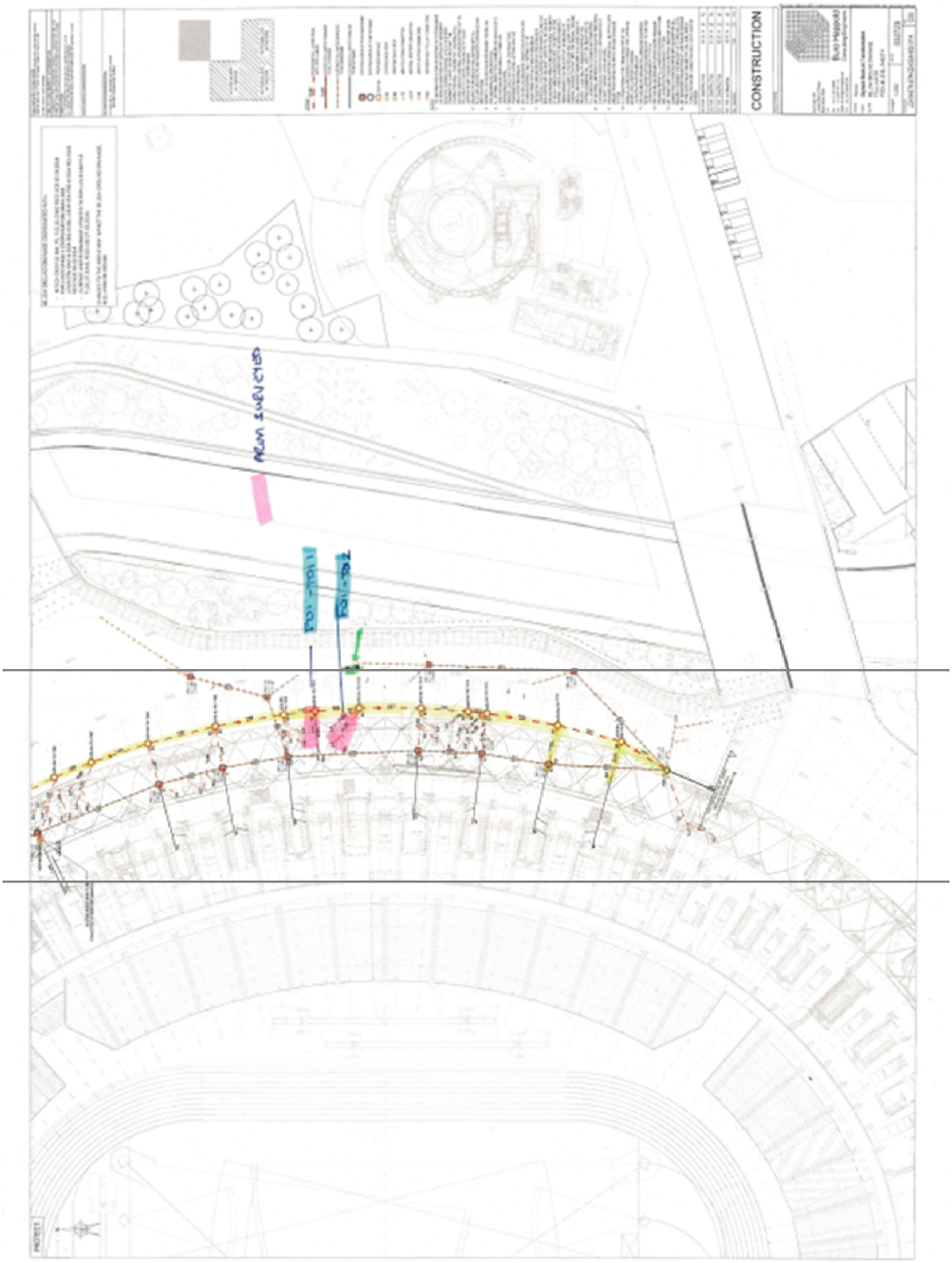
Applied Nuclide	Instrument Range	Applied Doserate $H^*(10)$	Observed Reading	Meter Fluctuation
Background	N/A	0.09 µSv/h	120 cps	
^{137}Cs	N/A	0.5 µSv/h	1640 cps	
^{137}Cs	N/A	1.0 µSv/h	3430 cps	
^{137}Cs	N/A	2.5 µSv/h	8830 cps	
^{137}Cs	N/A	5.0 µSv/h	16800 cps	
^{137}Cs	N/A	7.5 µSv/h	24200 cps	
^{137}Cs	N/A	10 µSv/h	31200 cps	
^{137}Cs	N/A	10000 µSv/h	----	Overload - PASSED

Calibrated By: [redacted] **Approved By:** [redacted]

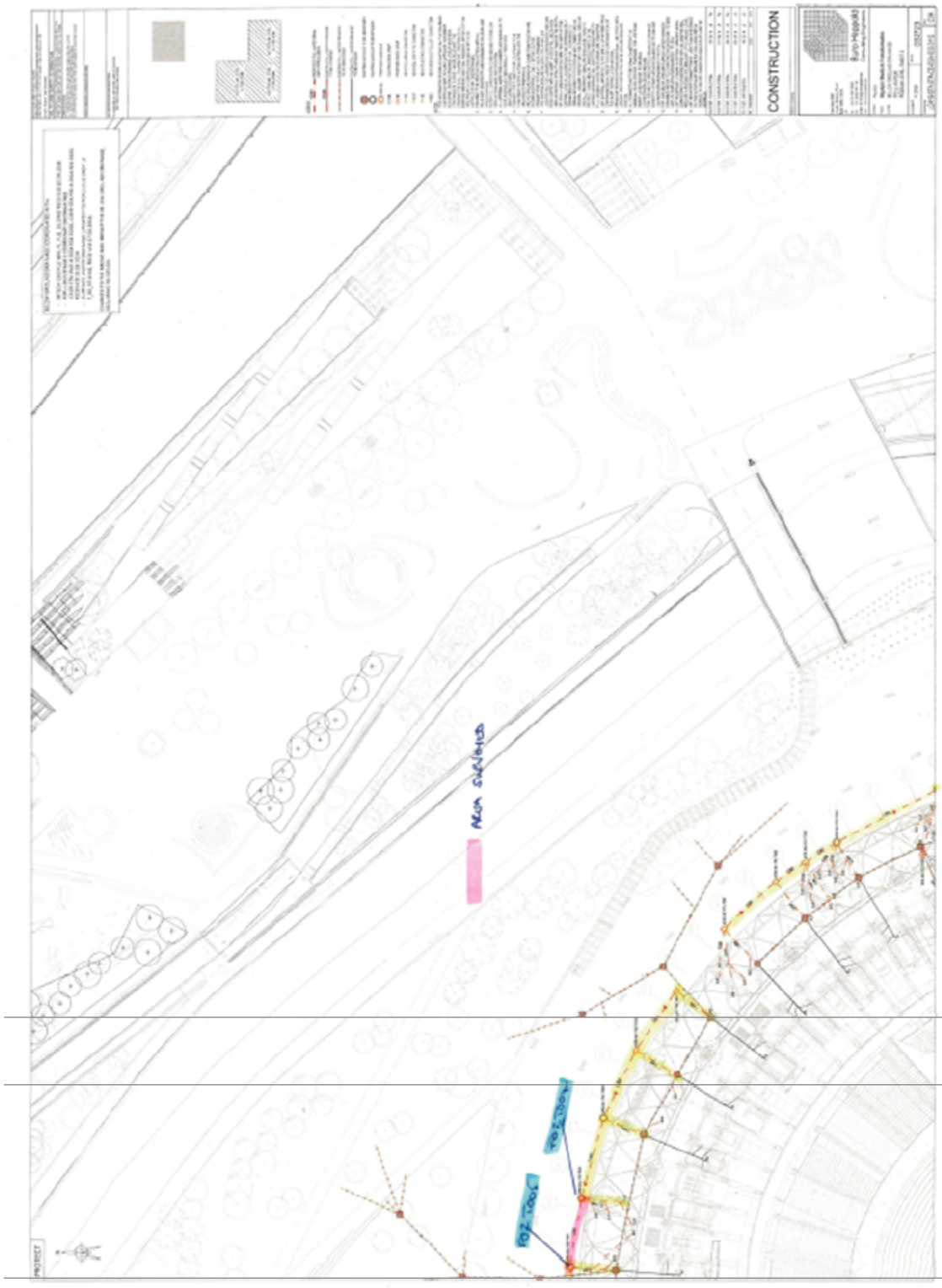
Notes:

