

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.3	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	N/A
LOCATION:	Location 3	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	8000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	23°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

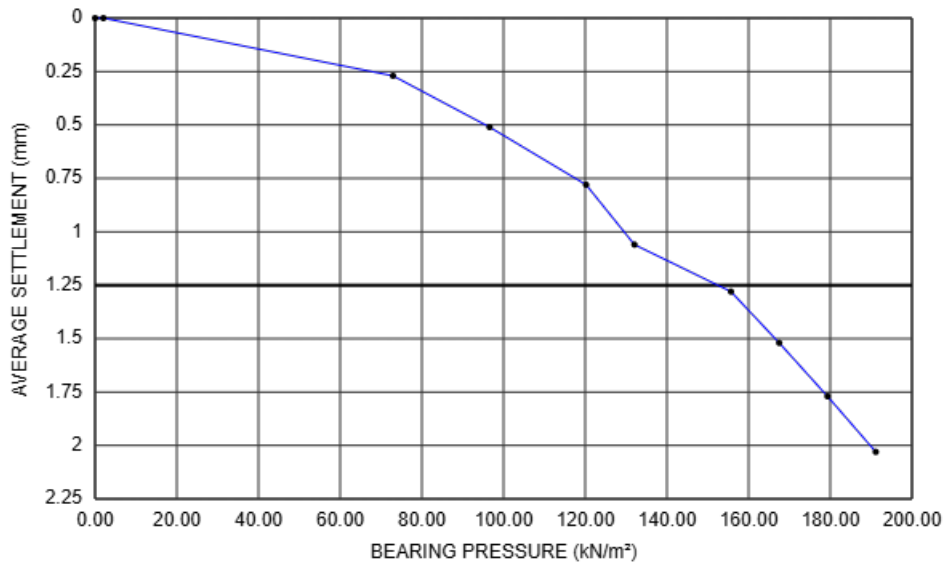
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 191 kN/m²
Max settlement: 2.03 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 152 kN/m²
Modulus of subgrade K762: 98 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 27.3%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 27.3 %

Remarks:

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Report Format: STP S8 rev.1

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Construction Testing Solutions Ltd.
Registered in England No. 05998333

Determination of Equivalent CBR Value

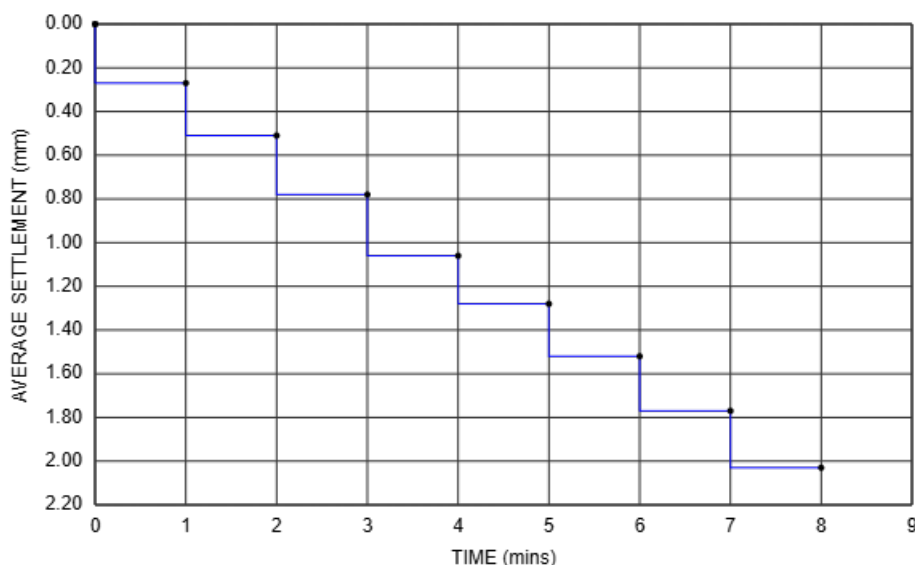
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 362730.1.1.3

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.6	72.9	-0.27	-0.24	-0.30	0.27	0.24	0.30	0.27
27.3	96.6	-0.51	-0.48	-0.54	0.51	0.48	0.54	0.51
34.0	120.2	-0.78	-0.75	-0.81	0.78	0.75	0.81	0.78
37.3	132.0	-1.06	-1.03	-1.09	1.06	1.03	1.09	1.06
44.0	155.7	-1.28	-1.25	-1.31	1.28	1.25	1.31	1.28
47.4	167.5	-1.52	-1.49	-1.55	1.52	1.49	1.55	1.52
50.7	179.3	-1.77	-1.74	-1.80	1.77	1.74	1.80	1.77
54.0	191.1	-2.03	-2.00	-2.06	2.03	2.00	2.06	2.03

SETTLEMENT RELATIONSHIP vs TIME



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END OF REPORT

For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

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Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	51.6067399, -0.0461874
LOCATION:	Location 1	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	8000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	21°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

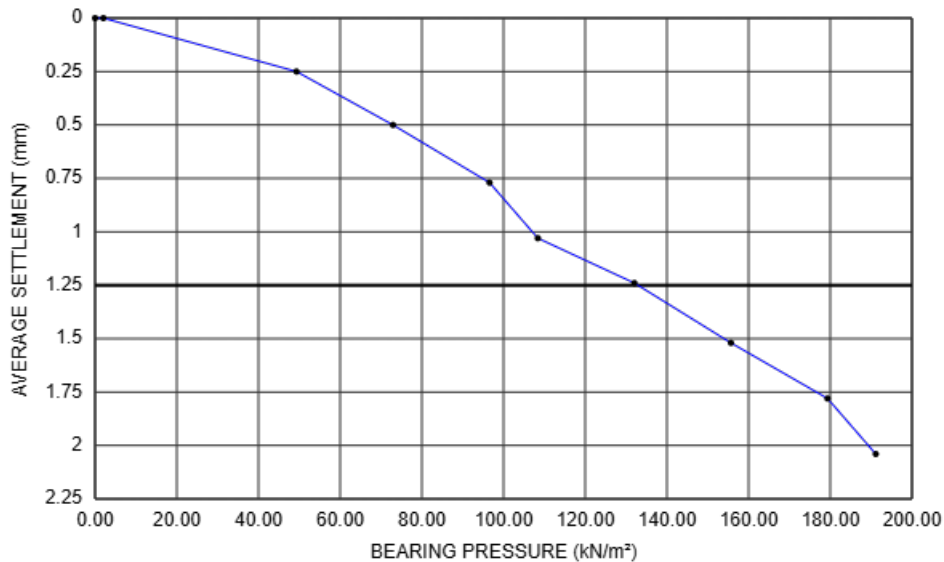
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 191 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 133 kN/m²
Modulus of subgrade K762: 86 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 21.5%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 21.5 %

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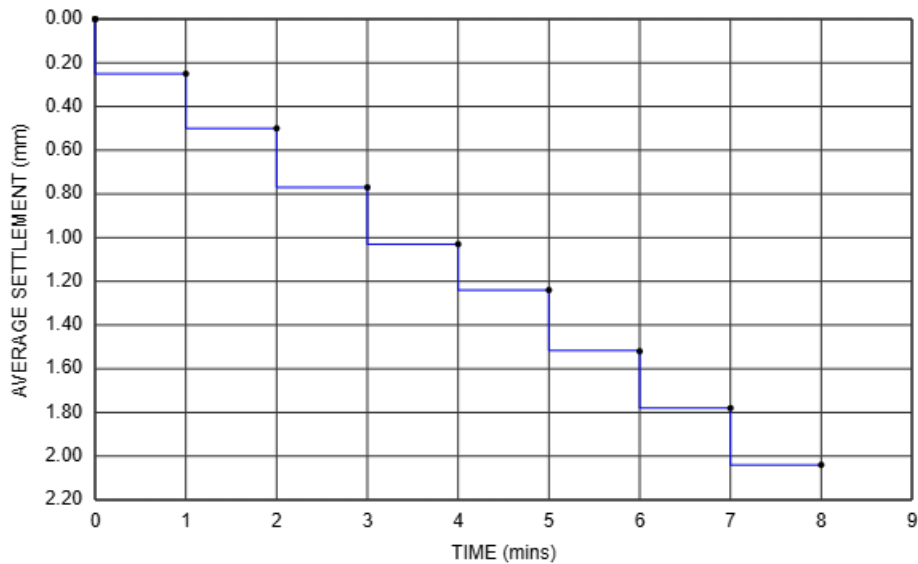
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REPORT NUMBER: C5001518 / 362730.1.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13.9	49.3	-0.25	-0.22	-0.28	0.25	0.22	0.28	0.25
20.6	72.9	-0.50	-0.47	-0.53	0.50	0.47	0.53	0.50
27.3	96.6	-0.77	-0.74	-0.80	0.77	0.74	0.80	0.77
30.7	108.4	-1.03	-1.00	-1.06	1.03	1.00	1.06	1.03
37.3	132.0	-1.24	-1.21	-1.27	1.24	1.21	1.27	1.24
44.0	155.7	-1.52	-1.48	-1.55	1.52	1.48	1.55	1.52
50.7	179.3	-1.78	-1.75	-1.81	1.78	1.75	1.81	1.78
54.0	191.1	-2.04	-2.01	-2.07	2.04	2.01	2.07	2.04

SETTLEMENT RELATIONSHIP vs TIME



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END OF REPORT

For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

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Report version 1



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Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	N/A
LOCATION:	Location 2	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	10000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	22°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

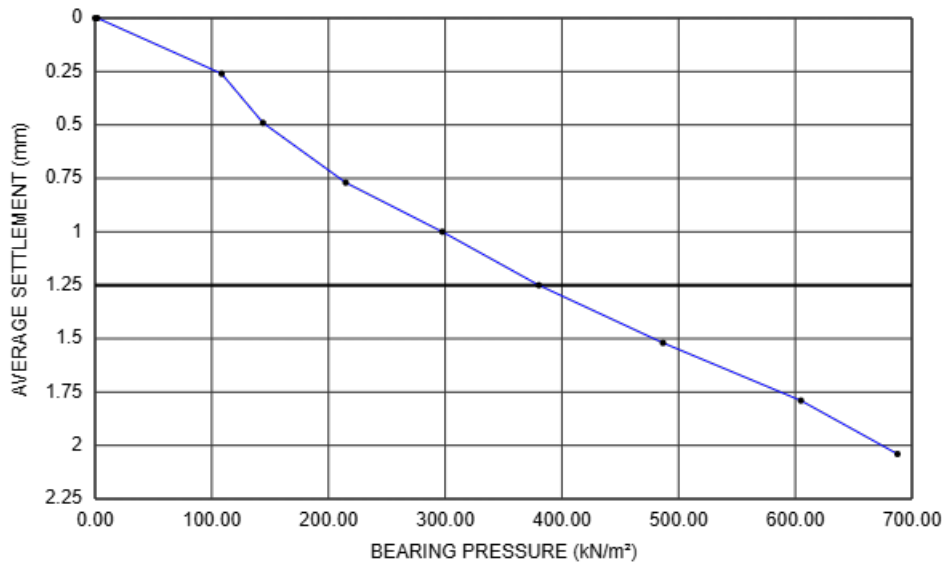
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 688 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 380 kN/m²
Modulus of subgrade K762: 245 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 133.0%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 133.0 %

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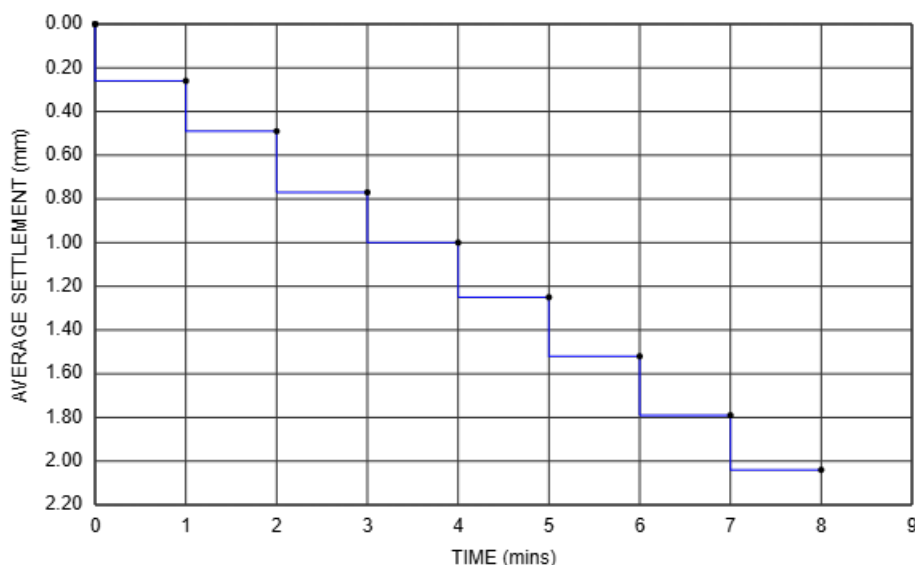
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REPORT NUMBER: C5001518 / 362730.1.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.7	108.4	-0.26	-0.23	-0.29	0.26	0.23	0.29	0.26
40.7	143.9	-0.49	-0.46	-0.52	0.49	0.46	0.52	0.49
60.7	214.8	-0.77	-0.74	-0.80	0.77	0.74	0.80	0.77
84.1	297.5	-1.00	-0.97	-1.03	1.00	0.97	1.03	1.00
107.5	380.3	-1.25	-1.22	-1.28	1.25	1.22	1.28	1.25
137.6	486.6	-1.52	-1.55	-1.49	1.52	1.55	1.49	1.52
171.0	604.8	-1.79	-1.76	-1.82	1.79	1.76	1.82	1.79
194.4	687.6	-2.04	-2.01	-2.07	2.04	2.01	2.07	2.04

SETTLEMENT RELATIONSHIP vs TIME



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For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	1A
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m ³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 02-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	Grey sandy gravel
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m ³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

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For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 02-Jul-25

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Report version 1



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DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	1A
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

Remarks:

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REPORT NUMBER:	C5001518 / 337922.1.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	12/03/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Ben Collins	LAT / LNG:	51.6066972, -0.0458699
LOCATION:	Test 1 Capping Layer	MATERIAL:	6F5
GROUND CONDITIONS:	Moist	ENVIRONMENTAL CONDITIONS:	Overcast
DISTANCE FROM EDGE OF PLATE TO WALL:	0 mm	SUPPLIER:	RMS
TEST DEPTH:	0mm	SOURCE:	Silvertown
AIR TEMPERATURE:	8°C	TEST METHOD:	Incremental Plate Loading
SAMPLING PLAN:	CTS procedure	SAMPLE TAKEN:	No

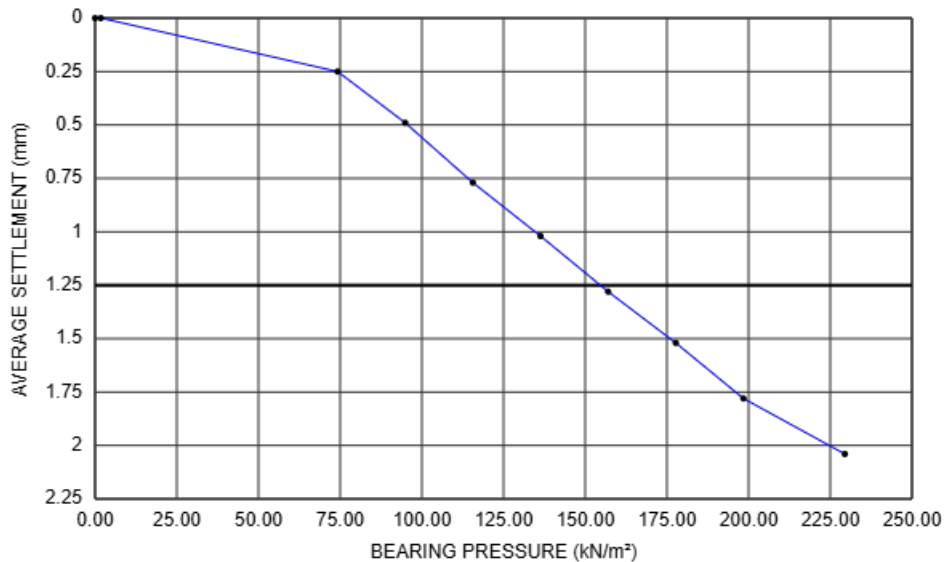
Equipment Details

Type of Kentledge: 30T
Plate Diameter: 450 mm
Plate Area: 0.159043 m²
Plate Correction: 0.62