1. Ambient dose equivalent $H^*(10)$ rates are derived from measurements made by a dosemeter calibrated at the NPL, and assume that an air kerma of 1 Gy = 1.2 Sv for ^{137}Cs, 1.15 Sv for ^{60}Co and 1.74 Sv for ^{241}Am.
2. The uncertainty of $H^*(10)$ rates 2 µSv/h and higher is ±3%, below 2 µSv/h is ±6% and background is ±10%. The uncertainty in the $H^*(10)$ rate from ^{241}Am is ±5%. The uncertainty associated with temperature is 0.09% and pressure is 0.07%. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.
3. The readings quoted are eye averages observed after the detector has been exposed for a period sufficiently long to enable it to reach equilibrium.
4. If the fluctuation of the observed reading was greater than ±10% of the average reading, then the minimum and maximum observed readings have been stated.
5. Before using the instrument the user should be familiar with its characteristics (energy dependence, directional dependence, etc.). Such information may be obtained from a type test report.
6. The calibration was done on the date of issue of the certificate.
7. The instrument meets the requirements of GPG 14 and is satisfactory for use.
8. This calibration used the following software; GammaCal.exe: v1.9.13 Profile:

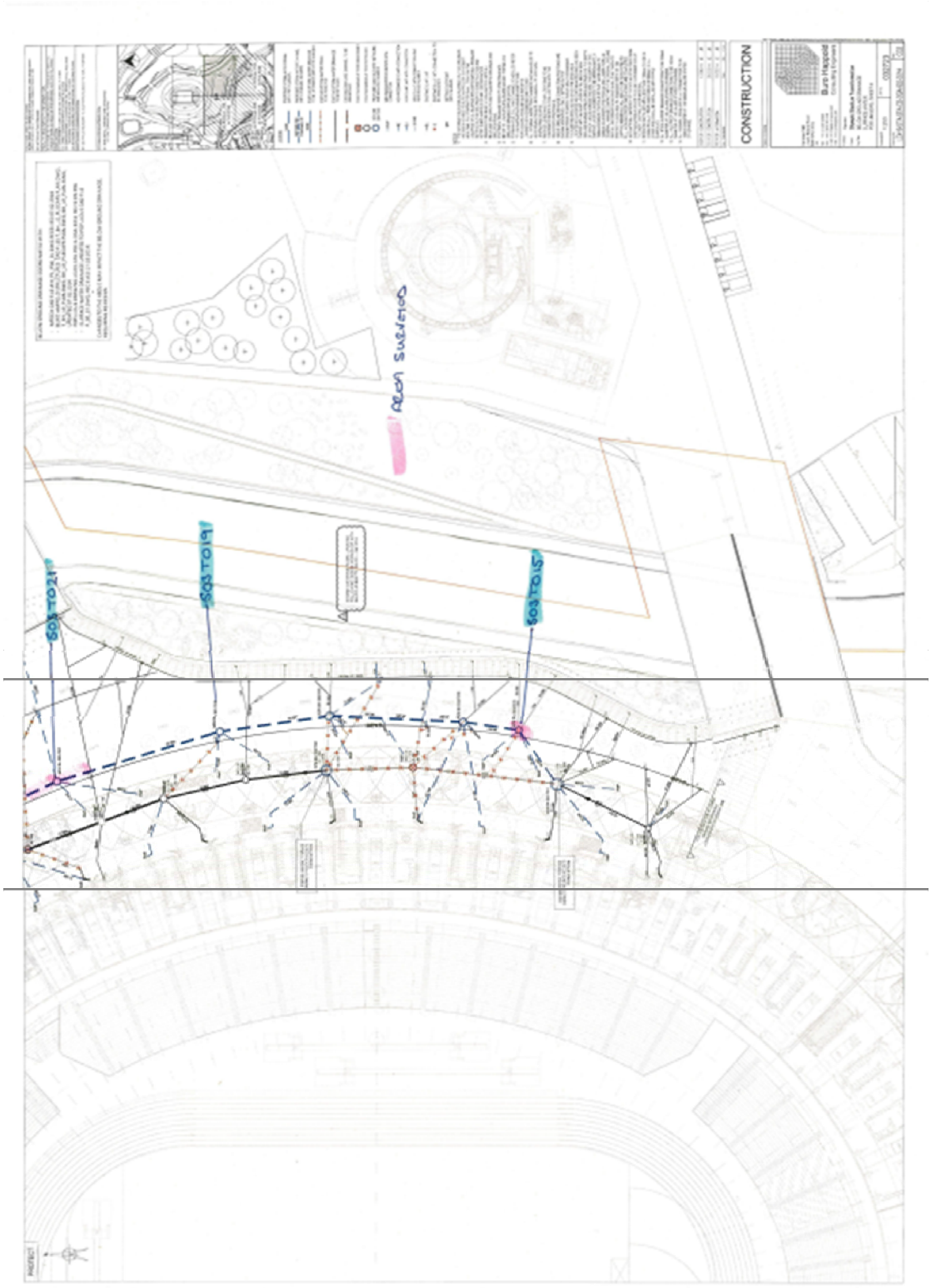
7.2 Areas monitored on site plan – F01-T011 and F01-T012



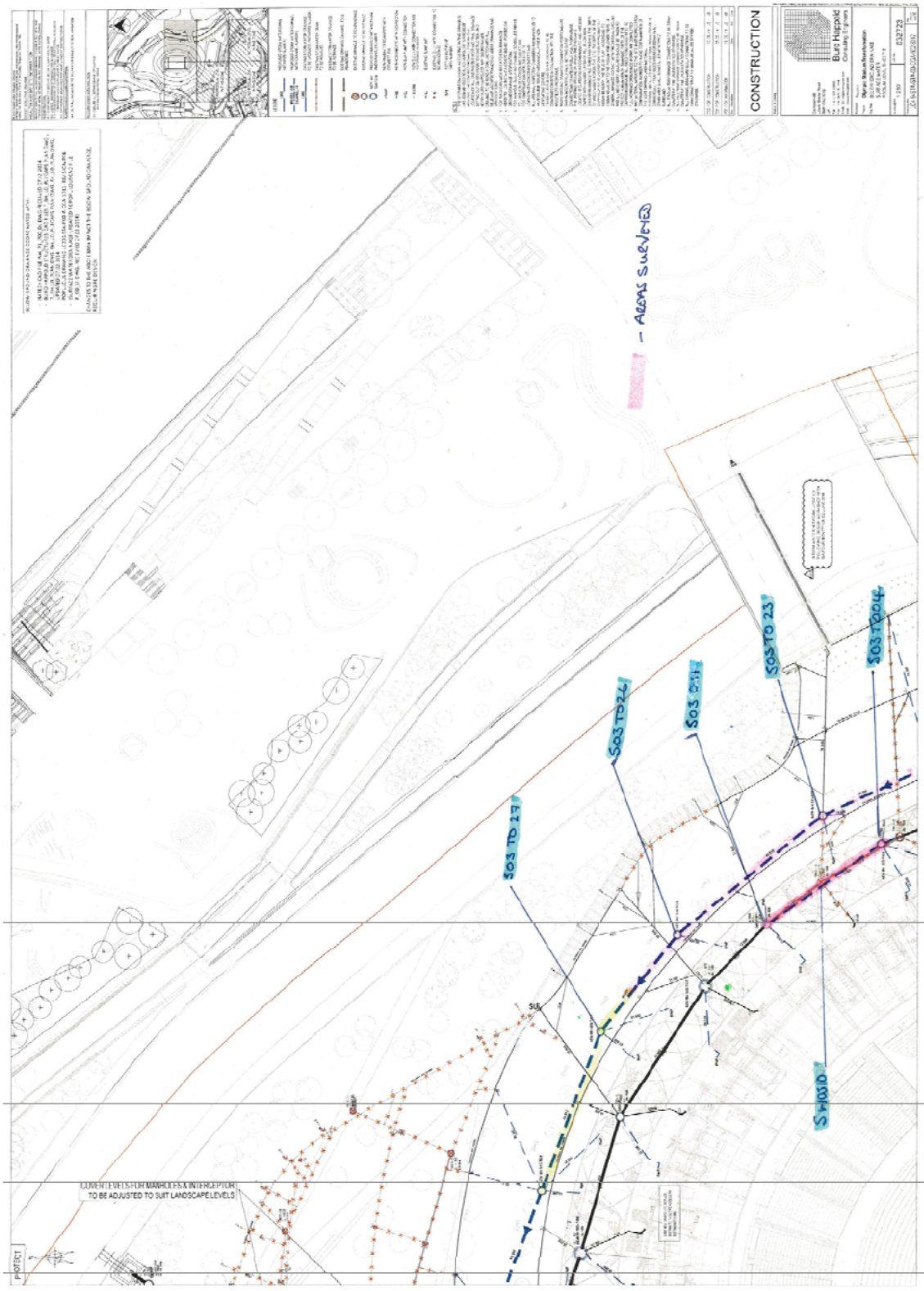
7.3 Areas monitored on site plan – F02-T005 and F02-T004



7.4 Areas monitored on site plan – S03-T021 and S03-T015



7.5 Areas monitored on site plan –S03-T004 to S03-11 and S03-T023 toS023-T027



7.6 Survey Sheets from 18/8/14-12/9/14 and lorry monitoring 26/8/14 -9/9/14 2014

Radiation & Contamination Survey Report

Health Physics

Date: MONDAY 18-5-14 | Building: Q.E OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

PIPE TRENCH BETWEEN S03-T027 AND S03-T026 (SURFACE WATER DRAINAGE)

Area Designation (tick)		Hazard Rating:	
Controlled	☐	(H, M, L)	
Supervised	☐	Radiation	L
Non-Des	✓	Contamination	L

Start Time: 0800

Survey No: B/B 13

Survey Type (tick)	
Routine	
Request	✓
Alarm/Incident	
Other	

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NAI PROBE	6035/SS1761	✓	300 CPS	✓
MINIMON/44B	036745/1045	✓	8 Bq	✓
ELECTRA/DP6	2061/1767	✓	x0.1 B5:4	✓ (CPS)
MINRAD	930	✓	0.1 μSv/h	✓
		☐		☐

Survey Details

No.	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS or γ	Radiation (circle units) mSv/h n	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
		300-700 (NaI Probe) *								
		10-20 (44B)								
		300-400 (NaI Probe)								
		300-400 (NaI Probe)								
		300-400 (NaI Probe)								

LARGE AMOUNT OF SPOILS IN STOCKPILE SURVEYED WHERE POSSIBLE :-

SMALL AREA 2m x 2m :-

REST OF SPOILS

TRENCH BEING DUG 1.5m WIDE 4m DEEP (2.5 WHICH IS BELOW MARINE LAYER)

BETWEEN M/H S03-T027 * M/H S03-T026.

TRENCH SURVEYED

DUMPER LOADED WITH SPOILS FROM TRENCH SURVEYED

ALL WORK CARRIED OUT BY M+H CONSTRUCTION

General Comments:

* DOSERATE USING MINI RAD AS BACKGROUND 0.1 μSv/h

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics

Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: TUESDAY 19-8-14 | Building: QE OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

P.PE TRENCH BETWEEN S03-T027 S03-T026

AND MANHOLE EXCAVATION S02-T026

Area Designation (tick)		Hazard Rating: (H, M, L)		Survey Type (tick)	
Controlled		Radiation	L	Routine	
Supervised		Contamination	L	Request	
Non-Des				Alarm/Incident	
Start Time:	0800			Other	
Survey No:	B/B 14				

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NaI PROBE	6635/SS1761	✓	250	✓
MINI/MON/44B	036745/10445	✓	10 cps	✓
MINI GM	930	✓	0.1 mSv/hr	✓
ELECTRA/DP6	2061/1947	✓	0.1-0.5 β cps	✓

Survey Details

No	Radiation (circle units) µSv/h βγ or mSv/h γ η	Contamination CPS α βγ	Contamination Bqcm² α βγ	P or S♦	R or FM ‡	U/S S or K**
	SPOILS FROM ABOVE AREAS SURVEYED IN DUMPERS & AT SPOILS STOCKPILE	250-400 (NaI Probe)				
	ALL SPOILS SURVEYED FROM EXCAVATIONS AT :- S03-T007 MANHOLE	250-400				
	SPOILS SURVEY FROM EXCAVATION AT F01-T012 MAN HOLE (FOUL WATER DRAINAGE)	250-400				
	EXCAVATOR BUCKETS SURVEYED		<0.2 Sat	P		

General Comments:

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRIBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments * Instrument Background ♦ Probe or Smear ** U/S - Unsatisfactory S - satisfactory K- Known ‡ R - Removed FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: WEDNESDAY 20-8-14 Building: Q.E. OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL S03 PIPE TRENCH M/HOLE TO26 EXCAVATION AT F01 - TO12

Area Designation (tick)		Hazard Rating:	Survey Type (tick)		Instruments	Serial No.	Pre Test	Bgd*	Post Test
Controlled	☐	(H, M, L)	Routine	☐	ELECTRA / NAI PROBE	6635 / SS1761	✓	280 cps	☐
Supervised	☐	Radiation L	Request	☐	MINIMON / 44S	030745 / 1045	✓	10 cps	☐
Non-Des	✓	Contamination L	Alarm/Incident	☐	ELECTRA / DP6	2061 / 1767	✓	<0.1 β cps	☐
Start Time:	0800		Other	☐	MIDI RAD	930	✓	0.1 μSv/hr	☐
Survey No:	B/B15			☐			☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	CPS γ	mSv/h η	Contamination CPS α	CPS βγ	Bqcm² α	Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	EXCAVATIONS COMPLETED AT BOTH OF THE ABOVE M/HOLE S03 - TO26	200-300									ALL READINGS INCLUDE B/G
	AS F01 - TO12 (FOLLOWING) EXCAVATION	180-250									
	TRENCH BETWEEN S03 TO26 TO S03 TO23 EXCAVATION COMMENCED SPOILS SURVEYED	250-320									

Survey completed by Print: [redacted] Sign [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRIBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: THURS 21-8-14

Building: Q.E OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

P.IPE TRENCH SPOILS FROM SO3-TO26 TO SO3-TO23

Area Designation (tick)		Hazard Rating:		Survey Type (tick)	
Controlled	☐	(H, M, L)		Routine	☐
Supervised	☐	Radiation	L	Request	☑
Non-Des	☑	Contamination	L	Alarm/Incident	☐
Start Time:	0800			Other	☐
Survey No:	B\816				

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NA/I PROBE	6310/2438	☑	180 CPS	☑
MINI MON/44B	036745/1045	☑	7 CPS	☑
ELECTRA/DP6	2061/17467	☑	<0.1 BS CPS	☑
MINI RAD	930	☑	0.1 μSv/HR	☑
		☐		

Survey Details

No		Radiation (circle units) μSv/h βγ	CPS γ	mSv/h η	Contamination CPS α	CPS βγ	Bqcm² α	Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
	SPOILS FROM ABOVE P.IPE TRENCH SURVEYED IN DUMPER TRUCKS		150-200								
	SPOILS STOCKPILE SURVEYED WHERE POSSIBLE		250-350								
	WALKOVER SURVEY OF ABOVE P.IPE TRENCH 8 METRES FROM M/H TO26 TO M/H TO23.		150-250								
	EXCAVATOR BUCKETS SURVEYED				<0.1	5*			P.		

General Comments:

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sig [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics

Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: FRI 22-8-14

Building: S.E OLYMPIC PARK STADIUM

Area Surveyed: PODIUM.