Results

Max applied pressure: 229 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 155 kN/m²
Modulus of subgrade K762: 77 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 18.0%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 18.0 %

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REPORT NUMBER: C5001518 / 337922.1.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.3	1.8	15.12	16.98	20.30	0.00	0.00	0.00	0.00
11.8	74.2	14.85	16.78	20.03	0.27	0.20	0.27	0.25
15.1	94.9	14.60	16.55	19.78	0.52	0.43	0.52	0.49
18.4	115.6	14.30	16.27	19.51	0.82	0.71	0.79	0.77
21.7	136.3	14.05	16.00	19.28	1.07	0.98	1.02	1.02
25.0	157.0	13.80	15.73	19.04	1.32	1.25	1.26	1.28
28.3	177.7	13.55	15.50	18.80	1.57	1.48	1.50	1.52
31.6	198.4	13.30	15.25	18.52	1.82	1.73	1.78	1.78
36.5	229.5	13.02	15.01	18.26	2.10	1.97	2.04	2.04

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For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 12-Mar-25

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REPORT NUMBER:	C5001518 / 337922.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	12/03/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Ben Collins	LAT / LNG:	51.6103451, -0.0481058
LOCATION:	Test 2 Capping Layer	MATERIAL:	6F5
GROUND CONDITIONS:	Moist	ENVIRONMENTAL CONDITIONS:	Overcast
DISTANCE FROM EDGE OF PLATE TO WALL:	0 mm	SUPPLIER:	RMC
TEST DEPTH:	0mm	SOURCE:	Silvertown
AIR TEMPERATURE:	8°C	TEST METHOD:	Incremental Plate Loading
SAMPLING PLAN:	CTS procedure	SAMPLE TAKEN:	No

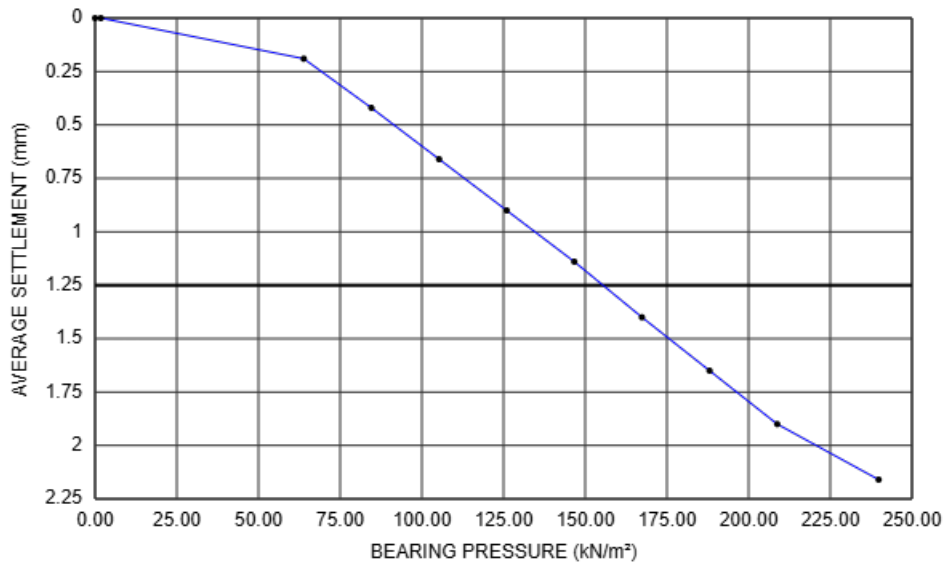
Equipment Details

Type of Kentledge: 30T
Plate Diameter: 450 mm
Plate Area: 0.159043 m²
Plate Correction: 0.62

Results

Max applied pressure: 240 kN/m²
Max settlement: 2.16 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 155 kN/m²
Modulus of subgrade K762: 77 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 18.1%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 18.1 %

Remarks:

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Report Format: STP S8 rev.1

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Determination of Equivalent CBR Value

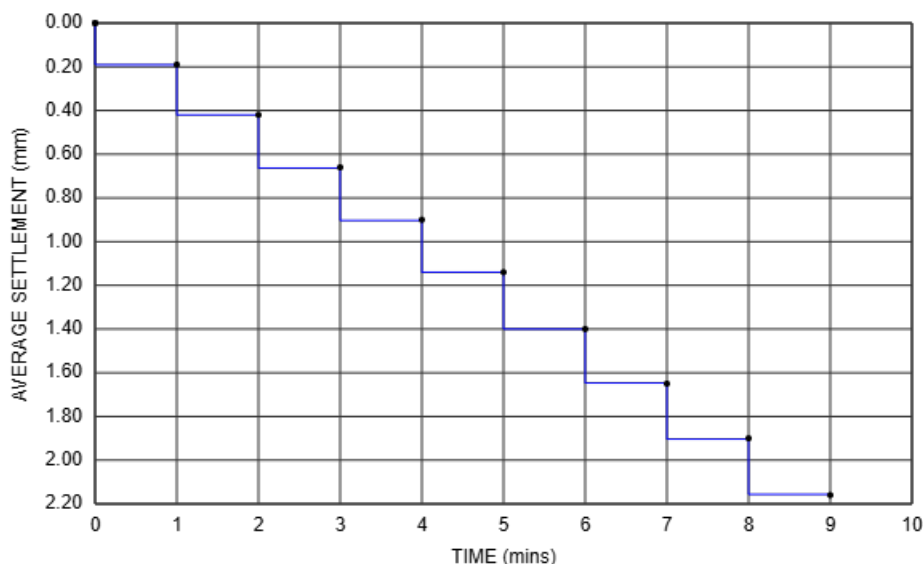
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 337922.1.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.3	1.8	18.59	20.13	21.12	0.00	0.00	0.00	0.00
10.2	63.9	18.36	20.01	20.90	0.23	0.12	0.22	0.19
13.5	84.6	18.11	19.80	20.67	0.48	0.33	0.45	0.42
16.7	105.3	17.85	19.60	20.40	0.74	0.53	0.72	0.66
20.0	126.0	17.60	19.38	20.15	0.99	0.75	0.97	0.90
23.3	146.7	17.35	19.16	19.91	1.24	0.97	1.21	1.14
26.6	167.4	17.10	18.90	19.64	1.49	1.23	1.48	1.40
29.9	188.1	16.85	18.65	19.40	1.74	1.48	1.72	1.65
33.2	208.8	16.60	18.40	19.13	1.99	1.73	1.99	1.90
38.1	239.8	16.35	18.13	18.89	2.24	2.00	2.23	2.16

SETTLEMENT RELATIONSHIP vs TIME



Remarks:

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For and on behalf of CTS

Lee Rossiter - Operations supervisor



Approved Signatory
Report date 12-Mar-25

Construction Testing Solutions Ltd.
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Report version 1



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER:	C5001518 / 333871.3.1.1		
CLIENT REF:	5001518	CLIENT:	ERITH CONTRACTORS LTD
DATE TESTED:	14/02/2025	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
TESTED BY:	Toby Crouch	SITE:	Leeside Road, Tottenham Leeside Road, Tottenham,
GUAGE MODEL No:	3440	SUPPLIER / SOURCE:	Rms Not specified
GUAGE SERIAL No:	15409	MATERIAL:	Class 1a
CORRECTION FACTORS:	Bulk $\gamma=1$ Moisture $b=1$	ENVIRONMENTAL CONDITIONS:	Clear
		OMC REFERENCED:	NA
MAX DRY DENSITY:	2 Mg/m ³	PARTICLE DENSITY:	NA
DEPTH OF LAYER:	500	DEPTH OF TEST	300
SAMPLING PLAN:	CTS procedure		

TEST RESULTS Activity Location: On-Site

AREA OF TEST: Remediation area section 1 / 1A layer 4

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Test 1	1.903	0.274	1.90	17	16	1.65	83
	1.943	0.269	1.94	16			
Test 2	1.962	0.265	1.96	16	15	1.69	85
	1.942	0.255	1.94	15			

Remarks:

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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER:	C5001518 / 334682.2.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	20/02/2025	SITE:	Leeside Road, Tottenham Leeside Road, Tottenham,
TESTED BY:	Aaron Henson	SUPPLIER / SOURCE:	RMS Silvertown
GAUGE MODEL No:	Trailer 3440	MATERIAL:	Recycled material
GAUGE SERIAL No:	15409	ENVIRONMENTAL CONDITIONS:	Overcast
CORRECTION FACTORS:	Bulk $\gamma=0.991$ Moisture $b=0.924$	OMC REFERENCED:	NA
MAX DRY DENSITY:	1.94 Mg/m ³	PARTICLE DENSITY:	2.64 Mg/m ³
DEPTH OF LAYER:	500	DEPTH OF TEST	300
SAMPLING PLAN:	CTS procedure		

TEST RESULTS Activity Location: On-Site

AREA OF TEST: Remediation Area 1 - Layer 4

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Air Voids (%)	Mean Relative Compaction (%)
Test 1	1.930	0.207	1.91	11	12	1.71	15.1	96
	1.929	0.226	1.91	12				
Test 2	1.958	0.253	1.94	14	13	1.73	12.2	97
	1.978	0.231	1.96	12				

Remarks:
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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 333871.2.1.2		
SAMPLE NO:	5001518	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	14/02/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Toby Crouch	MATERIAL:	Class 1a
SUPPLIER:	RMS	SOURCE:	Not specified
ENVIRONMENTAL CONDITIONS:	Clear	DEVIATIONS:	None
SAMPLING PLAN:	CTS procedure TP41	SAMPLING METHOD:	Method 5: Sampling of imported granular material from spread or laid material.
GROUNDWATER LEVEL:	Not known	TEST LEVEL:	Not known

RESULTS

LOCATION DETAILS

Laboratory Ref:	527020	527036
Client Ref:	5001518	5001518
Test location:	Remediation area section 1 / 1A layer 4	Remediation area section 1 / 1A layer 4 test 2

Weather Conditions:	Clear	Clear
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TEST DETAILS

Bulk Density: (Mg/m ³)	1.83	1.82
Moisture Content: (%)	12	13
Dry Density: (Mg/m ³)	1.63	1.61
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	84.2	82.9
Particle Density (Mg/m³)	2.64	2.64
Volume of Air Voids (%)	18.2	18.4

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 334682.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	20/02/2025	MATERIAL:	1A
TESTED BY:	Aaron Henson	SOURCE:	Silvertown
SUPPLIER:	RMS	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 2: Sampling from site excavation locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	528183	528346
Client Ref:	5001518	5001518
Test location:	Remediation Area 1 - Layer 4 - Test 1	Remediation Area 1 - Layer 4 - Test 2

Weather Conditions:	Overcast	Overcast
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TEST DETAILS

Bulk Density: (Mg/m ³)	1.77	1.90
Moisture Content: (%)	14	19
Dry Density: (Mg/m ³)	1.54	1.59
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	95.6	96.2
Particle Density (Mg/m ³)	2.64	2.64
Volume of Air Voids (%)	9.1	9.3

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Amended report. This test report supersedes test report version 1 - amendment

Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
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Report version 2



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 337922.4.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	12/03/2025	MATERIAL:	Class 1a
TESTED BY:	Ben Collins	SOURCE:	Silvertown
SUPPLIER:	RMC	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 1: Sampling shallow trial pits
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	300mm
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	532882	532886
Client Ref:	5001518	5001518
Test location:	Layer 7 Test 1	Test 2 Layer 7

Weather Conditions:	Overcast	Overcast
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.09	2.08
Moisture Content: (%)	5.6	3.9
Dry Density: (Mg/m ³)	1.98	2.00
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	102.1	103.0
Particle Density (Mg/m ³)	2.64	2.64
Volume of Air Voids (%)	13.9	16.5

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

Construction Testing Solutions Ltd.
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Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 337922.4.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	12/03/2025	MATERIAL:	Class 1a
TESTED BY:	Ben Collins	SOURCE:	Silvertown
SUPPLIER:	RMC	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 1: Sampling shallow trial pits
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	300mm
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	532882	532886
Client Ref:	5001518	5001518
Test location:	Layer 7 Test 1	Test 2 Layer 7

Weather Conditions:	Overcast	Overcast
---------------------	----------	----------

TEST DETAILS

Bulk Density: (Mg/m ³)	2.09	2.08
Moisture Content: (%)	5.6	3.9
Dry Density: (Mg/m ³)	1.98	2.00
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	102.1	103.0
Particle Density (Mg/m³)	2.64	2.64
Volume of Air Voids (%)	13.9	16.5

Remarks:

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

In-Situ Dry Density And Relative Compaction
BS 1377-9: 1990 Nuclear Density Method A (Direct transmission)

REPORT NUMBER:	C5001518 / 337922.3.1.2		
CLIENT REF:	5001518	CLIENT:	ERITH CONTRACTORS LTD
DATE COMPLETED:	12/03/2025	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
TESTED BY:	Ben Collins	SITE:	Leeside Road, Tottenham
SAMPLING PLAN:	CTS procedure	ENVIRONMENTAL CONDITIONS:	Overcast
GAUGE MODEL No:	Troxler	SUPPLIER / SOURCE:	RMS Silvertown
GAUGE SERIAL No:	15409	MATERIAL:	Class 1a
CORRECTION FACTORS:	Bulk $\gamma=0.991$ Moisture $b=0.924$	LOCATION:	Layer 7
MAX DRY DENSITY:	1.94 Mg/m ³	VARIATIONS FROM PROCEDURE:	N/A
DEPTH OF LAYER:	300	DEPTH OF TEST	300

TEST RESULTS Activity Location: On-Site

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Test 1 Layer 7	1.994	0.181	1.98	9.2	1.82	94
	1.999	0.164	1.98	8.3		
Test 2 Layer 7	2.061	0.214	2.04	11	1.87	96
	2.068	0.170	2.05	8.3		

Remarks:
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Report Format: NDMSoils05a/TP13/Rep Issue 1 Rev 0 10/15

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

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DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

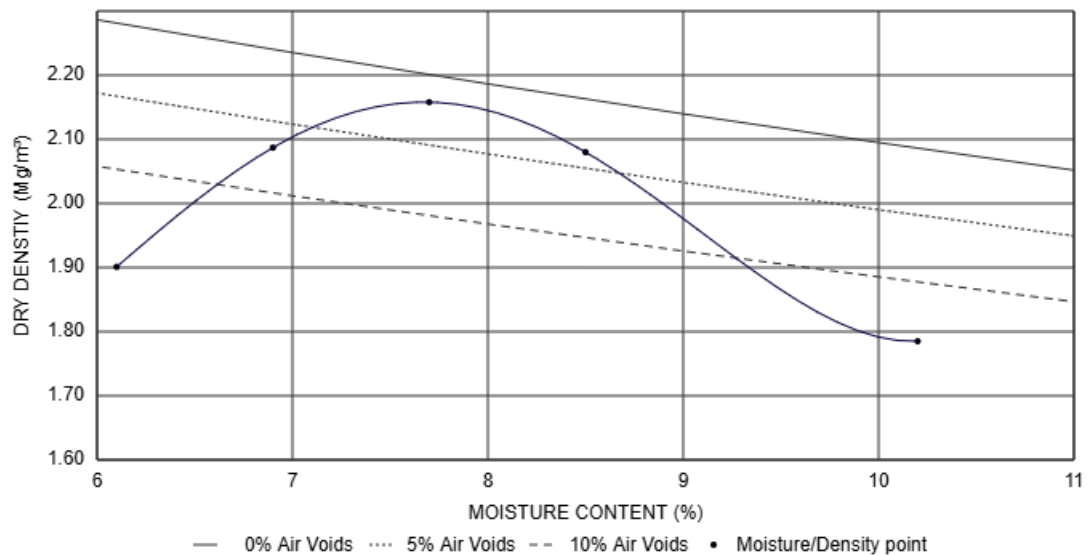
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.2	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	Near to surface
DATE COMPLETED:	06/08/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	JG, MC	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:	Hikoki		
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 2.16 Mg/m³
OPTIMUM WATER CONTENT: 7.5 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
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Report Format: BSENMcvib/TP34/Rep Issue 1 Rev 1 09/23

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END OF REPORT

For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
Report date 06-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

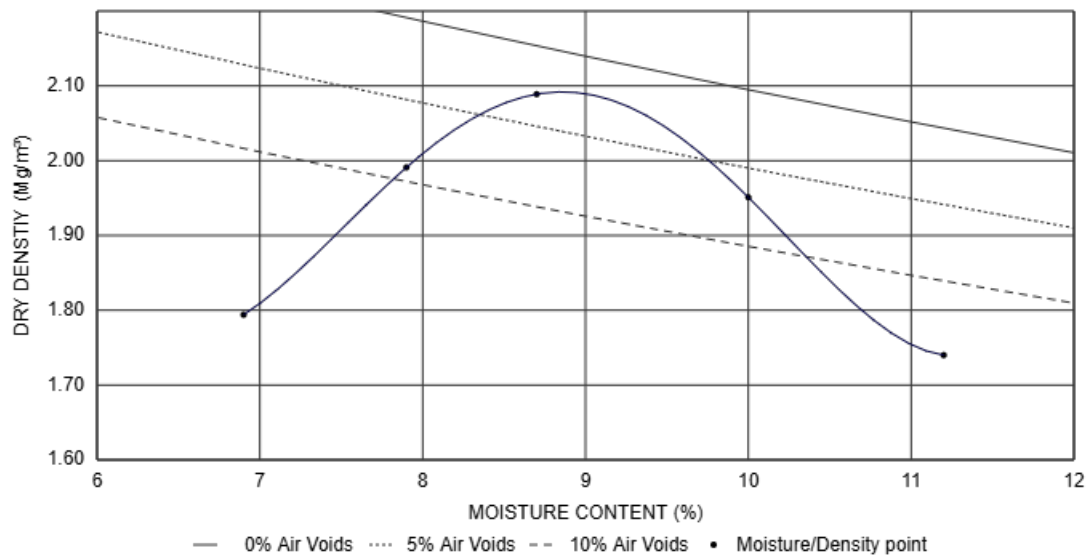
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.3	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	6F5 stockpile
DATE COMPLETED:	05/08/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	Charlotte Page	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:	Hikoki		
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 2.09 Mg/m³
OPTIMUM WATER CONTENT: 9.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 50 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Non-standard test as material classified as unsuitable, sample tested at clients request, test results may not be indicative of the material being used on site.