PIPE TRENCH BETWEEN TO26 & TO23

SPOILS LOADING AREA ADJ STOCKPILE

Area Designation (tick)		Hazard Rating: (H, M, L)		Survey Type (tick)	
Controlled		Radiation	L	Routine	
Supervised				Request	✓
Non-Des		Contamination	L	Alarm/Incident	
Start Time:	0700			Other	
Survey No:	B/B17				

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NaI PROBE	6310/2438	✓	180 cps	☒
MINIMON/44B	05745/1045	✓	7 cps	☐
ELECTRA/D16	2061/1767	✓	<0.1 β cps	☒
MINI RAD	930	✓	0.1 μSv/h	☒
				☐

Survey Details

No	Radiation (circle units) μSv/h βγ	γ	mSv/h η	Contamination CPS α	βγ	Bqcm² α	βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	APPROX 12 METRES OF EXCAVATED TRENCH SURVEYED BETWEEN TO26 TO TO23. TRENCH NOW APPROX 3.5 METRES DEEP (2 METRES APPROX BELOW MARKER LAYER)	350-450									ALL READINGS INCLUDE B/G
	19 LORRIES OF SPOILS (APPROX 18 TONS IN EACH) SURVEYED	500*									* MAX READING FOUND ON SIDE OF LORRY ANGLE OF LOAD 251 cps

Survey completed by Print: [redacted] Sign [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: TUESDAY 26th AUGUST 14 | Building: O.E. OLYMPIC PARK STADIUM

Area Surveyed: PODIUM

SPOILS LOADING AREA ADJ TO STOCKPILE

FOUL WATER DRAINAGE FOI - TOII

Area Designation (tick): Controlled [ ] Supervised [ ] Non-Des [✓]

Hazard Rating (H, M, L): Radiation [L] Contamination [L]

Survey Type (tick): Routine [ ] Request [✓] Alarm/Incident [ ] Other [ ]

Start Time: 0700

Survey No: B/B 18

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NaI PROBE	199/2436	✓	250 cps	✓
MINI MON/443	036745/1045	✓	8 cps	✓
ELECTRA/DP6	2061/1767	✓	<0.1 Bq/cm²	N
MIN RAD	930	✓	0.1 μSv/h	✓

Survey Details

No	Radiation (circle units) μSv/h or CPS βγ	γ	mSv/h η	Contamination CPS α	Bqcm² βγ	α	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	9 LORRIES OF SPOILS (APPROX 18 TONS EACH)	300*								* MAX READING FOUND ON SIDE OF LORRY DURING SURVEYS.
	SPOILS STOCKPILE AREA NOW CLEARED. 'WALKOVER' SURVEY CONDUCTED OF THIS AREA	180-270								ALL READINGS INCLUDE B/G
	EXCAVATOR BUCKET SURVEYED AFTER LOADING LORRIES			<0.1	S		P		♦	
	EXCAVATION AT FOI - TOII SURVEYED	250-320								

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRIBUTION - White Prime Copy to Health Physics

Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: WEDNESDAY 27th AUGUST 14 Building: Q.E. OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

PIPE TRENCH BETWEEN S03 TO 26 TO S02 TO 23

Area Designation (tick)		Hazard Rating:	Survey Type (tick)	
Controlled	☐	(H, M, L)	Routine	☐
Supervised	☐	Radiation L	Request	☑
Non-Des	☑	Contamination L	Alarm/Incident	☐
Start Time:	0800		Other	☐
Survey No:	B18/19			

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NAI PROBE	630/2438	☑	190 cps	☑
MINI MON/44B	036745/1041	☑	8 cps	☑
ELECTRA/DP6	2061/1767	☑	0.1 β 4cps	☑
MINI RAD	930	☐	0.1 mSv/h	☑
				☐

Survey Details

No	Radiation (circle units) µSv/h βγ	Radiation CPS or γ	Radiation mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
	CONTINUATION OF EXCAVATION OF ABOVE TRENCH NOW APPROX 3M DEEP (1.5M OF WHICH IS BELOW MARKER LAYER) TRENCH NOW APPROX 14M FROM M/H 26. TRENCH SURVEYED	250-320								
	SPOILS FROM ABOVE TRENCH SURVEYED	200-300								
	EXCAVATOR BUCKET SURVEYED			0.1cps	5cps			P		

General Comments:

ALL READINGS INCLUDE BACKGROUND

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRIBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date:	Building:	Area Designation (tick)	Hazard Rating:	Survey Type (tick)
THURSDAY 28th AUGUST 14	Q.E. OLYMPIC PARK STADIUM	Controlled ☐	(H, M, L)	Routine ☐
Area Surveyed: PODIUM LEVEL PIPE TRENCH BETWEN S03 T026 TO S03 T023		Supervised ☐	Radiation L	Request L
		Non-Des ☑	Contamination L	Alarm/Incident ☐
		Start Time: 0800		Other ☐
		Survey No: BB 20		

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECRA / NAI / Probe	6810/2438	☑	190 CPS	☑
MINI MON / GM B	036745/1045	☑	10 CPS	☑
ELECRA / DP6	2061/1767	☑	α 0.1 β 5 CPS	☑
MINI RAD	930	☑	0.1 mR/HR	☑
		☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS or γ	Radiation (circle units) mSv/h η	Radiation (circle units) CPS α	Contamination Bqcm² βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
	CONTINUATION OF ABOVE EXCAVATION. 17½ m APPROX (LENGTH) NOW COMPLETED. TRENCH SURVEYED	250 - 300								
	SPOILS FROM ABOVE SURVEYED	250-320								

General Comments:

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

NUVIA

Radiation & Contamination Survey Report

Health Physics

Date: FRI 29th AUG 14 Building: QE OLYMPIC PARK STADIUM	Area Designation (tick)	Hazard Rating: (H, M, L)	Survey Type (tick)	Instruments	Serial No.	Pre Test	Instrument background	Post Test
Area Surveyed: PODIUM LEVEL P.I.E TRENCH BETWEEN SO1 TO 26 P.I.E TRENCH BETWEEN FO2 TO04 TO FO2 TO05 TO SO3 TO2 3	Controlled ☐		Routine ☐	ELECTRA/NAI PROBE	6310/2438	☑	200 cps	☑
	Supervised ☐	Radiation L	Request ☑	MINI MON/443	0367US/1045	☑	5 cps	☑
	Non-Des ☑	Contamination L	Alarm/Incident ☐	ELECTRA/DP10	2061/1769	☑	X0.1 54 cps	☑
	Start Time: 0800		Other ☐	MINI RAD	930	☑	0.1 μSv/h	☑
	Survey No: B/B 2.1		☐			☐		☐

No	Survey Details	Radiation (circle units) μSv/h βγ	or cps γ	mSv/h n	Contamination CPS α	CPS βγ	Bq/cm² α	Bq/cm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	A FURTHER 3.5M OF TRENCH * DUG BETWEEN TO26 TO TO23											ALL READINGS INCLUDE BACKGROUND
	SPOILS SURVEYED		200-250 cps									* NO ACCESS TO SURVEY TRENCHES AT PRESENT
	APPROX 6M OF TRENCH DUG BETWEEN FO2 TO04 & FO2 TO05 TO A DEPTH OF APPROX 2.4 M											
	SPOILS SURVEYED		150-250 cps									

Survey completed by Print: [redacted]	Si [redacted]	HP Supervisor's Comments:
HP Supervisor Sign:	Date:	
RPS or Area Supervisor Sign:	Date:	

DISTRIBUTION – White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Registered Office: Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington WA3 6TW
Registered in England No 2063786
Tel: 01925 858200 Fax: 01925 811866 Email: info@nuvia.co.uk www.nuvia.co.uk

Radiation & Contamination Survey Report

Health Physics

NUVIA

Date: MONDAY 1st SEPTEMBER 14 | Building: Q.E. OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL SPOILS LAYDOWN AREA NEAR NEW M/H SO3 TO23 (SURFACE WATER)

Area Designation (tick): Controlled ☐ Supervised ☐ Non-Des ☐

Hazard Rating: (H, M, L) Radiation L | Contamination L

Start Time: 0800

Survey No: B/B 22

Survey Type (tick): Routine ☐ Request ☑ Alarm/Incident ☐ Other ☐

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NAI PROBE	6310/2438	☑	190	☑
MINIMAX/44B	035745/10445	☑	10	☑
ELECTRA/DP6	2061/17167	☑	×0.1 BS CPS	☑
MINI RAD	930	☑	0.1 μSv/hr.	☑
		☐		☑