Remarks:
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END OF REPORT

For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
Report date 06-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

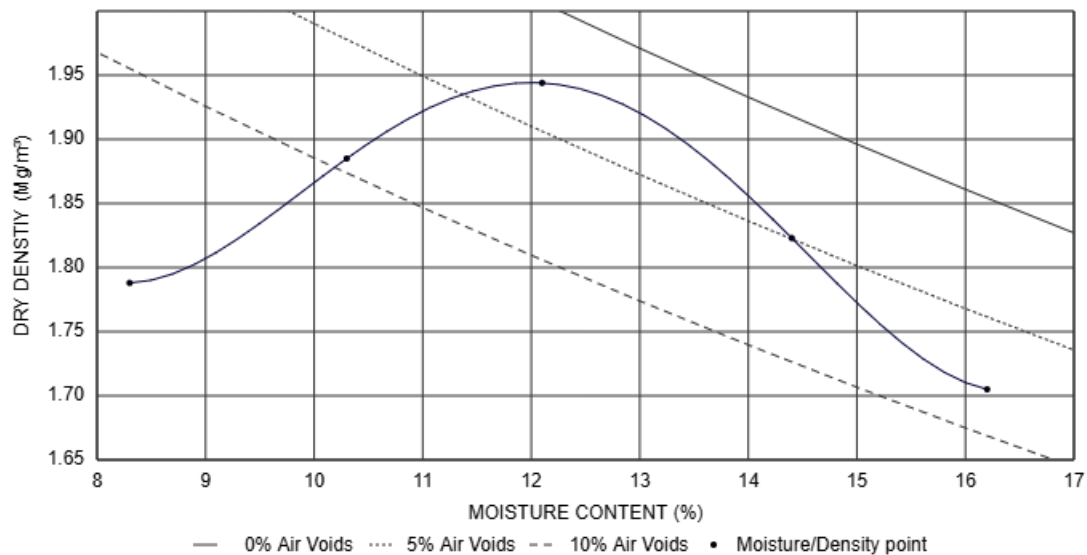
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.1	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	6F5 stockpile
DATE COMPLETED:	28/07/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	James Gough	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:			
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 1.94 Mg/m³
OPTIMUM WATER CONTENT: 12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 58 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



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For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
Report date 29-Jul-25



4161

Report Format: BSENM CVib/TP34/Rep Issue 1 Rev 1 09/23

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Mounnessing Road
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END OF REPORT

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1

Page 1 of 1

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

	LOWER LIMIT	UPPER LIMIT
--	-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	34
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the Laboratory.
Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation. The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.

Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
Harrietsham, Nr Maidstone
Kent ME17 1QW

0343 227 8545
enquiries@constructiontesting.co.uk
www.constructiontesting.co.uk
END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	34
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



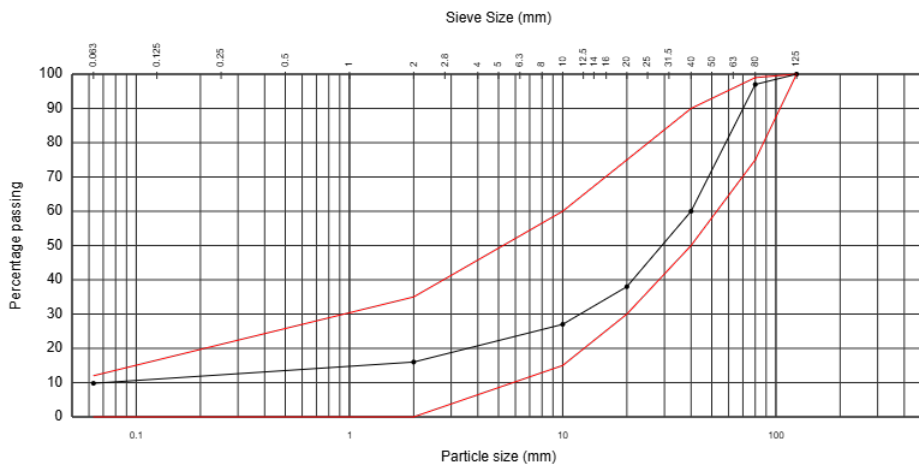
4161

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER:	C5001518 / 356893.3.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SOURCE / SUPPLIER:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete
DATE RECEIVED:	09/07/2025	PROPOSED CLASSIFICATION:	Class 6F5
DATE COMPLETED:	23/07/2025	LOCATION:	6F5 Stockpile
TESTED BY:	James Gough	SAMPLING PLAN:	Client Specification
ENVIRONMENTAL CONDITIONS:	Overcast	METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles

RESULT TestLocation: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 493
BS EN ISO 14688-2: 2018.

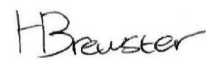
SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
125	100	100 - 100
80	97	75 - 99
63	84	
50	73	
40	60	50 - 90
31.5	51	
25	44	
20	38	30 - 75
16	33	
14	30	
12.5	29	
10	27	15 - 60
8	24	
6.3	22	
5	21	
4	19	
2.8	18	
2	16	0 - 35
1	14	
0.5	13	
0.25	12	
0.125	11	
0.063	9.8	0 - 12

Remarks:

Test results reported relate only to the items tested.
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For and on behalf of CTS
Harry Brewster - Laboratory Supervisor



Approved Signatory
Report date 26-Jul-25



4161

Report Format: PSDagg/TP17/Rep Issue 1 Rev 1 08/23

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END OF REPORT

Construction Testing Solutions Ltd.
Registered in England No. 05998333

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	Near to surface
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

	LOWER LIMIT	UPPER LIMIT
--	-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
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enquiries@constructiontesting.co.uk
www.constructiontesting.co.uk
END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	Near to surface
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

	LOWER LIMIT	UPPER LIMIT
--	-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
Harrietsham, Nr Maidstone
Kent ME17 1QW

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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



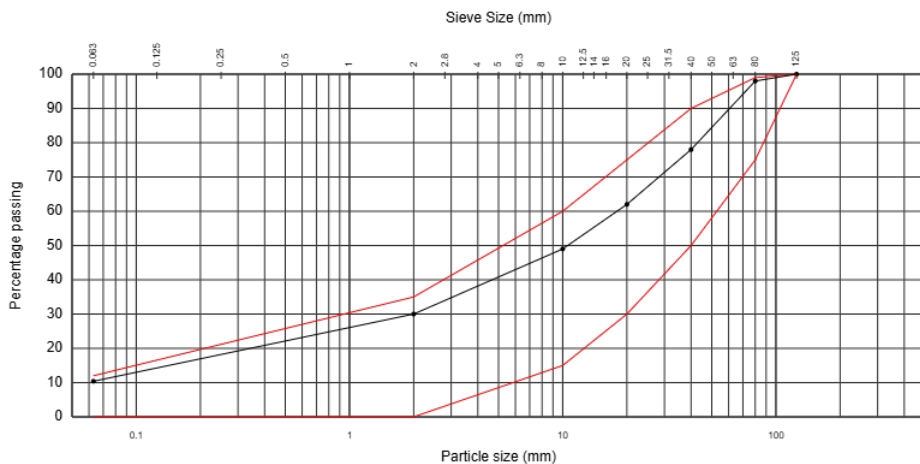
4161

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER:	C5001518 / 356893.3.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SOURCE / SUPPLIER:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete
DATE RECEIVED:	09/07/2025	PROPOSED CLASSIFICATION:	Class 6F5
DATE COMPLETED:	28/07/2025	LOCATION:	6F5 Stockpile
TESTED BY:	JG, CP	SAMPLING PLAN:	Client Specification
ENVIRONMENTAL CONDITIONS:	Overcast	METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles

RESULT TestLocation: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 296
BS EN ISO 14688-2: 2018.

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
125	100	100 - 100
80	98	75 - 99
63	90	
50	89	
40	78	50 - 90
31.5	71	
25	67	
20	62	30 - 75
16	56	
14	54	
12.5	52	
10	49	15 - 60
8	45	
6.3	42	
5	39	
4	36	
2.8	33	
2	30	0 - 35
1	26	
0.5	23	
0.25	17	
0.125	12	
0.063	10.4	0 - 12

Remarks:

Test results reported relate only to the items tested.
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Report Format: PSDagg/TP17/Rep Issue 1 Rev 1 08/23

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END OF REPORT

For and on behalf of CTS
Harry Brewster - Laboratory Supervisor

HBrewster

Approved Signatory
Report date 29-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
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Kent ME17 1QW

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enquiries@constructiontesting.co.uk
www.constructiontesting.co.uk
END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
Harrietsham, Nr Maidstone
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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



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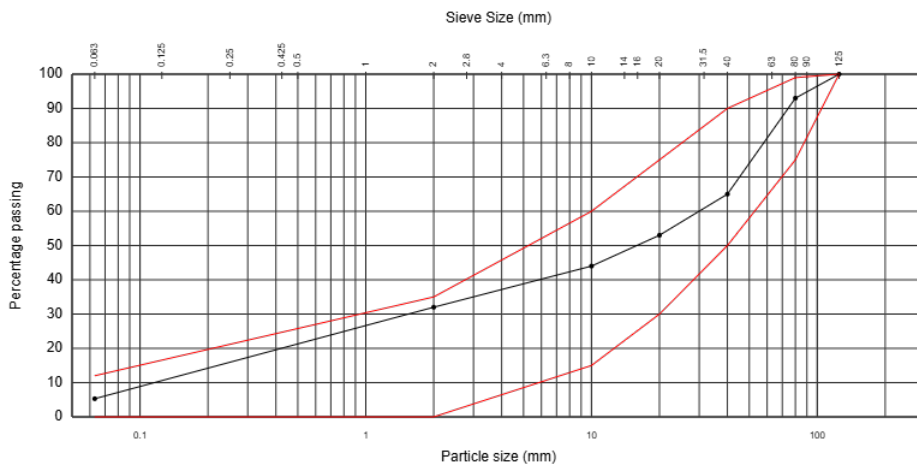
TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER: C5001518 / 356893.3.1.3
SAMPLE NUMBER: 562708
CLIENT REF: 5001518
DATE SAMPLED: 07/07/2025
SAMPLED BY: Jack Fitzgerald
DATE RECEIVED: 09/07/2025
DATE COMPLETED: 28/07/2025
TESTED BY: JG, CP
ENVIRONMENTAL CONDITIONS: Overcast

CLIENT: ERITH CONTRACTORS LTD
ADDRESS: Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
SITE: Leaside Road, Tottenham
SOURCE / SUPPLIER: Site won, Insitu
MATERIAL: Crushed concrete
PROPOSED CLASSIFICATION: Class 6F5
LOCATION: 6F5 stockpile
SAMPLING PLAN: Client Specification
METHOD OF SAMPLING: C2 Sampling from small conical stockpiles

RESULT TestLocation: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 114
BS EN ISO 14688-2: 2018.

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
90	100	
80	93	75 - 99
63	77	
40	65	50 - 90
31.5	61	
20	53	30 - 75
16	51	
14	49	
10	44	15 - 60
8	42	
6.3	39	
4	34	
2.8	34	
2	32	0 - 35
1	28	
0.5	22	
0.425	17	
0.25	9	
0.125	6	
0.063	5.3	0 - 12

Remarks:

Test results reported relate only to the items tested.
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Report Format: PSDagg/TP17/Rep Issue 1 Rev 1 08/23

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Mountnessing Road
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0343 227 8545
enquiries@constructiontesting.co.uk
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END OF REPORT

For and on behalf of CTS
Mike Gray - Laboratory Supervisor

Approved Signatory
Report date 29-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER: C5001518 / 353251.1.1.1
CLIENT REF: 5001518 CLIENT: ERITH CONTRACTORS LTD
DATE TESTED: 16/06/2025 ADDRESS: Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
TESTED BY: Toby Crouch SITE: Leaside Road, Tottenham
Leaside Road, Tottenham,
GAUGE MODEL No: 3440 SUPPLIER / SOURCE: RMS, Silvertown
GAUGE SERIAL No: 15409 MATERIAL: 1A Recycled Aggregate
CORRECTION FACTORS: Bulk $\gamma=1$ ENVIRONMENTAL CONDITIONS: Sunny
Moisture $b=1$ OMC REFERENCED: NA
MAX DRY DENSITY: 2 Mg/m³ PARTICLE DENSITY: 2.64 Mg/m³
DEPTH OF LAYER: 300 DEPTH OF TEST: 200
SAMPLING PLAN: CTS procedure

TEST RESULTS Activity Location: On-Site

AREA OF TEST: NDM Testing 16/6/25

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Air Voids (%)	Mean Relative Compaction (%)
Test 1	2.197	0.208	2.20	10	11	1.94	5.1	97
	2.115	0.216	2.12	11				
Test 2	2.198	0.208	2.20	10	10	1.99	4.0	100
	2.196	0.202	2.20	10				
Test 3	2.192	0.202	2.19	10	10	1.95	6.2	97
	2.103	0.200	2.10	11				

Remarks:

Test results reported relate only to the items tested.
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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

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Poyle Road
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 20-Jun-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 353251.3.1.1		
SAMPLE NO:	5001518	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	16/06/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Toby Crouch	MATERIAL:	1A Recycled Aggregate
SUPPLIER:	RMS	SOURCE:	RMS, Silvertown
ENVIRONMENTAL CONDITIONS:	Sunny	DEVIATIONS:	None
SAMPLING PLAN:	CTS procedure TP41	SAMPLING METHOD:	Method 5: Sampling of imported granular material from spread or laid material.
GROUNDWATER LEVEL:	1.7m bgl	TEST LEVEL:	Not known

RESULTS

LOCATION DETAILS

Laboratory Ref:	556932	556939	556943
Client Ref:	5001518	5001518	5001518
Test location:	Test 1	Srd test 2	Srd test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.22	2.29	2.28
Moisture Content: (%)	5.6	5.9	5.7
Dry Density: (Mg/m ³)	2.10	2.17	2.16
Maximum Dry Density: (Mg/m ³)	2.00	2.00	2.00
Percentage Compaction: (%)	105.2	108.3	108.0
Particle Density (Mg/m³)	2.64	2.64	2.64
Volume of Air Voids (%)	8.6	5.2	5.8

Remarks:

Test results reported relate only to the items tested.
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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

Unit 16 Britannia Ind Estate
Poyle Road
Colnbrook SL3 0BH

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 19-Jun-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 353251.3.1.2		
SAMPLE NO:	5001518	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	16/06/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Toby Crouch	MATERIAL:	1A Recycled Aggregate
SUPPLIER:	RMS	SOURCE:	RMS, Silvertown
ENVIRONMENTAL CONDITIONS:	Sunny	DEVIATIONS:	None
SAMPLING PLAN:	CTS procedure TP41	SAMPLING METHOD:	Method 5: Sampling of imported granular material from spread or laid material.
GROUNDWATER LEVEL:	1.7m bgl	TEST LEVEL:	Not known

RESULTS

LOCATION DETAILS

Laboratory Ref:	556932	556939	556943
Client Ref:	5001518	5001518	5001518
Test location:	Test 1	Srd test 2	Srd test 3

Weather Conditions:	Sunny	Sunny	Sunny
---------------------	-------	-------	-------

TEST DETAILS

Bulk Density: (Mg/m ³)	2.22	2.29	2.28
Moisture Content: (%)	5.6	5.9	5.7
Dry Density: (Mg/m ³)	2.10	2.17	2.16
Maximum Dry Density: (Mg/m ³)	2.00	2.00	2.00
Percentage Compaction: (%)	105.2	108.3	108.0
Particle Density (Mg/m³)	2.64	2.64	2.64
Volume of Air Voids (%)	8.6	5.2	5.8

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

Unit 16 Britannia Ind Estate
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 19-Jun-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 353251.3.1.3		
SAMPLE NO:	5001518	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	16/06/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Toby Crouch	MATERIAL:	1A Recycled Aggregate
SUPPLIER:	RMS	SOURCE:	RMS, Silvertown
ENVIRONMENTAL CONDITIONS:	Sunny	DEVIATIONS:	None
SAMPLING PLAN:	CTS procedure TP41	SAMPLING METHOD:	Method 5: Sampling of imported granular material from spread or laid material.
GROUNDWATER LEVEL:	1.7m bgl	TEST LEVEL:	Not known

RESULTS

LOCATION DETAILS

Laboratory Ref:	556932	556939	556943
Client Ref:	5001518	5001518	5001518
Test location:	Test 1	Srd test 2	Srd test 3

Weather Conditions:	Sunny	Sunny	Sunny
---------------------	-------	-------	-------

TEST DETAILS

Bulk Density: (Mg/m ³)	2.22	2.29	2.28
Moisture Content: (%)	5.6	5.9	5.7
Dry Density: (Mg/m ³)	2.10	2.17	2.16
Maximum Dry Density: (Mg/m ³)	2.00	2.00	2.00
Percentage Compaction: (%)	105.2	108.3	108.0
Particle Density (Mg/m³)	2.64	2.64	2.64
Volume of Air Voids (%)	8.6	5.2	5.8

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 19-Jun-25

Construction Testing Solutions Ltd.
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Report version 1



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER:	C5001518 / 355950.3.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	01/07/2025	SITE:	Leeside Road, Tottenham Leeside Road, Tottenham,
TESTED BY:	Kyle Ager	SUPPLIER / SOURCE:	RMS, Silvertown
GAUGE MODEL No:	TROXLER 3440	MATERIAL:	1A
GAUGE SERIAL No:	15414	ENVIRONMENTAL CONDITIONS:	Sunny
CORRECTION FACTORS:	Bulk $\gamma=1.009$ Moisture $b=1.009$	OMC REFERENCED:	337922.21.1.1
MAX DRY DENSITY:	2.02 Mg/m ³	PARTICLE DENSITY:	2.65 Mg/m ³
DEPTH OF LAYER:	300	DEPTH OF TEST	200
SAMPLING PLAN:	CTS procedure		

TEST RESULTS Activity Location: On-Site

AREA OF TEST: Pylon Base, Layer 8

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Air Voids (%)	Mean Relative Compaction (%)
TEST 1	2.134	0.156	2.15	7.9	7.9	2.00	8.7	99
	2.143	0.158	2.16	8.0				
TEST 2	2.106	0.170	2.13	8.8	8.9	1.95	9.0	97
	2.108	0.173	2.13	8.9				
TEST 3	2.107	0.193	2.13	10	10	1.93	7.7	95
	2.103	0.195	2.12	10				

Remarks:
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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

Unit 16 Britannia Ind Estate
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 01-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333



4161

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.3	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	N/A
LOCATION:	Location 3	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	8000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	23°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

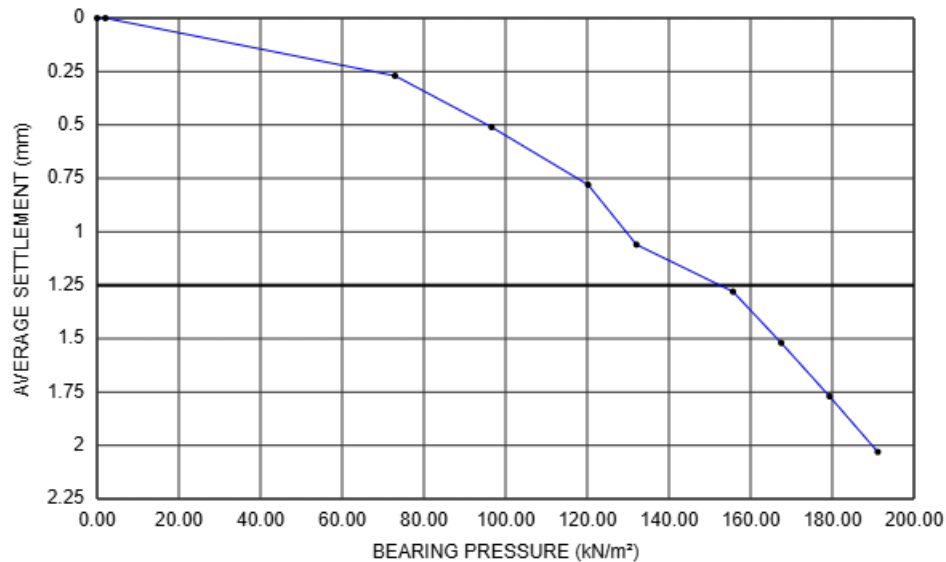
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 191 kN/m²
Max settlement: 2.03 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 152 kN/m²
Modulus of subgrade K762: 98 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 27.3%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 27.3 %

Remarks:

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Determination of Equivalent CBR Value

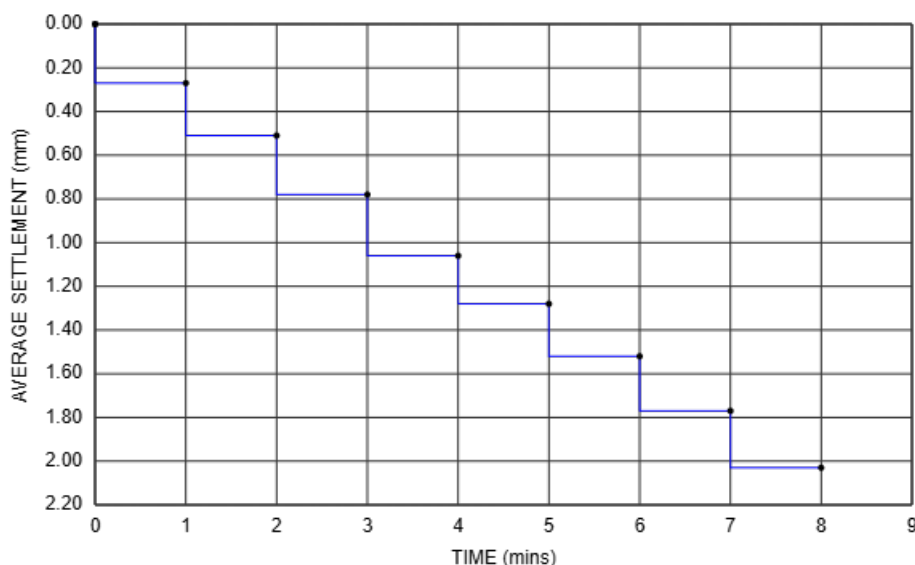
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 362730.1.1.3

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.6	72.9	-0.27	-0.24	-0.30	0.27	0.24	0.30	0.27
27.3	96.6	-0.51	-0.48	-0.54	0.51	0.48	0.54	0.51
34.0	120.2	-0.78	-0.75	-0.81	0.78	0.75	0.81	0.78
37.3	132.0	-1.06	-1.03	-1.09	1.06	1.03	1.09	1.06
44.0	155.7	-1.28	-1.25	-1.31	1.28	1.25	1.31	1.28
47.4	167.5	-1.52	-1.49	-1.55	1.52	1.49	1.55	1.52
50.7	179.3	-1.77	-1.74	-1.80	1.77	1.74	1.80	1.77
54.0	191.1	-2.03	-2.00	-2.06	2.03	2.00	2.06	2.03

SETTLEMENT RELATIONSHIP vs TIME



Remarks:

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END OF REPORT

For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	51.6067399, -0.0461874
LOCATION:	Location 1	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	8000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	21°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

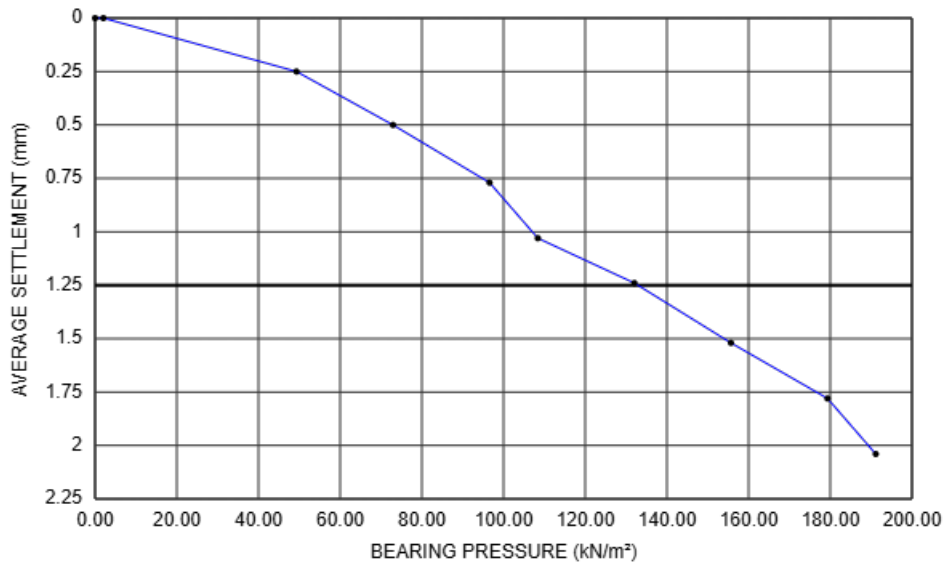
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 191 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 133 kN/m²
Modulus of subgrade K762: 86 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 21.5%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 21.5 %

Remarks:

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Report version 1

Page 1 of 2

Determination of Equivalent CBR Value

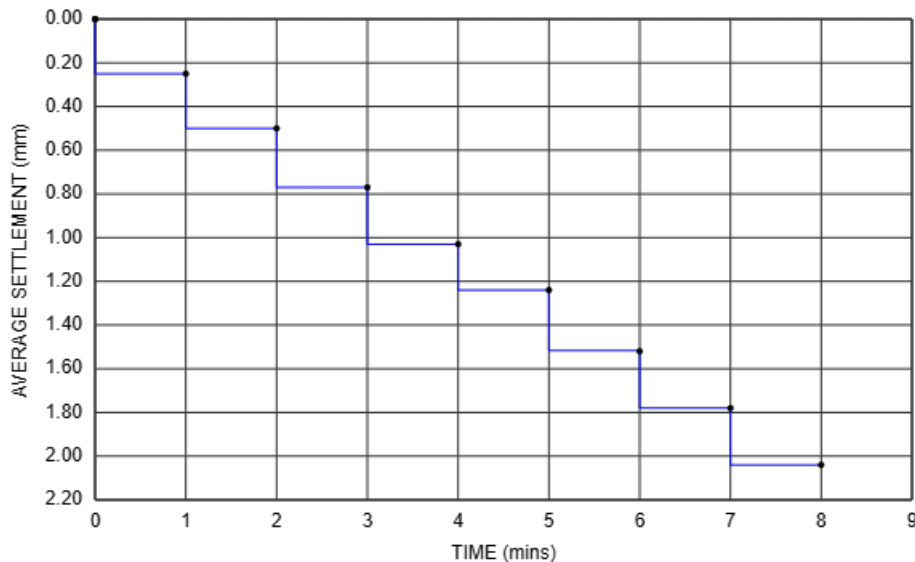
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 362730.1.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13.9	49.3	-0.25	-0.22	-0.28	0.25	0.22	0.28	0.25
20.6	72.9	-0.50	-0.47	-0.53	0.50	0.47	0.53	0.50
27.3	96.6	-0.77	-0.74	-0.80	0.77	0.74	0.80	0.77
30.7	108.4	-1.03	-1.00	-1.06	1.03	1.00	1.06	1.03
37.3	132.0	-1.24	-1.21	-1.27	1.24	1.21	1.27	1.24
44.0	155.7	-1.52	-1.48	-1.55	1.52	1.48	1.55	1.52
50.7	179.3	-1.78	-1.75	-1.81	1.78	1.75	1.81	1.78
54.0	191.1	-2.04	-2.01	-2.07	2.04	2.01	2.07	2.04

SETTLEMENT RELATIONSHIP vs TIME



Remarks:

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END OF REPORT

For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 362730.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	11/08/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Nathan Williams	LAT / LNG:	N/A
LOCATION:	Location 2	MATERIAL:	6F5
GROUND CONDITIONS:	Normal	ENVIRONMENTAL CONDITIONS:	Sunny
DISTANCE FROM EDGE OF PLATE TO WALL:	10000 mm		
TEST DEPTH:		SUPPLIER:	RMS
AIR TEMPERATURE:	22°C	SOURCE:	Silvertown Idn
SAMPLING PLAN:	CTS procedure	TEST METHOD:	Incremental Plate Loading
		SAMPLE TAKEN:	No

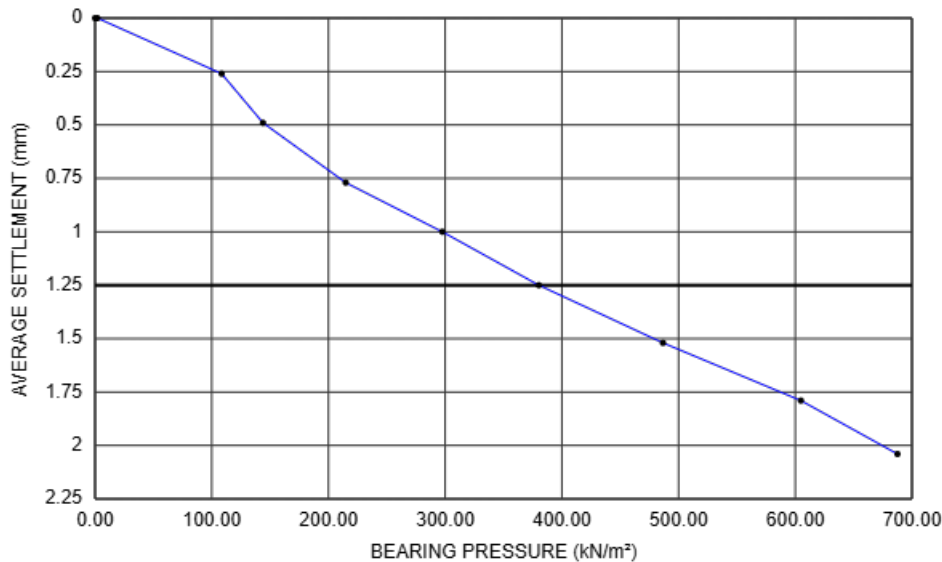
Equipment Details

Type of Kentledge: 35
Plate Diameter: 600 mm
Plate Area: 0.282743 m²
Plate Correction: 0.80

Results

Max applied pressure: 688 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 380 kN/m²
Modulus of subgrade K762: 245 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 133.0%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 133.0 %

Remarks:

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Determination of Equivalent CBR Value

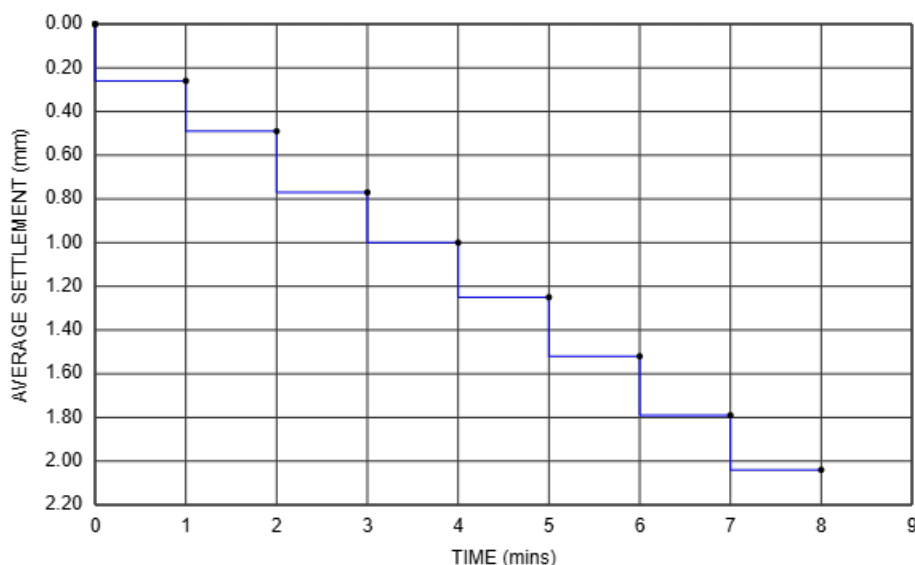
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 362730.1.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.6	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.7	108.4	-0.26	-0.23	-0.29	0.26	0.23	0.29	0.26
40.7	143.9	-0.49	-0.46	-0.52	0.49	0.46	0.52	0.49
60.7	214.8	-0.77	-0.74	-0.80	0.77	0.74	0.80	0.77
84.1	297.5	-1.00	-0.97	-1.03	1.00	0.97	1.03	1.00
107.5	380.3	-1.25	-1.22	-1.28	1.25	1.22	1.28	1.25
137.6	486.6	-1.52	-1.55	-1.49	1.52	1.55	1.49	1.52
171.0	604.8	-1.79	-1.76	-1.82	1.79	1.76	1.82	1.79
194.4	687.6	-2.04	-2.01	-2.07	2.04	2.01	2.07	2.04

SETTLEMENT RELATIONSHIP vs TIME



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END OF REPORT

For and on behalf of CTS
Vincent Faulkner - Operations Manager



Approved Signatory
Report date 11-Aug-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	1A
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m ³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 02-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	Grey sandy gravel
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

Remarks:

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 02-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 355950.2.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	01/07/2025	MATERIAL:	1A
TESTED BY:	Kyle Ager	SOURCE:	Site won
SUPPLIER:	Site won	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Sunny	SAMPLING METHOD:	Method 3: Sampling from site fill locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	561321	561327	561328
Client Ref:	5001518	5001518	5001518
Test location:	Pylon base layer 7 TEST 1	Pylon base Layer 7 TEST 2	Pylon Base Layer 7 Test 3

Weather Conditions:	Sunny	Sunny	Sunny
---------------------	-------	-------	-------

TEST DETAILS

Bulk Density: (Mg/m ³)	2.16	2.07	2.18
Moisture Content: (%)	7.6	6.8	10
Dry Density: (Mg/m ³)	2.01	1.94	1.97
Maximum Dry Density: (Mg/m ³)	2.02	2.02	2.02
Percentage Compaction: (%)	99.4	96.1	97.5
Particle Density (Mg/m ³)	2.65	2.62	2.62
Volume of Air Voids (%)	9.0	12.7	4.3

Remarks:

Test results reported relate only to the items tested.
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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

Unit 16 Britannia Ind Estate
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 02-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 337922.1.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	12/03/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Ben Collins	LAT / LNG:	51.6066972, -0.0458699
LOCATION:	Test 1 Capping Layer	MATERIAL:	6F5
GROUND CONDITIONS:	Moist	ENVIRONMENTAL CONDITIONS:	Overcast
DISTANCE FROM EDGE OF PLATE TO WALL:	0 mm	SUPPLIER:	RMS
TEST DEPTH:	0mm	SOURCE:	Silvertown
AIR TEMPERATURE:	8°C	TEST METHOD:	Incremental Plate Loading
SAMPLING PLAN:	CTS procedure	SAMPLE TAKEN:	No

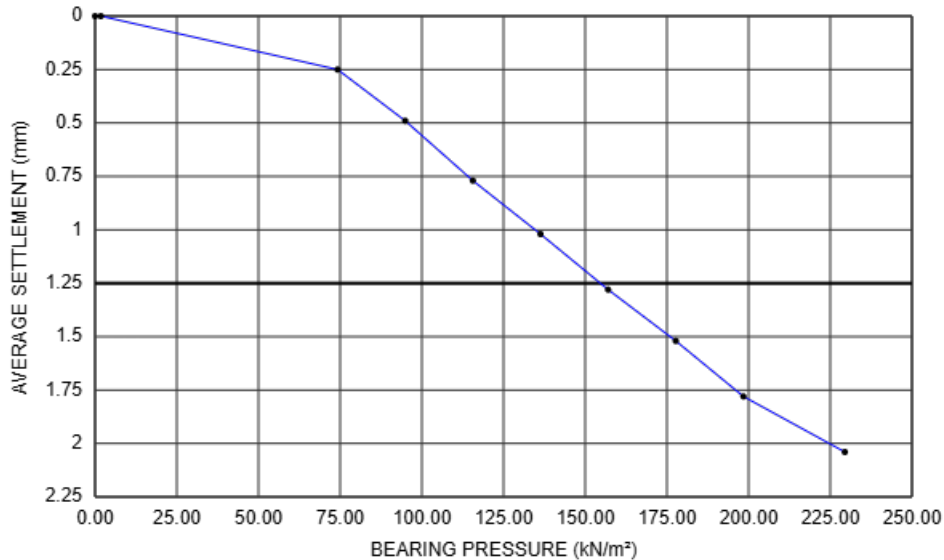
Equipment Details

Type of Kentledge: 30T
Plate Diameter: 450 mm
Plate Area: 0.159043 m²
Plate Correction: 0.62

Results

Max applied pressure: 229 kN/m²
Max settlement: 2.04 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 155 kN/m²
Modulus of subgrade K762: 77 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 18.0%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 18.0 %

Remarks:

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Report Format: STP S8 rev.1

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Registered in England No. 05998333

Report version 1

Page 1 of 2

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 337922.1.1.1

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.3	1.8	15.12	16.98	20.30	0.00	0.00	0.00	0.00
11.8	74.2	14.85	16.78	20.03	0.27	0.20	0.27	0.25
15.1	94.9	14.60	16.55	19.78	0.52	0.43	0.52	0.49
18.4	115.6	14.30	16.27	19.51	0.82	0.71	0.79	0.77
21.7	136.3	14.05	16.00	19.28	1.07	0.98	1.02	1.02
25.0	157.0	13.80	15.73	19.04	1.32	1.25	1.26	1.28
28.3	177.7	13.55	15.50	18.80	1.57	1.48	1.50	1.52
31.6	198.4	13.30	15.25	18.52	1.82	1.73	1.78	1.78
36.5	229.5	13.02	15.01	18.26	2.10	1.97	2.04	2.04

Remarks:

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 12-Mar-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

Determination of Equivalent CBR Value

Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER:	C5001518 / 337922.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE COMPLETED:	12/03/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Ben Collins	LAT / LNG:	51.6103451, -0.0481058
LOCATION:	Test 2 Capping Layer	MATERIAL:	6F5
GROUND CONDITIONS:	Moist	ENVIRONMENTAL CONDITIONS:	Overcast
DISTANCE FROM EDGE OF PLATE TO WALL:	0 mm	SUPPLIER:	RMC
TEST DEPTH:	0mm	SOURCE:	Silvertown
AIR TEMPERATURE:	8°C	TEST METHOD:	Incremental Plate Loading
SAMPLING PLAN:	CTS procedure	SAMPLE TAKEN:	No

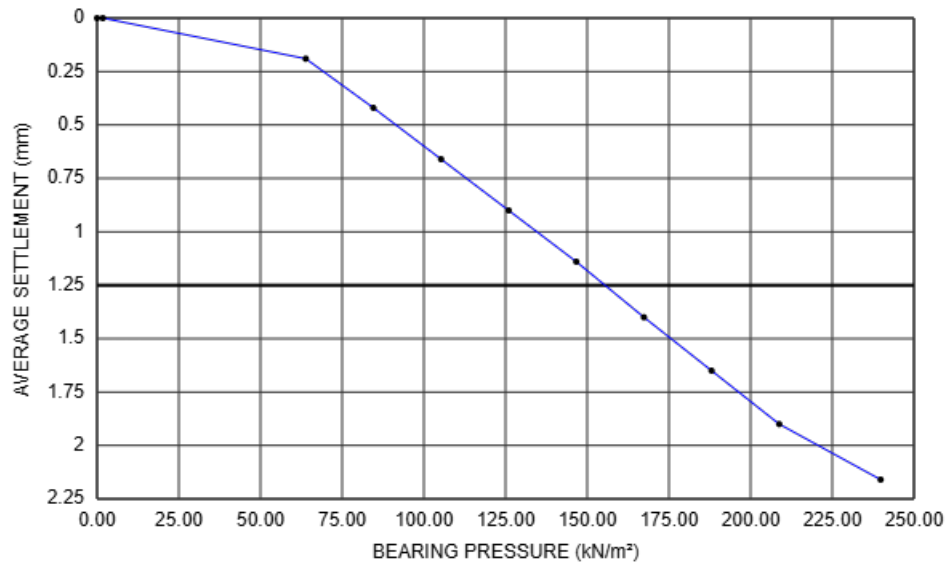
Equipment Details

Type of Kentledge: 30T
Plate Diameter: 450 mm
Plate Area: 0.159043 m²
Plate Correction: 0.62

Results

Max applied pressure: 240 kN/m²
Max settlement: 2.16 mm
Avg Bearing Pressure (P) at 1.25mm penetration: 155 kN/m²
Modulus of subgrade K762: 77 kN/m²/mm
Equivalent C.B.R Value at 1.25mm penetration: 18.1%

APPLIED LOAD vs SETTLEMENT RELATIONSHIP



Equivalent C.B.R Value: 18.1 %

Remarks:

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Determination of Equivalent CBR Value

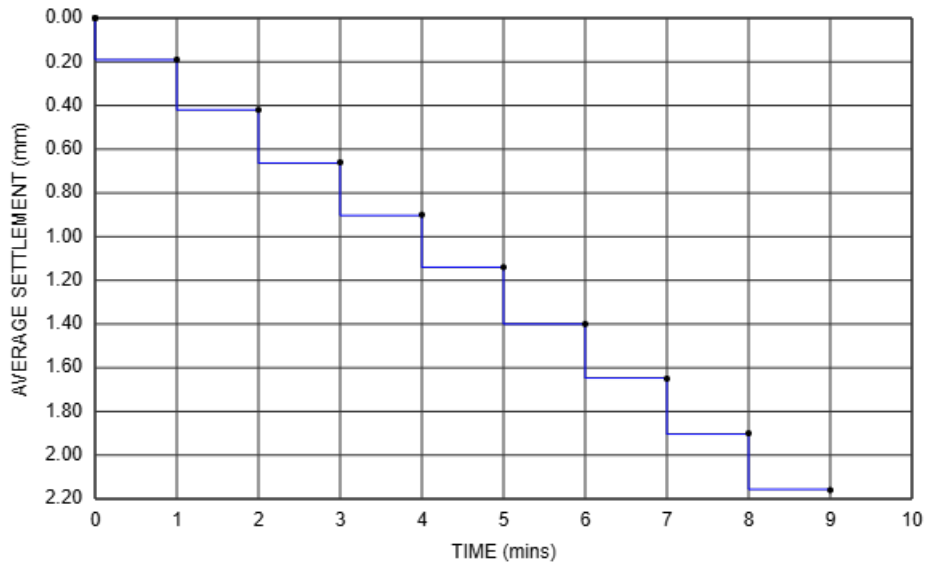
Design Guidance for Road Pavement Foundations Interim Advice Note 73/06 Rev1

REPORT NUMBER: C5001518 / 337922.1.1.2

TEST RESULTS

LOAD APPLIED TO PLATE	AVERAGE BEARING PRESSURE	GAUGE READING			GAUGE SETTLEMENT			AVERAGE SETTLEMENT
		1	2	3	1	2	3	
kN	kN/m ²	mm			mm			mm
0.3	1.8	18.59	20.13	21.12	0.00	0.00	0.00	0.00
10.2	63.9	18.36	20.01	20.90	0.23	0.12	0.22	0.19
13.5	84.6	18.11	19.80	20.67	0.48	0.33	0.45	0.42
16.7	105.3	17.85	19.60	20.40	0.74	0.53	0.72	0.66
20.0	126.0	17.60	19.38	20.15	0.99	0.75	0.97	0.90
23.3	146.7	17.35	19.16	19.91	1.24	0.97	1.21	1.14
26.6	167.4	17.10	18.90	19.64	1.49	1.23	1.48	1.40
29.9	188.1	16.85	18.65	19.40	1.74	1.48	1.72	1.65
33.2	208.8	16.60	18.40	19.13	1.99	1.73	1.99	1.90
38.1	239.8	16.35	18.13	18.89	2.24	2.00	2.23	2.16

SETTLEMENT RELATIONSHIP vs TIME



Remarks:

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 12-Mar-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER:	C5001518 / 333871.3.1.1		
CLIENT REF:	5001518	CLIENT:	ERITH CONTRACTORS LTD
DATE TESTED:	14/02/2025	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
TESTED BY:	Toby Crouch	SITE:	Leeside Road, Tottenham Leeside Road, Tottenham,
GUAGE MODEL No:	3440	SUPPLIER / SOURCE:	Rms Not specified
GUAGE SERIAL No:	15409	MATERIAL:	Class 1a
CORRECTION FACTORS:	Bulk $\gamma=1$ Moisture $b=1$	ENVIRONMENTAL CONDITIONS:	Clear
		OMC REFERENCED:	NA
MAX DRY DENSITY:	2 Mg/m ³	PARTICLE DENSITY:	NA
DEPTH OF LAYER:	500	DEPTH OF TEST	300
SAMPLING PLAN:	CTS procedure		

TEST RESULTS Activity Location: On-Site

AREA OF TEST: Remediation area section 1 / 1A layer 4

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Test 1	1.903	0.274	1.90	17	16	1.65	83
	1.943	0.269	1.94	16			
Test 2	1.962	0.265	1.96	16	15	1.69	85
	1.942	0.255	1.94	15			

Remarks:

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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333



4161

In-Situ Dry Density, Relative Compaction And Air Voids
BS 1377-9: 1990 Nuclear Density Method D (Direct transmission)

REPORT NUMBER:	C5001518 / 334682.2.1.1	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	20/02/2025	SITE:	Leeside Road, Tottenham Leeside Road, Tottenham,
TESTED BY:	Aaron Henson	SUPPLIER / SOURCE:	RMS Silvertown
GAUGE MODEL No:	Trailer 3440	MATERIAL:	Recycled material
GAUGE SERIAL No:	15409	ENVIRONMENTAL CONDITIONS:	Overcast
CORRECTION FACTORS:	Bulk $\gamma=0.991$ Moisture $b=0.924$	OMC REFERENCED:	NA
MAX DRY DENSITY:	1.94 Mg/m ³	PARTICLE DENSITY:	2.64 Mg/m ³
DEPTH OF LAYER:	500	DEPTH OF TEST	300
SAMPLING PLAN:	CTS procedure		

TEST RESULTS Activity Location: On-Site

AREA OF TEST: Remediation Area 1 - Layer 4

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Air Voids (%)	Mean Relative Compaction (%)
Test 1	1.930	0.207	1.91	11	12	1.71	15.1	96
	1.929	0.226	1.91	12				
Test 2	1.958	0.253	1.94	14	13	1.73	12.2	97
	1.978	0.231	1.96	12				

Remarks:
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Report Format: NDM042Bulk/TP13/Rep Issue 1 Rev0 10/23