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS of γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S◆	R or FM ‡	U/S S or K**
SPOILS STOCKPILE AREA SURVEYED SMALL AREA (3MX2M)		500-1000 (NAI) 70 (44B) 0.5 μSv/hr (MINIRAD) *								
2 EXCAVATOR BUCKETS OF SPOILS REMOVED FROM AREA & SURVEYED		400-500 (NAI)								
AREA SURVEYED WHERE HIGH READINGS OBSERVED		400-600 (NAI) 40 (44B) 0.2 μSv/hr (MINI RAD)								
WALKOVER SURVEY CARRIED OUT OVER AREA AS TARMAC REMOVED ON TRENCH TO NEW M/H SO3 TO23		180-230 (NAI)								

General Comments:

* SPOILS WERE EXCAVATED FROM TRENCH FOR SURFACE WATER DRAINAGE BETWEEN M/H SW03 11 & SW03 10

UNABLE TO SURVEY TRENCH AS PIPE ALREADY LAID IN TRENCH. THIS EXCAVATION & RELAYING CARRIED OUT ON SAT 30th AUGUST / SUNDAY 31st AUGUST

* ALL READINGS INCLUDE B/G

HP Supervisor's Comments:

Survey completed by Print: [redacted] Sign [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

DISTRIBUTION - White Prime Copy to Health Physics

Yellow Carbonated Copy Retained by Client

HPCF/30001 - Issue B

Symbol Comments

* Instrument Background

◆ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date:	Building:	Area Designation (tick)		Hazard Rating:	Survey Type (tick)		Instruments	Serial No.	Pre Test	Bgd*	Post Test
TUESDAY 2nd SEPTEMBER 14	QE OLYMPIC PARK STADIUM	Controlled	☐	(H, M, L)	Routine	☐	ELEDEA/NAI PROBE	6310/2438	☑	200 cps	✓
Area Surveyed: PODIUM LEVEL FW02 004 TO FW02 005 SPOILS SW03 011 TO SW03 012 SPOILS S03 T026 TO S03 T023 SPOILS		Supervised	☐	Radiation ☐	Request	☑	MINI MAX/4453	036745/1045	☑	9 cps	✓
		Non-Des	☑	Contamination ☐	Alarm/Incident	☐	ELEDEA/DP6	2061/1967	☑	<0.1 β γ cps	✓
		Start Time:	0800		Other	☐	MINIRAD	930	☑	0.1 μSv/h	✓
		Survey No:	B/823			☐			☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
											ALL READINGS INCLUDE BK
SPOILS FROM FW02 004 TO FW02 005 SURVEYED		250-300									
SPOILS FROM SW03 11 TO SW03 12 SURVEYED ADJACENT TRENCH THESE SPOILS USED FOR BACKFILLING TRENCH		300-800									
WALKOVER SURVEY CARRIED OUT WHERE SPOILS WERE LOCATED		200-300									
SPOILS FROM S03 T026 TO S03 T023 SURVEYED		200-300									
EXCAVATOR BUCKET SURVEYED		150-200		0.1	4-6			P			

Survey completed by Print: [redacted]	Sign [redacted]	HP Supervisor's Comments:
HP Supervisor Sign:	Date:	
RPS or Area Supervisor Sign:	Date:	

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: WEDNESDAY 2nd SEPTEMBER	Building: QE OLYMPIC PARK STADIUM	Area Designation (tick)	Hazard Rating:	Survey Type (tick)	Instruments	Serial No.	Pre Test	Bgd*	Post Test
Area Surveyed: PODIUM LEVEL FW02 004 TO FW02 005 TRENCH SO3 T026 TO SO3 T023 TRENCH SW0310 TO SO3 T004		Controlled ☐	(H, M, L)	Routine ☐	ELECTRA/NAI PROBE	6370/2438	☑	180	☐
		Supervised ☑	Radiation L	Request ☑	MINI MON/445	036745/1045	☑	10	☑
		Non-Des ☐	Contamination L	Alarm/Incident ☐	ELECTRA/DP6	2061/1967	☑	< 0.1 βγ cps	☑
		Start Time: 0800		Other ☐	MINI RAD	930	☑	0.1 μSv/hr	☑
		Survey No: B/R 24					☐		☐

No	Survey Details	Radiation (circle units) μSv/h CPS or mSv/h βγ	γ	η	Contamination CPS α	βγ	Bqcm² α	βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	FW02 004 TO FW02 005 TRENCH SURVEYED AFTER EXCAVATION		200-280									
	FINAL PART OF TRENCH TO SO3 T023 SURVEYED MANHOLE SO3 T023 NOW BEING EXCAVATED		200-350									
	SPOILS FROM SURFACE WATER SW0310 TO SO3 T004 TRENCH SURVEYED		200-250									

Survey completed by Print: [redacted]	Sign [redacted]	HP Supervisor's Comments:
HP Supervisor Sign:	Date:	
RPS or Area Supervisor Sign:	Date:	

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: THURSDAY Building: QE OLYMPIC & COMMONWEALTH POOL STADIUM

Area Surveyed: PODIUM LEVEL M/H SO3 TO23 EXCAVATION SWO310 TO SO3 TO04 TRENCH

Area Designation (tick)		Hazard Rating:
Controlled	☐	(H, M, L)
Supervised	☐	Radiation L
Non-Des	☑	Contamination L
Start Time:	0800	
Survey No:	B\A 25	

Survey Type (tick)		Instruments	Serial No.
Routine	☐	ELECTRA/NAI LARGE	6310/2438
Request	☑	MINI MONITOR	036745/1045
Alarm/Incident	☐	ELECTRA DPL	2061/1967
Other	☐	MINI RAD	930
	☐		

	Pre Test	Bgd*	Post Test
	☑	180 cps	☑
	☑	9 cps	☑
	☑	<0.1 β 5 cps	☑
	☑	0.1 μSv/hr	☐
	☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS or γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
	5M x 5M x 3M M/H EXCAVATION (M/H SO3 TO 23)									
	SPOILS FROM M/H SURVEYED EXCAVATION COMPLETED AREA SURVEYED	250 - 300								
		200 - 350								
	SPOILS FROM SWO310 TO SO3 TO04 SURVEYED	200 - 280								

General Comments:

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRIBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: FRIDAY | Building: QE OLYMPIC
5" SCANSORIA PARK STADIUM

Area Surveyed: PODIUM LEVEL
M/H S03 R23 TO S03 T021
SPOILS LAYDOWN AREA

Area Designation (tick)		Hazard Rating:		Survey Type (tick)	
Controlled	☐	(H, M, L)		Routine	☐
Supervised	☐	Radiation	L	Request	☐
Non-Des	✓	Contamination	L	Alarm/Incident	☐
Start Time:	0700			Other	☐
Survey No:	B/C 26				

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NAI PROBE	6310/2438	☑	200 cps	☑
MIN MON/44B	036745/1045	☑	9 cps	☑
ELECTRA/DP6	2061/1967	☑	0.1x@4β cps	☑
MINI RAD	930	☑	0.1 μSv/hr	☑
		☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
APPROX 7M @ TRENCH DUG BETWEEN S03T023 TOWARD S03T021. TRENCH SURVEYED AFTER EXCAVATION		250-400								
SPOILS SURVEYED		200-300								
SPOILS LAYDOWN AREA TURNED BY EXCAVATOR. WHERE ACCESSIBLE SPOILS SURVEYED		280-420								

General Comments:
ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted]	Sign: [redacted]	HP Supervisor's Comments:
HP Supervisor Sign:	Date:	
RPS or Area Supervisor Sign:	Date:	

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date	Building	Area Designation (tick)	Hazard Rating:	Survey Type (tick)	Instruments	Serial No.	Pre Test	Bgd*	Post Test
MONDAY 8th SEPTEMBER 14	QE OLYMPIC PARK STADIUM	Controlled ☐	(H, M, L)	Routine ☐	ELECTRA/NAI PROBE	6310/2438	☑	200 cps	☐
Area Surveyed: PODIUM LEVEL BETWEEN NW SO3 TO23 TO SO3 TO21 SPOILS LAYDOWN AREA		Supervised ☐	Radiation L	Request ☑	MINI MON/44B	036745/1045	☑	8 cps	☐
		Non-Des ☑	Contamination L	Alarm/Incident ☐	ELECTRA/DP6	2061/1967	☑	x0.1 cps B/G cps	☐
		Start Time: 0700		Other ☐	MINI RAD	950	☐	0.1 μSv/hr	☐
		Survey No: B/B 27					☐		☐