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 333871.2.1.2		
SAMPLE NO:	5001518	CLIENT:	ERITH CONTRACTORS LTD
CLIENT REF:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
DATE TESTED:	14/02/2025	SITE:	Leeside Road, Tottenham
TESTED BY:	Toby Crouch	MATERIAL:	Class 1a
SUPPLIER:	RMS	SOURCE:	Not specified
ENVIRONMENTAL CONDITIONS:	Clear	DEVIATIONS:	None
SAMPLING PLAN:	CTS procedure TP41	SAMPLING METHOD:	Method 5: Sampling of imported granular material from spread or laid material.
GROUNDWATER LEVEL:	Not known	TEST LEVEL:	Not known

RESULTS

LOCATION DETAILS

Laboratory Ref:	527020	527036
Client Ref:	5001518	5001518
Test location:	Remediation area section 1 / 1A layer 4	Remediation area section 1 / 1A layer 4 test 2

Weather Conditions:	Clear	Clear
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TEST DETAILS

Bulk Density: (Mg/m ³)	1.83	1.82
Moisture Content: (%)	12	13
Dry Density: (Mg/m ³)	1.63	1.61
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	84.2	82.9
Particle Density (Mg/m³)	2.64	2.64
Volume of Air Voids (%)	18.2	18.4

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

Unit 12 Britannia Ind Estate
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 334682.1.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	20/02/2025	MATERIAL:	1A
TESTED BY:	Aaron Henson	SOURCE:	Silvertown
SUPPLIER:	RMS	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 2: Sampling from site excavation locations.
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	Not known
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	528183	528346
Client Ref:	5001518	5001518
Test location:	Remediation Area 1 - Layer 4 - Test 1	Remediation Area 1 - Layer 4 - Test 2

Weather Conditions:	Overcast	Overcast
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TEST DETAILS

Bulk Density: (Mg/m ³)	1.77	1.90
Moisture Content: (%)	14	19
Dry Density: (Mg/m ³)	1.54	1.59
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	95.6	96.2
Particle Density (Mg/m ³)	2.64	2.64
Volume of Air Voids (%)	9.1	9.3

Remarks:

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Amended report. This test report supersedes test report version 1 - amendment

Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 28-Feb-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 2



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 337922.4.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	12/03/2025	MATERIAL:	Class 1a
TESTED BY:	Ben Collins	SOURCE:	Silvertown
SUPPLIER:	RMC	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 1: Sampling shallow trial pits
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	300mm
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	532882	532886
Client Ref:	5001518	5001518
Test location:	Layer 7 Test 1	Test 2 Layer 7

Weather Conditions:	Overcast	Overcast
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TEST DETAILS

Bulk Density: (Mg/m ³)	2.09	2.08
Moisture Content: (%)	5.6	3.9
Dry Density: (Mg/m ³)	1.98	2.00
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	102.1	103.0
Particle Density (Mg/m ³)	2.64	2.64
Volume of Air Voids (%)	13.9	16.5

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

DETERMINATION OF IN-SITU DENSITY

Tested in accordance with BS 1377:Part 9:1990 clause 2.2 Large Cylinder Sand Replacement

REPORT NUMBER:	C5001518 / 337922.4.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NO:	5001518	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE TESTED:	12/03/2025	MATERIAL:	Class 1a
TESTED BY:	Ben Collins	SOURCE:	Silvertown
SUPPLIER:	RMC	DEVIATIONS:	None
ENVIRONMENTAL CONDITIONS:	Overcast	SAMPLING METHOD:	Method 1: Sampling shallow trial pits
SAMPLING PLAN:	CTS procedure TP41	TEST LEVEL:	300mm
GROUNDWATER LEVEL:	Not known		

RESULTS

LOCATION DETAILS

Laboratory Ref:	532882	532886
Client Ref:	5001518	5001518
Test location:	Layer 7 Test 1	Test 2 Layer 7

Weather Conditions:	Overcast	Overcast
---------------------	----------	----------

TEST DETAILS

Bulk Density: (Mg/m ³)	2.09	2.08
Moisture Content: (%)	5.6	3.9
Dry Density: (Mg/m ³)	1.98	2.00
Maximum Dry Density: (Mg/m ³)	1.94	1.94
Percentage Compaction: (%)	102.1	103.0
Particle Density (Mg/m ³)	2.64	2.64
Volume of Air Voids (%)	13.9	16.5

Remarks:

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Report Format: SRD/TP11/Rep Issue 1 Rev 0 11/22

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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

Report version 1



4161

In-Situ Dry Density And Relative Compaction
BS 1377-9: 1990 Nuclear Density Method A (Direct transmission)

REPORT NUMBER: C5001518 / 337922.3.1.2

CLIENT REF: 5001518 CLIENT: ERITH CONTRACTORS LTD

DATE COMPLETED: 12/03/2025 ADDRESS: Erith House, 7 Queen Street, Erith, Kent, DA8 1RP

TESTED BY: Ben Collins SITE: Leaside Road, Tottenham

SAMPLING PLAN: CTS procedure ENVIRONMENTAL CONDITIONS: Overcast

GAUGE MODEL No: Troxler SUPPLIER / SOURCE: RMS Silvertown

GAUGE SERIAL No: 15409 MATERIAL: Class 1a

CORRECTION FACTORS: Bulk $\gamma=0.991$ LOCATION: Layer 7
Moisture $b=0.924$

MAX DRY DENSITY: 1.94 Mg/m³ VARIATIONS FROM PROCEDURE: N/A

DEPTH OF LAYER: 300 DEPTH OF TEST 300

TEST RESULTS Activity Location: On-Site

Test No.	Gauge Bulk Density (Mg/m ³)	Gauge Moisture Density (Mg/m ³)	Corrected Bulk Density (Mg/m ³)	Corrected Moisture Content (%)	Mean Dry Density (Mg/m ³)	Mean Relative Compaction (%)
Test 1 Layer 7	1.994	0.181	1.98	9.2	1.82	94
	1.999	0.164	1.98	8.3		
Test 2 Layer 7	2.061	0.214	2.04	11	1.87	96
	2.068	0.170	2.05	8.3		

Remarks:

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Report Format: NDMSoils05a/TP13/Rep Issue 1 Rev 0 10/15

Unit 12 Britannia Ind Estate
Poyle Road
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END OF REPORT

For and on behalf of CTS
Lee Rossiter - Operations supervisor



Approved Signatory
Report date 13-Mar-25

Construction Testing Solutions Ltd.
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Report version 1



4161

DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

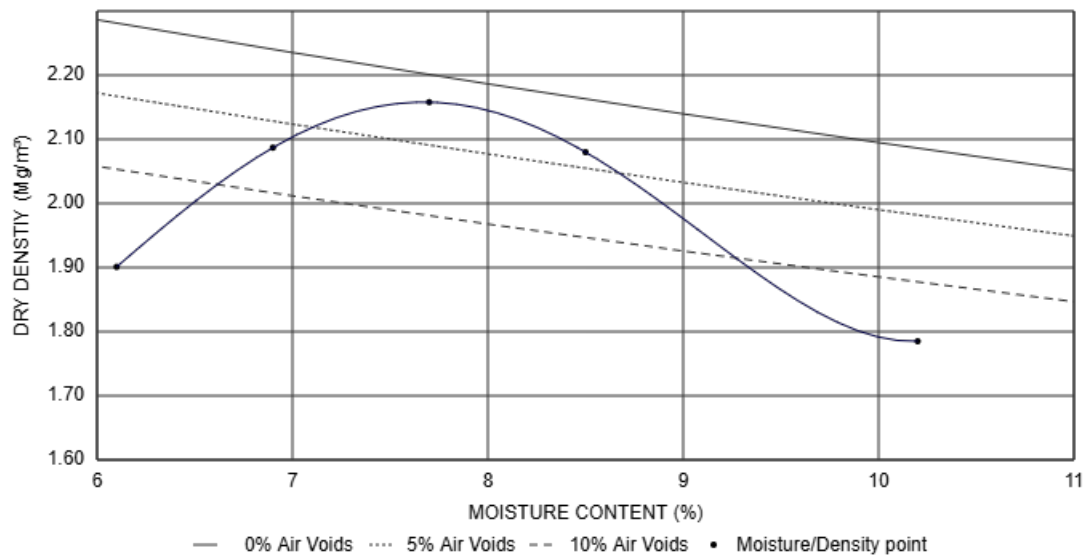
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.2	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	Near to surface
DATE COMPLETED:	06/08/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	JG, MC	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:	Hikoki		
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 2.16 Mg/m³
OPTIMUM WATER CONTENT: 7.5 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 0 %
MEASURED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
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Report Format: BSENMcvib/TP34/Rep Issue 1 Rev 1 09/23

Lawness Barns
Mounnessing Road
Billericay
Essex CM12 0TS

0343 227 8545
enquiries@constructiontesting.co.uk
www.constructiontesting.co.uk
END OF REPORT

For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
Report date 06-Aug-25

Construction Testing Solutions Ltd.
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DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

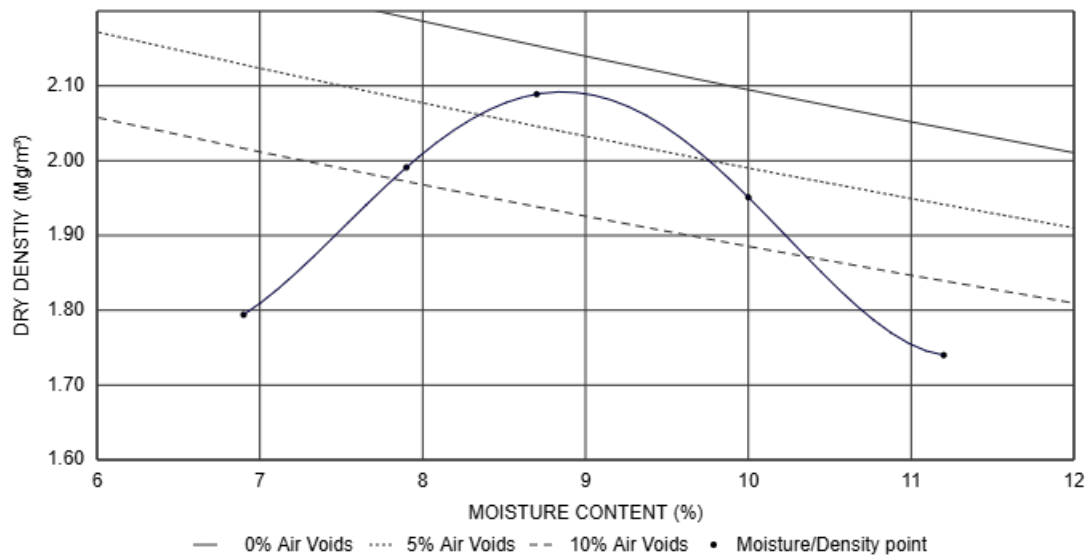
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.3	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	6F5 stockpile
DATE COMPLETED:	05/08/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	Charlotte Page	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:	Hikoki		
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 2.09 Mg/m³
OPTIMUM WATER CONTENT: 9.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 50 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Non-standard test as material classified as unsuitable, sample tested at clients request, test results may not be indicative of the material being used on site.

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For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
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DETERMINATION OF REFERENCE DENSITY AND WATER CONTENT

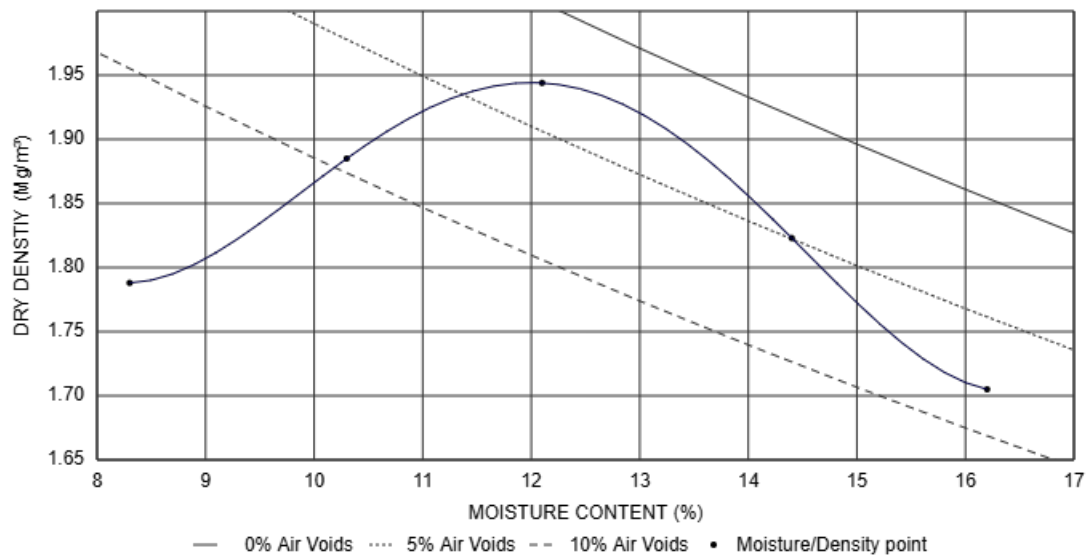
BS EN 13286-4: 2021 - Vibrating Hammer

REPORT NUMBER:	C5001518 / 356893.5.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	356893.1.1.1	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SUPPLIER/SOURCE:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete 6F5
DATE RECEIVED:	09/07/2025	LOCATION:	6F5 stockpile
DATE COMPLETED:	28/07/2025	COMPACTION SAMPLE:	Separate samples
TESTED BY:	James Gough	SAMPLING PLAN:	Client Specification
TYPE OF SAMPLE:	Disturbed	SAMPLING METHOD:	C2 Sampling from small conical stockpiles
HAMMER MAKE/MODEL:			
ENVIRONMENTAL CONDITIONS:	Overcast		

RESULT Test Location: MT Billericay

MAXIMUM DRY DENSITY: 1.94 Mg/m³
OPTIMUM WATER CONTENT: 12.0 %
AMOUNT (By Dry Mass) RETAINED >40.0mm: 58 %
ASSUMED PARTICLE DENSITY USED TO PLOT AIR VOIDS: 2.65 Mg/m³

MOISTURE CONTENT / DRY DENSITY RELATIONSHIP



Remarks:
Test results reported relate only to the items tested.
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For and on behalf of CTS
James Gough - Senior Lab Technician

Approved Signatory
Report date 29-Jul-25



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Report Format: BSENM CVib/TP34/Rep Issue 1 Rev 1 09/23

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Page 1 of 1

DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	34
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Northdown House, Ashford Road
Harrietsham, Nr Maidstone
Kent ME17 1QW

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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
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DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

	LOWER LIMIT	UPPER LIMIT
--	-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	34
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

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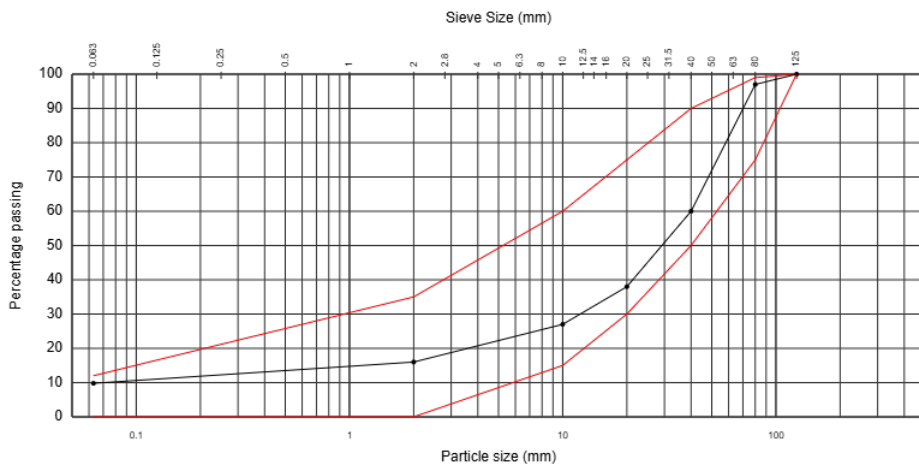
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TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER:	C5001518 / 356893.3.1.1	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562483	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SOURCE / SUPPLIER:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete
DATE RECEIVED:	09/07/2025	PROPOSED CLASSIFICATION:	Class 6F5
DATE COMPLETED:	23/07/2025	LOCATION:	6F5 Stockpile
TESTED BY:	James Gough	SAMPLING PLAN:	Client Specification
ENVIRONMENTAL CONDITIONS:	Overcast	METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles

RESULT TestLocation: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 493
BS EN ISO 14688-2: 2018.