No	Survey Details	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	SPOILS SURVEYED AS BOWLES FROM SO3 TO23 TO SO3 TO21 TRACK											ALL READINGS INCLUDE B/G
	APPROX 11 METRES COMPLETED		200-300									
	SPOILS LAYDOWN AREA SURVEYED WHERE POSSIBLE		200-350									

Survey completed by Print: [redacted] Sig [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

HPCF/30001 - Issue B

Symbol Comments * Instrument Background ♦ Probe or Smear ** U/S - Unsatisfactory S - satisfactory K- Known ‡ R - Removed FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: TUESDAY 9th SEPT 14	Building: QE OLYMPIC PARK STADIUM	Area Designation (tick)	Hazard Rating:	Survey Type (tick)	Instruments	Serial No.	Pre Test	Bgd*	Post Test
Area Surveyed: PODIUM LEVEL BETWEEN M/H SO3TO23 & SO3 TO21 SPOILS LAYDOWN AREA		Controlled ☐	(H, M, L)	Routine ☐	ELECTRA/NAI PROBE	199/2436	☑	230 cps	☑
		Supervised ☐	Radiation L	Request ☑	MINIMON/44B	036745/1045	☑	8 cps	☑
		Non-Des ☑	Contamination L	Alarm/Incident ☐	ELECTRA D6	2061/17673	☑	∝ 0.1 β 4 cps	☑
		Start Time: 0700		Other ☐	MINI RAD	930	☐	0.1 μSv/hr	☑
		Survey No: B/B28					☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS or γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
	SPOILS FROM M/H SO3TO23 TO SO3 TO21 TRENCH SURVEYED	230-300									ALL READINGS INCLUDE B/G
	19 LORRY LOADS OF SPOILS SURVEYED TO GO OFF SITE	200-290									

Survey completed by Print: [redacted] Sign [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments * Instrument Background ♦ Probe or Smear ** U/S - Unsatisfactory S - satisfactory K- Known ‡ R - Removed FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: WEDNESDAY 10 SEPT 14 | Building: OE OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

M/H SO3 TO23 TO SO3TO21

SPOILS LAYDOWN AREA

Area Designation (tick)		Hazard Rating:		Survey Type (tick)	
Controlled		(H, M, L)		Routine	
Supervised		Radiation	L	Request	✓
Non-Des	✓	Contamination	L	Alarm/Incident	
Start Time:	0800			Other	
Survey No:	B|G 29				

Instruments	Serial No.	Pre Test	Bgd*	Post Test
ELECTRA/NAI PROBE	191/2436	✓	210 cps	✓
MINIMON/44B	036745/1045	✓	9 cps	✓
ELECTRA/DP6	206/1767	✓	α 0.1 βS cps	✓
MINI RAD	930	✓	0.1 μSv/hr	

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) cps or γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
WALKOVER SURVEY OF SPOILS LAYDOWN AREA FOLLOWING REMOVAL		200 - 300								
M/H SO3TO21 AREA SURVEYED BEFORE EXCAVATION		180 - 250								
FINAL PART OF TRENCH EXCAVATED BETWEEN SO3TO23 AND SO3TO21										
SPOILS SURVEYED		200 - 300								
TRENCH SURVEYED AFTER EXCAVATION		200 - 380								
EXCAVATOR BUCKETS SURVEYED				0.1	4 - 6 cps					(P)

General Comments:

ALL READINGS INCLUDE B/G

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

HPCF/30001 - Issue B

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: THURSDAY 11th SEPT 14 | Building: QE OLYMPIC PARK STADIUM

Area Surveyed: PODIUM LEVEL

MH 303 TO21

MH S03TO21 TO MH S03TO19 TRENCH

Area Designation (tick)		Hazard Rating:		Survey Type (tick)		Instruments	Serial No.	Pre Test	Bgd*	Post Test
Controlled		(H, M, L)		Routine		ELECTRA NAI PROBE	199/2436	✓	220 cps	✓
Supervised		Radiation		Request	✓	MINI MON/44B	036745/1045	✓	8 cps	✓
Non-Des	✓	Contamination		Alarm/Incident		ELECTRA D6	2061/1767	✓	<0.1 Bq/cm²	✓
Start Time:	0800			Other		MIN RAD	930	✓	<0.1 µSv/h	✓
Survey No:	B\B30									

Survey Details

No	Radiation (circle units) µSv/h βγ	Radiation (circle units) CPS γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**	General Comments:
MH S03TO21 EXCAVATED. SPOILS SURVEYED		200-300									ALL READINGS INCLUDE B\G
MH SURVEYED AFTER EXCAVATION		220-400									
SPOILS AT LAYDOWN AREA SURVEYED		200-350									
3.5m OF TRENCH EXCAVATED BETWEEN S03TO21 & S03TO19 SPOILS SURVEYED		200-300									

Survey completed by Print [redacted] S[redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Radiation & Contamination Survey Report

Health Physics

Date: FRIDAY 12th SEPT 14	Building: QE OLYMPIC PARK STADIUM	Area Designation (tick)	Hazard Rating:	Survey Type (tick)	Instruments	Serial No.	Pre Test	Bgd*	Post Test
Area Surveyed: PODIUM LEVEL M/H SO3TO21 TO M/H SO3TO19 TRENCH M/H SO3TO15		Controlled ☐	(H, M, L)	Routine ☐	ELECTRA NAI PROBE	199/2486	✓	220	☑
		Supervised ☐	Radiation	Request ☑	MINI-RAD 44B	036746/1040	✓	9cps	☑
		Non-Des ☑	Contamination	Alarm/Incident ☐	ELECTRA/PA6	2061/1767	✓	∝0.1 β5cps	☑
		Start Time: 0800		Other ☐	MINI RAD	930	✓	0.1 μSv/h	☑
		Survey No: B/B 31		☐			☐		☐

Survey Details

No	Radiation (circle units) μSv/h βγ	Radiation (circle units) CPS γ	Radiation (circle units) mSv/h η	Contamination CPS α	Contamination CPS βγ	Contamination Bqcm² α	Contamination Bqcm² βγ	P or S♦	R or FM ‡	U/S S or K**
CONTINUATION OF TRENCH EXCAVATION BETWEEN M/H SO3TO21 TO M/H SO3TO19. SPOILS SURVEYED		250-300								
EXCAVATION OF M/H SO3TO15 SPOILS SURVEYED		220-240								
WALKOVER SURVEY OF COMPLETED WORK BETWEEN SO3TO27 TO SO3TO21		220-260								
EXCAVATOR BUCKET SURVEYED				0.1	5			P		
7M OF TRENCH NOW EXCAVATED BETWEEN M/H SO3TO21 & SO3TO9. TRENCH SURVEYED		350-400								

General Comments:

Survey completed by Print: [redacted] Sign: [redacted]

HP Supervisor Sign: Date:

RPS or Area Supervisor Sign: Date:

HP Supervisor's Comments:

DISTRBUTION - White Prime Copy to Health Physics Yellow Carbonated Copy Retained by Client

Symbol Comments

* Instrument Background

♦ Probe or Smear

** U/S - Unsatisfactory
S - satisfactory
K- Known

‡ R - Removed
FM - Fixed and Marked

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 KTJ
Transfer Ticket Number	49272

CPS	180	200	200	200	180
	[redacted]				
CPS	170	160	200	180	180

Average CPS Including Background for the Load: 175

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	✓
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0755
Comments:	BELOW MREM/HR SHOTS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49858

CPS	190	190	180	200	200
	[redacted]				
CPS	170	190	180	180	180

Average CPS Including Background for the Load: 186

Ground Hog Serial Number:	6310/2438
Background cps:	180
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0800
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50958

CPS	170	180	180	190	170
	[redacted]				
CPS	190	200	190	180	180

Average CPS Including Background for the Load: 184

Ground Hog Serial Number: **Background cps:**	6310 | 2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSIH
Surveyor name and signature:	[redacted]
Date:	22 | 8 | 14
Time:	0810
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	~~50465~~ EJ 12 SOE
Transfer Ticket Number	50465

CPS	200	190	190	200	190
	[redacted]				
CPS	180	170	180	190	190

Average CPS Including Background for the Load: 188

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	✓
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0820
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49859

CPS	200	190	190	200	210
	[redacted]				
CPS	190	200	210	190	198

Average CPS Including Background for the Load: 197

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	~~DAMPSAND~~
Maximum dose rate:	0.1 μSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0940
Comments:	BACK MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EN14 KTJ
Transfer Ticket Number	49273

CPS	210	200	220	220	210	Average CPS Including Background for the Load: 207
	[redacted]					
CPS	190	200	220	200	200	

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0945
Comments:	BELOW MARKER SHEETS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50959

CPS	200	220	190	200	200	Average CPS Including Background for the Load: 198
	[redacted]					
CPS	180	210	200	190	190	

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	0955
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	S0466

CPS	190	190	180	200	190
	[redacted]				
CPS	180	200	210	190	190

Average CPS Including Background for the Load: 192

Ground Hog Serial Number: **Background cps:**	6310/2438
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	✓
Maximum dose rate:	0.1 mSv/h.
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1005
Comments:	BELOW MANOR SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	E014 KTJ
Transfer Ticket Number	49274

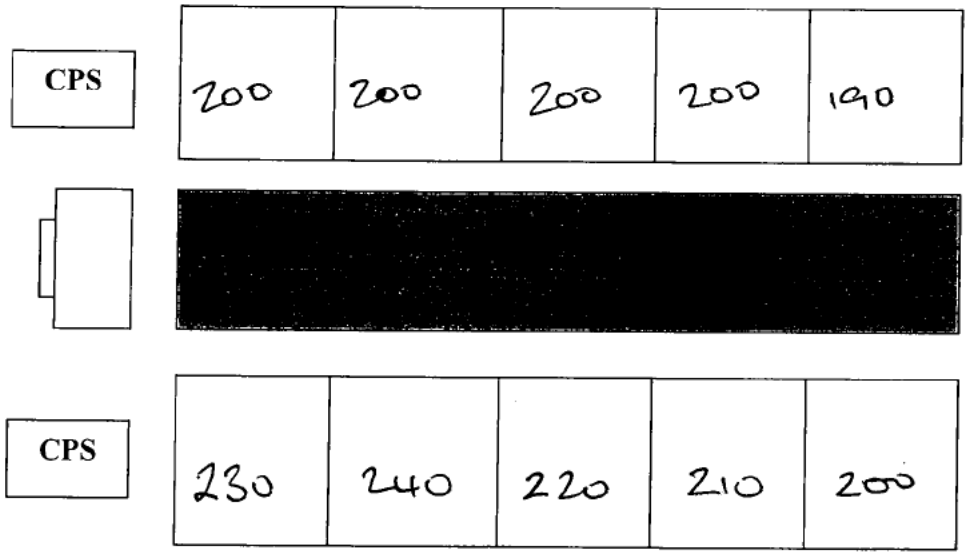
CPS	190	240	260	250	200	Average CPS Including Background for the Load: 243
	[redacted]					
CPS	270	300	270	250	200	

Ground Hog Serial Number: **Background cps:**	6310/2438 150
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.15mSv/l
Surveyor name and signature:	[redacted]
Date:	22/8/15
Time:	1115
Comments:	Below marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

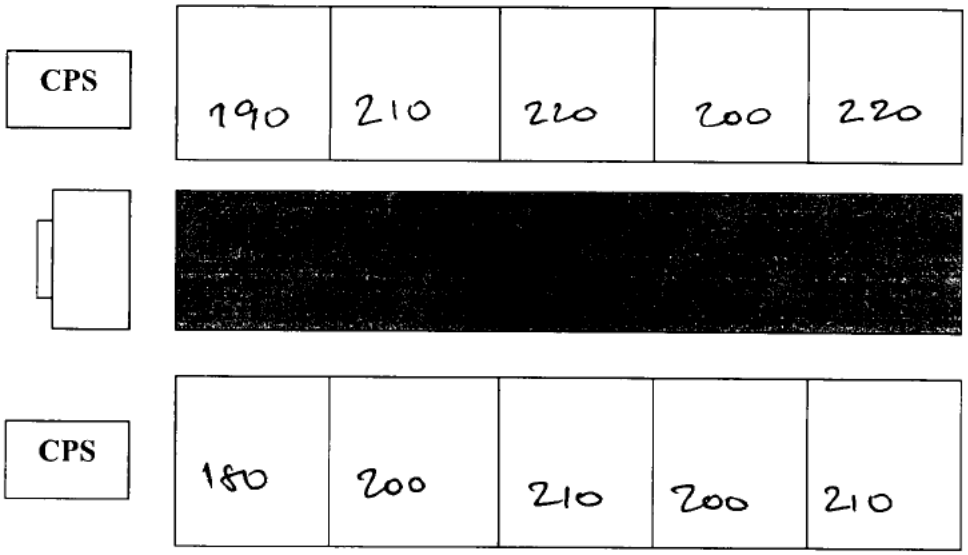
Lorry Registration Number	GF61 MWX
Transfer Ticket Number	49860



Ground Hog Serial Number: **Background cps:**	6310 | 2430 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/15
Time:	1120
Comments:	Below maximum spoils

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX57 DFK
Transfer Ticket Number	50960



CPS	190	210	220	200	220
	[redacted]				
CPS	180	200	210	200	210

Average CPS Including Background for the Load: 204

Ground Hog Serial Number: **Background cps:**	6310/2438
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/LS
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1125
Comments:	BROWN MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	50467

CPS	190	210	180	180	190
	[redacted]				
CPS	190	200	210	200	210

Average CPS Including Background for the Load: 196

Ground Hog Serial Number: **Background cps:**	6310/2438
Dose Rate Instrument: **Serial Number:**	MIN RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1135
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 KTJ
Transfer Ticket Number	49275

CPS	190	180	200	210	190
	[redacted]				
CPS	200	210	180	190	200

Average CPS Including Background for the Load: 193

Ground Hog Serial Number:	6310 | 2438
Background cps:	180
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1310
Comments:	Below marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49861

CPS	170	180	190	190	200	Average CPS Including Background for the Load: 189
	[redacted]					
CPS	210	200	180	180	190	

Ground Hog Serial Number: **Background cps:**	6310 / 2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1315
Comments:	Brown marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50961

CPS	180	190	200	210	190	Avcrage CPS Including Background for the Load: 251
	[redacted]					
CPS	220	300	500	300	220	

Ground Hog Serial Number: **Background cps:**	6310/2438 180
Dose Rate Instrument: **Serial Number:**	MINI EAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.2 mSv/hr.
Surveyor name and signature:	[redacted]
Date:	22/6/14
Time:	1320
Comments:	Below natural spoils

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	50468

CPS	190	180	190	190	180	Average CPS Including Background for the Load: 190
	[redacted]					
CPS	170	190	200	220	190	

Ground Hog Serial Number: **Background cps:**	6310 / 2438 180
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1335
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU 14 KTJ
Transfer Ticket Number	492 76

CPS	200	190	180	200	210	Average CPS Including Background for the Load: 189
	[redacted]					
CPS	170	180	180	200	180	

Ground Hog Serial Number:	6310/2438
Background cps:	180
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1435
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50962

CPS	200	190	200	190	190	Average CPS Including Background for the Load: 197
	[redacted]					
CPS	190	200	210	210	190	

Ground Hog Serial Number:	6310/2438
Background cps:	180
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1445
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49862

CPS	220	220	210	200	190
[redacted]					
CPS	220	250	260	240	200

Average CPS Including Background for the Load: 221

Ground Hog Serial Number:	6810/2438
Background cps:	180
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 μSv/hr
Surveyor name and signature:	[redacted]
Date:	22/8/14
Time:	1440
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49863