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
125	100	100 - 100
80	97	75 - 99
63	84	
50	73	
40	60	50 - 90
31.5	51	
25	44	
20	38	30 - 75
16	33	
14	30	
12.5	29	
10	27	15 - 60
8	24	
6.3	22	
5	21	
4	19	
2.8	18	
2	16	0 - 35
1	14	
0.5	13	
0.25	12	
0.125	11	
0.063	9.8	0 - 12

Remarks:

Test results reported relate only to the items tested.
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END OF REPORT

For and on behalf of CTS
Harry Brewster - Laboratory Supervisor

HBrewster

Approved Signatory
Report date 26-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

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DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	Near to surface
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT	UPPER LIMIT
-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

Northdown House, Ashford Road
Harrietsham, Nr Maidstone
Kent ME17 1QW

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enquiries@constructiontesting.co.uk
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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

Construction Testing Solutions Ltd.
Registered in England No. 05998333

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DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	Near to surface
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

	LOWER LIMIT	UPPER LIMIT
--	-------------	-------------

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

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Report Format: LA/TP19/Rep Issue 1 Rev 1 09/23

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Harrietsham, Nr Maidstone
Kent ME17 1QW

0343 227 8545
enquiries@constructiontesting.co.uk
www.constructiontesting.co.uk
END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



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Report date 18-Jul-25

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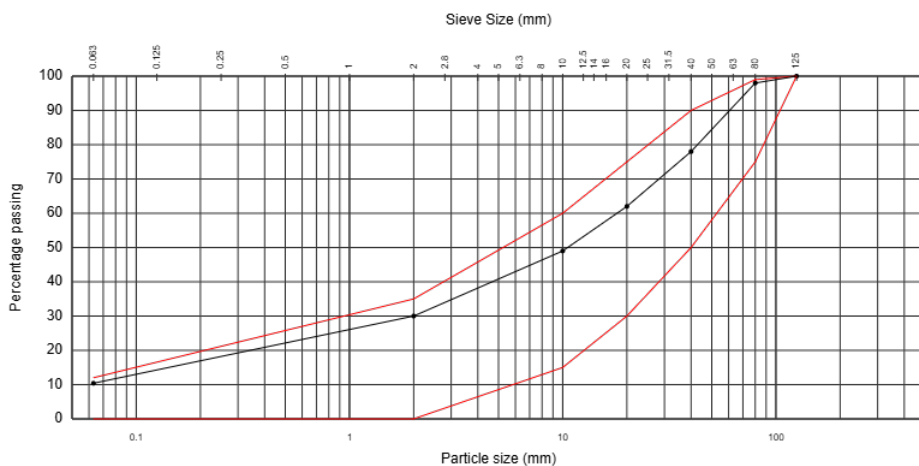
4161

TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER:	C5001518 / 356893.3.1.2	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562705	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE SAMPLED:	07/07/2025	SOURCE / SUPPLIER:	Site won, Insitu
SAMPLED BY:	Jack Fitzgerald	MATERIAL:	Crushed concrete
DATE RECEIVED:	09/07/2025	PROPOSED CLASSIFICATION:	Class 6F5
DATE COMPLETED:	28/07/2025	LOCATION:	6F5 Stockpile
TESTED BY:	JG, CP	SAMPLING PLAN:	Client Specification
ENVIRONMENTAL CONDITIONS:	Overcast	METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles

RESULT TestLocation: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 296
BS EN ISO 14688-2: 2018.

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
125	100	100 - 100
80	98	75 - 99
63	90	
50	89	
40	78	50 - 90
31.5	71	
25	67	
20	62	30 - 75
16	56	
14	54	
12.5	52	
10	49	15 - 60
8	45	
6.3	42	
5	39	
4	36	
2.8	33	
2	30	0 - 35
1	26	
0.5	23	
0.25	17	
0.125	12	
0.063	10.4	0 - 12

Remarks:

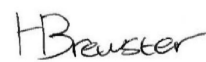
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enquiries@constructiontesting.co.uk
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For and on behalf of CTS
Harry Brewster - Laboratory Supervisor



Approved Signatory
Report date 29-Jul-25

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DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

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END OF REPORT

For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



Approved Signatory
Report date 18-Jul-25

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DETERMINATION OF RESISTANCE OF COARSE AGGREGATE TO FRAGMENTATION

Los Angeles Test BS EN 1097-2: 2020

REPORT NUMBER:	C5001518 / 356893.6.1.3	CLIENT:	ERITH CONTRACTORS LTD
SAMPLE NUMBER:	562708	ADDRESS:	Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
CLIENT REF:	5001518	SITE:	Leeside Road, Tottenham
DATE RECEIVED:	09/07/2025	SUPPLIER:	Site won
DATE SAMPLED:	07/07/2025	SOURCE:	Insitu
DATE COMPLETED:	18/07/2025	MATERIAL:	Crushed concrete - 6F5
TESTED BY:	Colin Gourlay	LOCATION:	6F5 stockpile
ACCEPTABLE STANDARD:	Contract Specification	SAMPLING CERTIFICATE:	Available
SAMPLING PLAN:	Client Provided	ENVIRONMENTAL CONDITIONS:	Overcast
METHOD OF SAMPLING:	C2 Sampling from small conical stockpiles		

TEST RESULT: Test Location: Harrietsham

SPECIFICATION REQUIREMENTS

LOWER LIMIT UPPER LIMIT

THE LOS ANGELES COEFFICIENT (LA)::	33
SIZE FRACTION FROM WHICH TEST PORTION WAS OBTAINED:	10-14 mm

Remarks:

Test results reported relate only to the items tested.
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Harrietsham, Nr Maidstone
Kent ME17 1QW

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enquiries@constructiontesting.co.uk
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For and on behalf of CTS
Richard Lawry-Johns - Lead Senior Technician



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Report date 18-Jul-25

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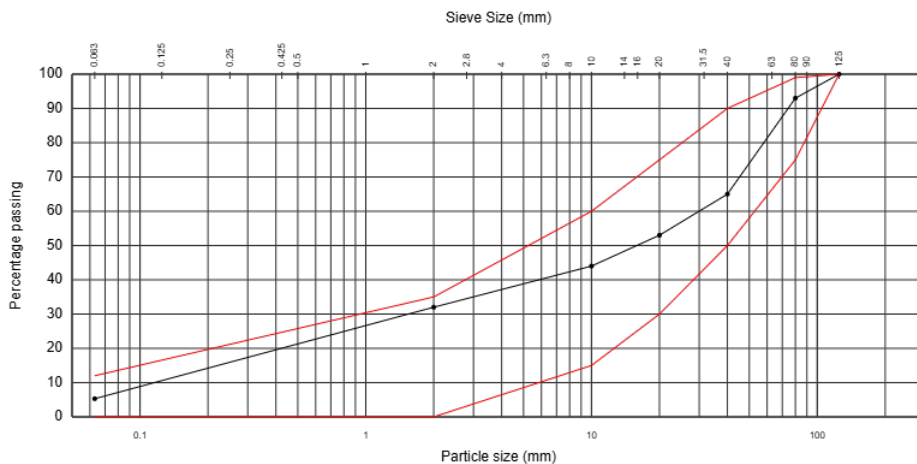
TEST REPORT: DETERMINATION OF PARTICLE SIZE DISTRIBUTION

BS EN 933-1 : 2012 Washing & Dry Sieving

REPORT NUMBER: C5001518 / 356893.3.1.3
SAMPLE NUMBER: 562708
CLIENT REF: 5001518
DATE SAMPLED: 07/07/2025
SAMPLED BY: Jack Fitzgerald
DATE RECEIVED: 09/07/2025
DATE COMPLETED: 28/07/2025
TESTED BY: JG, CP
ENVIRONMENTAL CONDITIONS: Overcast

CLIENT: ERITH CONTRACTORS LTD
ADDRESS: Erith House, 7 Queen Street, Erith, Kent, DA8 1RP
SITE: Leaside Road, Tottenham
SOURCE / SUPPLIER: Site won, Insitu
MATERIAL: Crushed concrete
PROPOSED CLASSIFICATION: Class 6F5
LOCATION: 6F5 stockpile
SAMPLING PLAN: Client Specification
METHOD OF SAMPLING: C2 Sampling from small conical stockpiles

RESULT Test Location: MT Billericay



Applied Specification: Class 6F5 - Specification for Highway Works (2016) Table 6/5 Earthworks Materials - Class 6F5
Specification stated as requested, no indication of conformity applied

Uniformity Coefficient (D60/D10) 114
BS EN ISO 14688-2: 2018.

SIEVE ANALYSIS

Particle Diameter mm	Passing %	Specification Limits
500	100	
300	100	
125	100	100 - 100
90	100	
80	93	75 - 99
63	77	
40	65	50 - 90
31.5	61	
20	53	30 - 75
16	51	
14	49	
10	44	15 - 60
8	42	
6.3	39	
4	34	
2.8	34	
2	32	0 - 35
1	28	
0.5	22	
0.425	17	
0.25	9	
0.125	6	
0.063	5.3	0 - 12

Remarks:

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For and on behalf of CTS
Mike Gray - Laboratory Supervisor

Approved Signatory
Report date 29-Jul-25



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Report Format: PSDagg/TP17/Rep Issue 1 Rev 1 08/23

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END OF REPORT

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Appendix I. Environmental Monitoring Information



Environmental Monitoring Report

Week 01

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 01
Monitoring Period	13/01/2025 – 17/01/2025

Document Revision / Authorisation Record

Rev No.	Prepared by Position Date	Authorised By Position	Details
1.0	James Hardy Site Manager 23/01/2025	Owain Davey Project Manager	

Distribution List

Roles	Organisation/Name	Contact Details	
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1. Summary of Works

The project scope of works involves the remediation of the National Grid site on Leaside Road. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837	81160	17/10/2025
Ion Science PID VOC gas detector	Tiger Select 136	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Site mobilisation and setup
- Breakout of concrete from former warehouse base

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

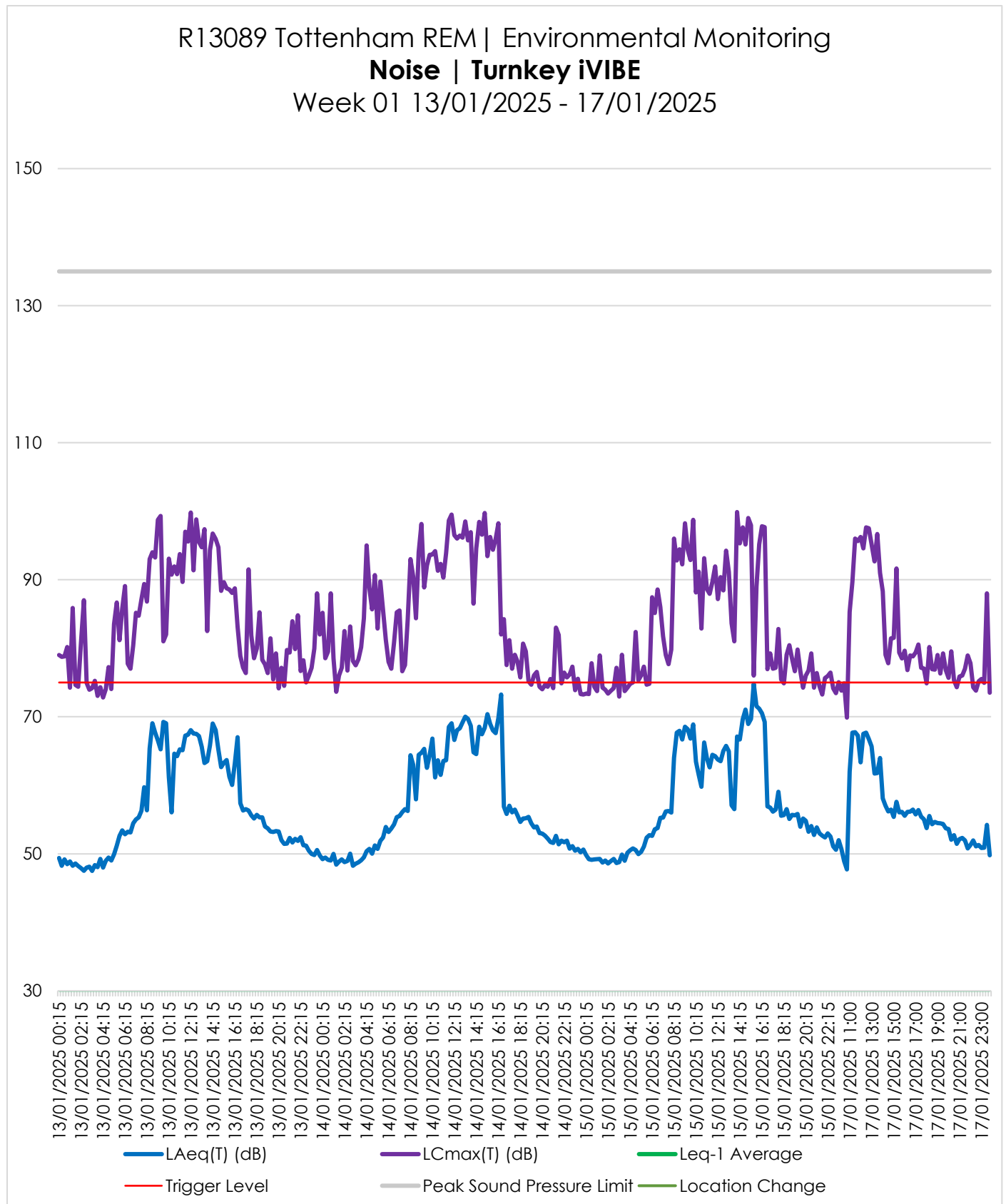
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum LAeq, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

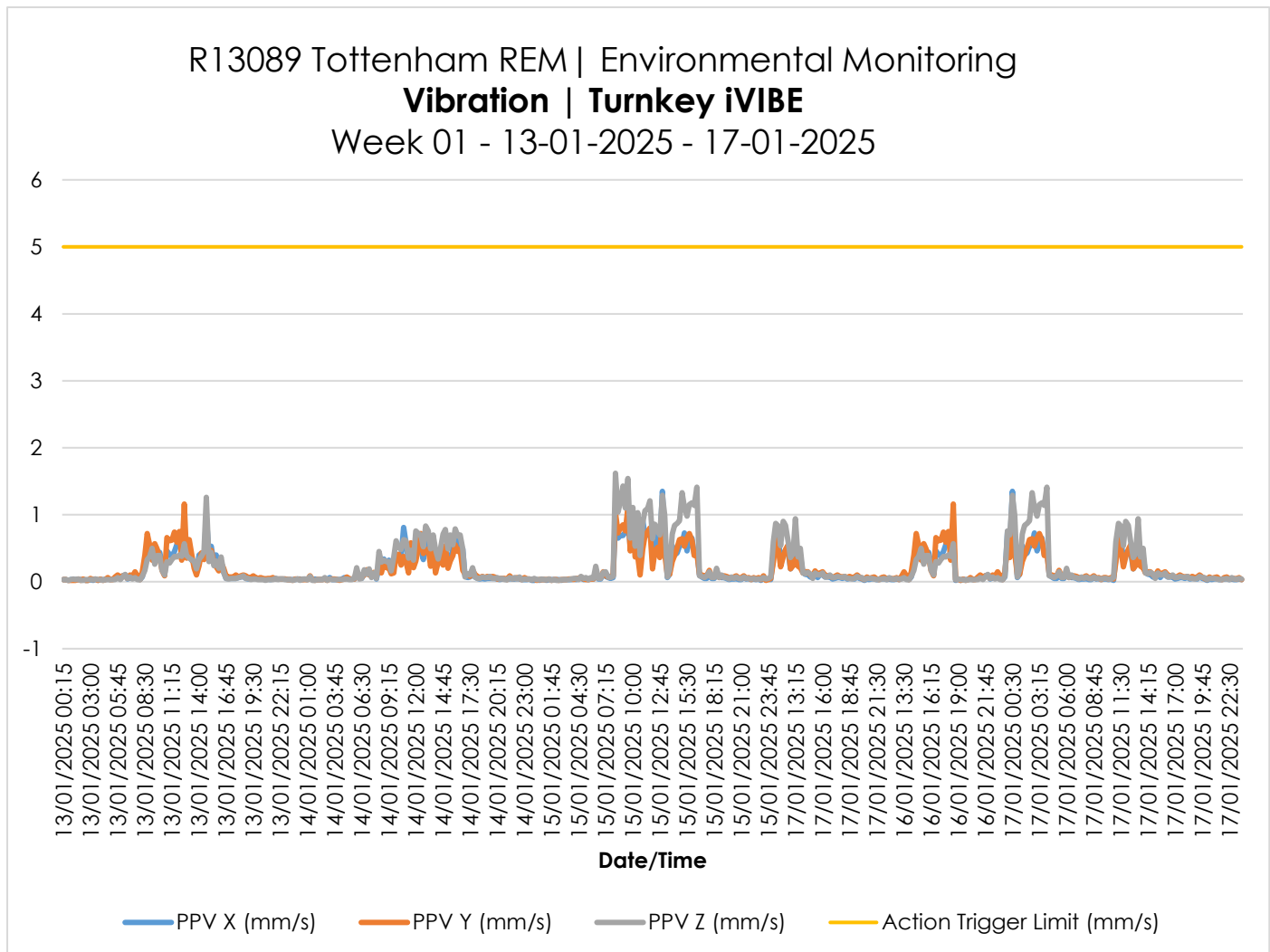
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