CPS	240	260	240	250	240	Average CPS Including Background for the Load: 246
	[redacted]					
CPS	260	250	240	240	240	

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/HR
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	0750
Comments:	BELOW MARKER SHOTS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50963

CPS	250	240	260	250	260
	[redacted]				
CPS	240	230	250	250	240

Average CPS Including Background for the Load: 247

Ground Hog Serial Number: **Background cps:**	199/2436
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	0745
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU 14 KTJ
Transfer Ticket Number	47953

CPS	300	280	270	280	300
	[redacted]				
CPS	290	290	320	260	280

Average CPS Including Background for the Load: 287

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	
If average cps < 300 NET cps = PASS	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	0735
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 KTJ
Transfer Ticket Number	47955

CPS	250	260	270	280	270
[redacted]					
CPS	260	240	270	260	260

Average CPS Including Background for the Load: 262

Ground Hog Serial Number: **Background cps:**	199/2436 250
Dose Rate Instrument: **Serial Number:**	MINI RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	1110
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 JFK
Transfer Ticket Number	50965

CPS	240	240	260	260	250	Average CPS Including Background for the Load: 251
	[redacted]					
CPS	250	260	250	260	240	

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MIN RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	
If average cps < 300 NET cps = PASS	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	1120
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF61 MWX
Transfer Ticket Number	49865

CPS	250	260	270	260	250	Average CPS Including Background for the Load: 255
	[redacted]					
CPS	240	250	260	260	240	

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MIN. RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	
If average cps < 300 NET cps = PASS	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	1130
Comments:	Brown marker spoils

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU 14KTJ
Transfer Ticket Number	47954

CPS	240	260	240	230	250	Average CPS Including Background for the Load: 247
	[redacted]					
CPS	250	250	240	260	250	

Ground Hog Serial Number: **Background cps:**	199/2436 250
Dose Rate Instrument: **Serial Number:**	MIM RAD 932
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/h
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	0905
Comments:	BOOM MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	RX 57 DFK
Transfer Ticket Number	50964

CPS	260	280	240	260	250	Average CPS Including Background for the Load: 262
	[redacted]					
CPS	290	270	260	250	261	

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	24/8/14
Time:	0910
Comments:	BADEN MIXED SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	GF 61 MWX
Transfer Ticket Number	49864

CPS	250	270	270	280	260	Average CPS Including Background for the Load: 263
	[redacted]					
CPS	250	250	260	270	270	

Ground Hog Serial Number:	199/2436
Background cps:	250
Dose Rate Instrument:	MINI RAD
Serial Number:	932
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	26/8/14
Time:	0945
Comments:	Below marker stone

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	51405

CPS	230	240	240	260	220	Average CPS Including Background for the Load:
	[redacted]					
CPS	220	250	250	240	240	

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	0735
Comments:	BLOW MARKER SEALS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	51406

CPS	230	230	250	240	230
[redacted]					
CPS	220	240	240	230	240

Average CPS Including Background for the Load: 234

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 μSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	0955
Comments:	Below marker spoils

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOE
Transfer Ticket Number	51407

CPS	240	230	240	230	200	Average CPS Including Background for the Load: 229
	[redacted]					
CPS	220	240	240	230	220	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1305
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ12 SOE
Transfer Ticket Number	51408

CPS	230	240	230	250	240	Average CPS Including Background for the Load: 243
	[redacted]					
CPS	240	250	270	240	240	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MIN RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	
If average cps < 300 NET cps = PASS	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 μSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1415
Comments:	BELOW MARKER SPOTS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOM
Transfer Ticket Number	51851

CPS	240	240	230	240	250	Average CPS Including Background for the Load: 242
	[redacted]					
CPS	240	250	250	240	240	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	
If average cps < 300 NET cps = PASS	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	0835
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ12 SOA
Transfer Ticket Number	S1852

CPS	230	240	240	220	230
	[redacted]				
CPS	240	240	230	230	240

Average CPS Including Background for the Load: 235

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1015
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ12 SOA
Transfer Ticket Number	51853

CPS	240	240	240	230	240	Average CPS Including Background for the Load: 239
	[redacted]					
CPS	230	240	260	240	230	

Ground Hog Serial Number: **Background cps:**	199/2436
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1145
Comments:	BELOW MARKER LOADS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ 12 SOA
Transfer Ticket Number	51854

CPS	240	230	250	230	240	Average CPS Including Background for the Load: 234
	[redacted]					
CPS	230	240	230	220	230	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	✓
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1400
Comments:	BROWN MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 KTG
Transfer Ticket Number	50030

CPS	240	230	240	240	230
	[redacted]				
CPS	220	220	240	230	240

Average CPS Including Background for the Load: 237

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1445
Comments:	BELOW WREXHAM SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 ICTG
Transfer Ticket Number	50029

CPS	220	230	240	220	230	Average CPS Including Background for the Load: 237
	[redacted]					
CPS	240	250	260	240	240	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 MSV/H
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1325
Comments:	BROWN MARKER SPOTS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 ICTG
Transfer Ticket Number	50028

CPS	230	250	240	240	250
	[redacted]				
CPS	220	230	230	240	240

Average CPS Including Background for the Load: 237

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1125
Comments:	Below marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EN 14 KTG
Transfer Ticket Number	50027

CPS	240	260	290	250	240	Average CPS Including Background for the Load: 248
	[redacted]					
CPS	250	240	240	230	240	

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1002
Comments:	Road marker spoils

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU14 ICTG
Transfer Ticket Number	S0026

CPS	230	240	250	250	240	Average CPS Including Background for the Load: 244
	[redacted]					
CPS	220	240	250	250	240	

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	—
Maximum dose rate:	0.1 μSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	0825
Comments:	Brown marker spots

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU 13 VJK
Transfer Ticket Number	51852

CPS	240	250	260	240	240
	[redacted]				
CPS	220	240	270	250	240

Average CPS Including Background for the Load: 245

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 MSV/HR
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	0545
Comments:	BELOW MARKER SPOILS

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EY13 VJK
Transfer Ticket Number	51853

CPS	230	240	220	220	270	Average CPS Including Background for the Load: 233
	[redacted]					
CPS	250	240	230	240	230	

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 μSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1025
Comments:	Below marker stones

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU13 VJK
Transfer Ticket Number	51854

CPS	230	240	230	230	240	Average CPS Including Background for the Load: 232
	[redacted]					
CPS	220	220	240	230	240	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	Mini RAD
Serial Number:	920
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1220
Comments:	Brown marker sheets

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU13 VKJ
Transfer Ticket Number	S1855

CPS	220	240	230	230	240	Average CPS Including Background for the Load: 232
	[redacted]					
CPS	230	240	240	230	220	

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MINI RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/h
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1350
Comments:	Below marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: Info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EU13 VKJ
Transfer Ticket Number	S1856

CPS	210	230	230	240	250
	[redacted]				
CPS	210	230	240	230	240

Average CPS Including Background for the Load: 233

Ground Hog Serial Number: **Background cps:**	199/2436 230
Dose Rate Instrument: **Serial Number:**	MINI RAD 930
If average cps > 300 NET cps = FAIL **If average cps < 300 NET cps = PASS**	PASS
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/hr
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1525
Comments:	BELOW MARKER SPOILS

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: info@Nuvia.co.uk

Appendix 3 – Lorry Monitoring Form

Lorry Registration Number	EJ12 SOE
Transfer Ticket Number	S1409

CPS	260	260	290	280	270
	[redacted]				
CPS	250	260	270	270	260

Average CPS Including Background for the Load: 267

Ground Hog Serial Number:	199/2436
Background cps:	230
Dose Rate Instrument:	MIN. RAD
Serial Number:	930
If average cps > 300 NET cps = FAIL	PASS
If average cps < 300 NET cps = PASS	
Wheel contamination survey completed if vehicle has entered supervised / contaminated area:	/
Maximum dose rate:	0.1 mSv/hr.
Surveyor name and signature:	[redacted]
Date:	9/9/14
Time:	1540
Comments:	Bobcat marker spoils

Nuvia Limited, Kelburn Court, Daten Park, Risley, Warrington, WA3 6TW
Tel: 01925 858200 Fax: 01925 811866
Email: info@Nuvia.co.uk