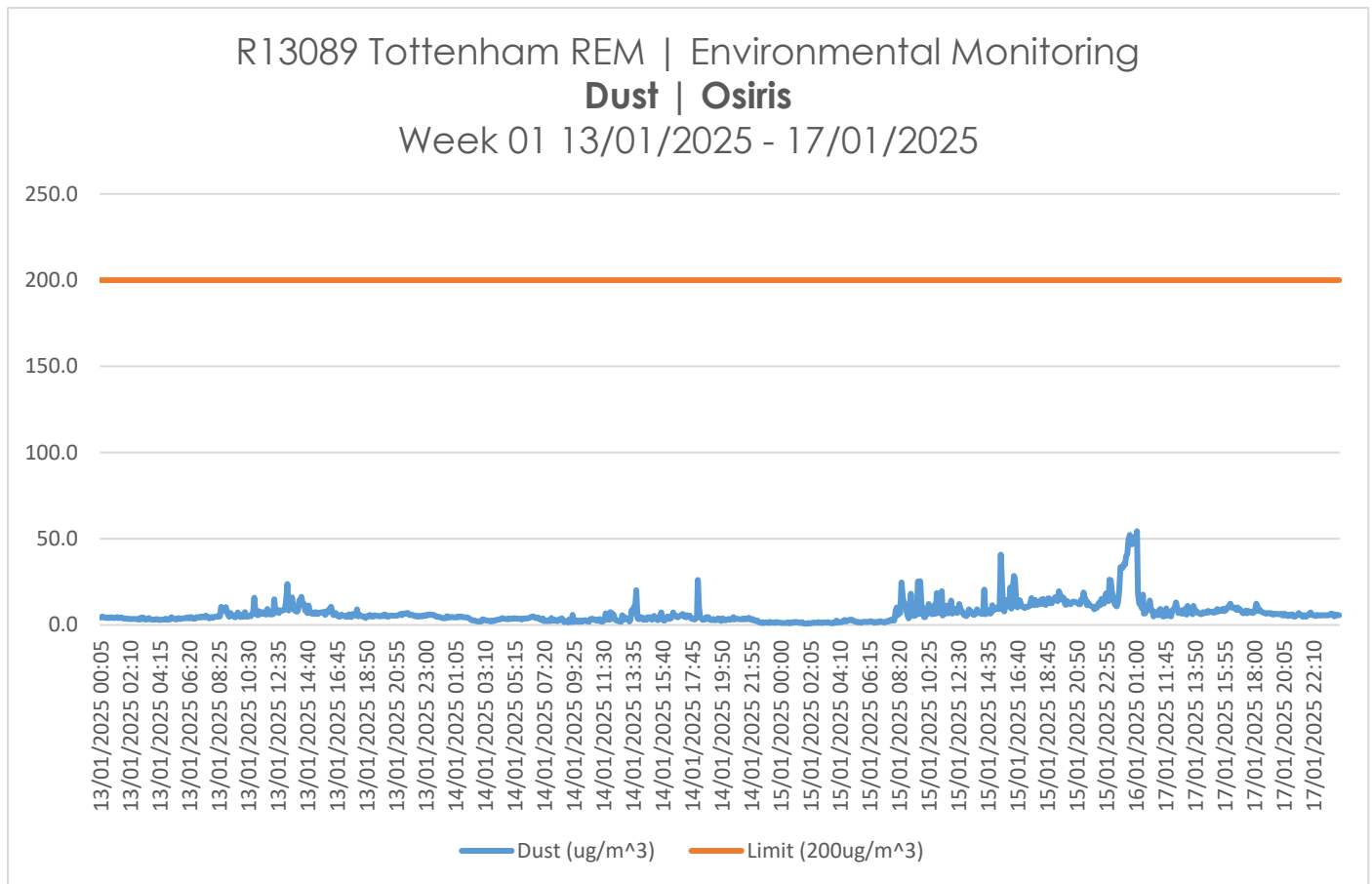
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 µg/m³ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

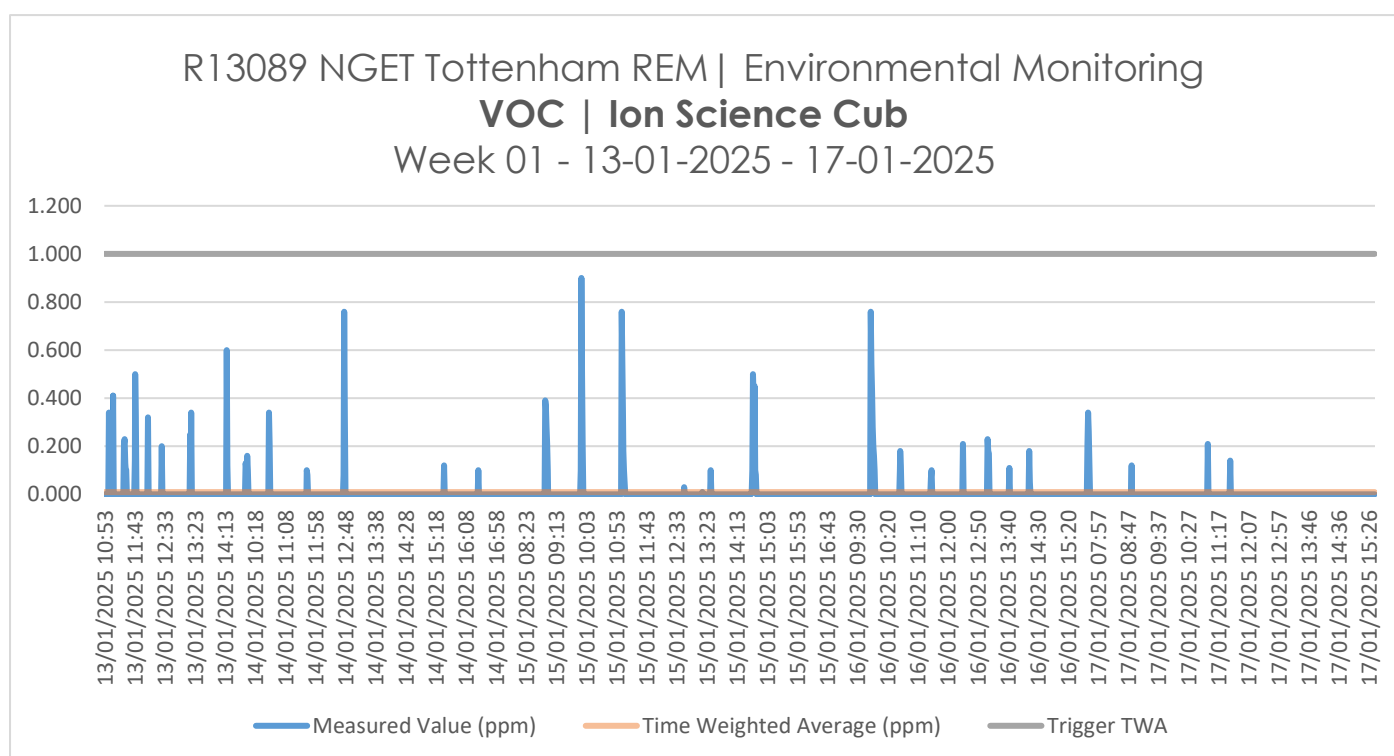
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

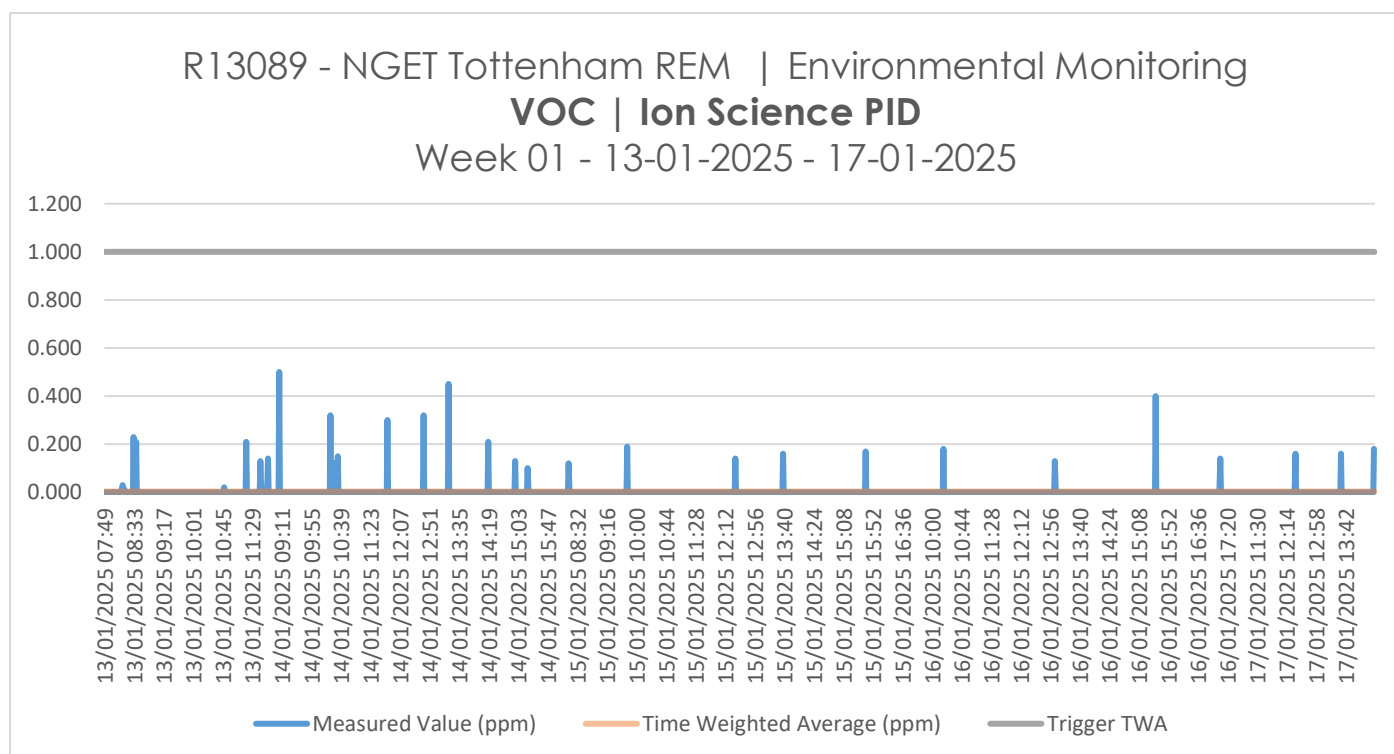
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The Cub is placed with the Site Foreman. The following data has been obtained from the onsite Photo Ionising Detector (PID) and Tiger Select Cub and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 02

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 02
Monitoring Period	20/01/2025 – 24/01/2025

Document Revision / Authorisation Record

Rev No.	Prepared by Position Date	Authorised By Position	Details
1.0	James Hardy Site Manager 27/01/2025	Owain Davey Project Manager	

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Site Manager	James Hardy	Email	James.hardy@erith.com

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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837	81160	17/10/2025
Ion Science PID VOC gas detector	Tiger Select 136	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Breakout of concrete from former warehouse base.
- Begin trench excavations in Section 1.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

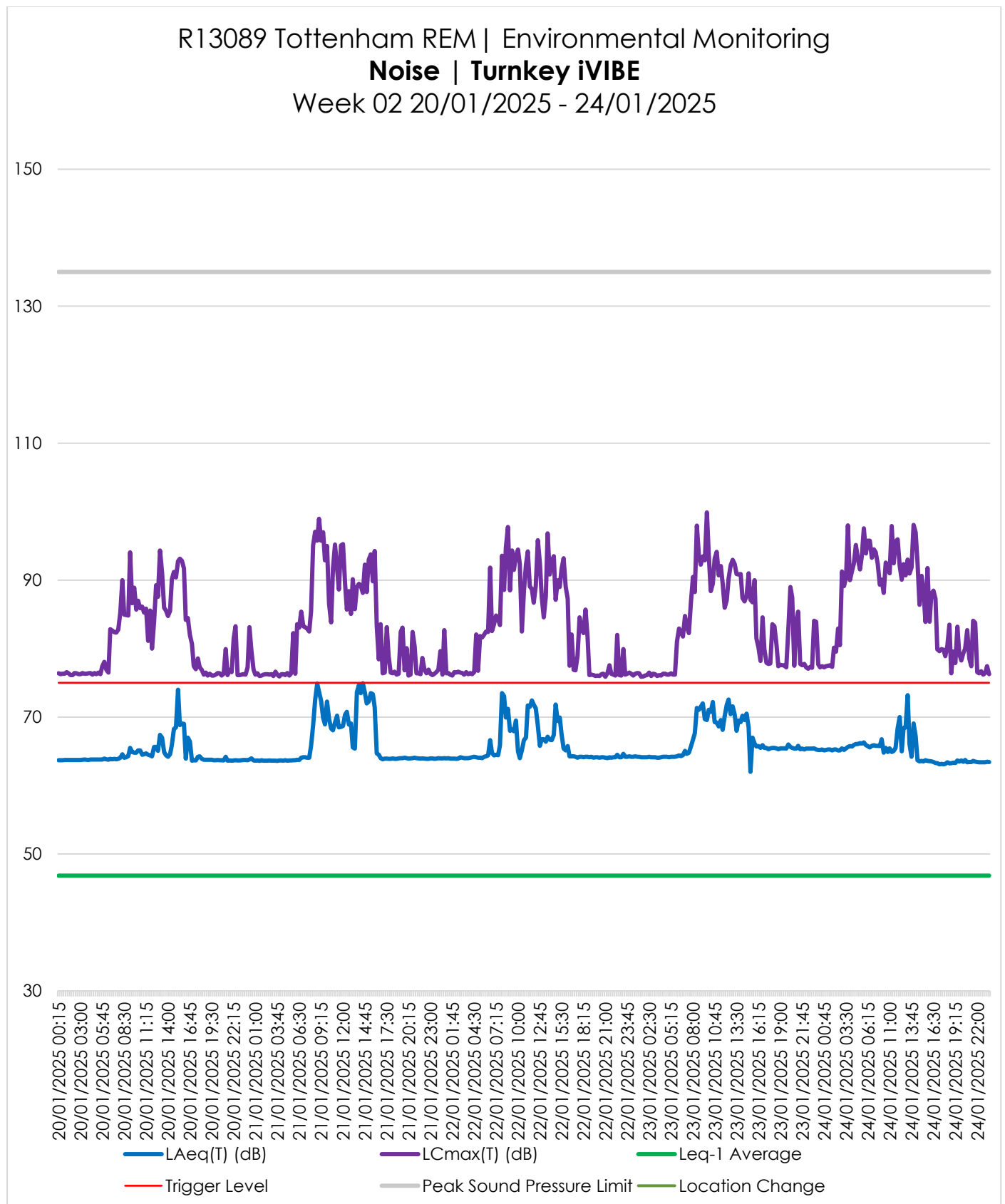
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum LAeq, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

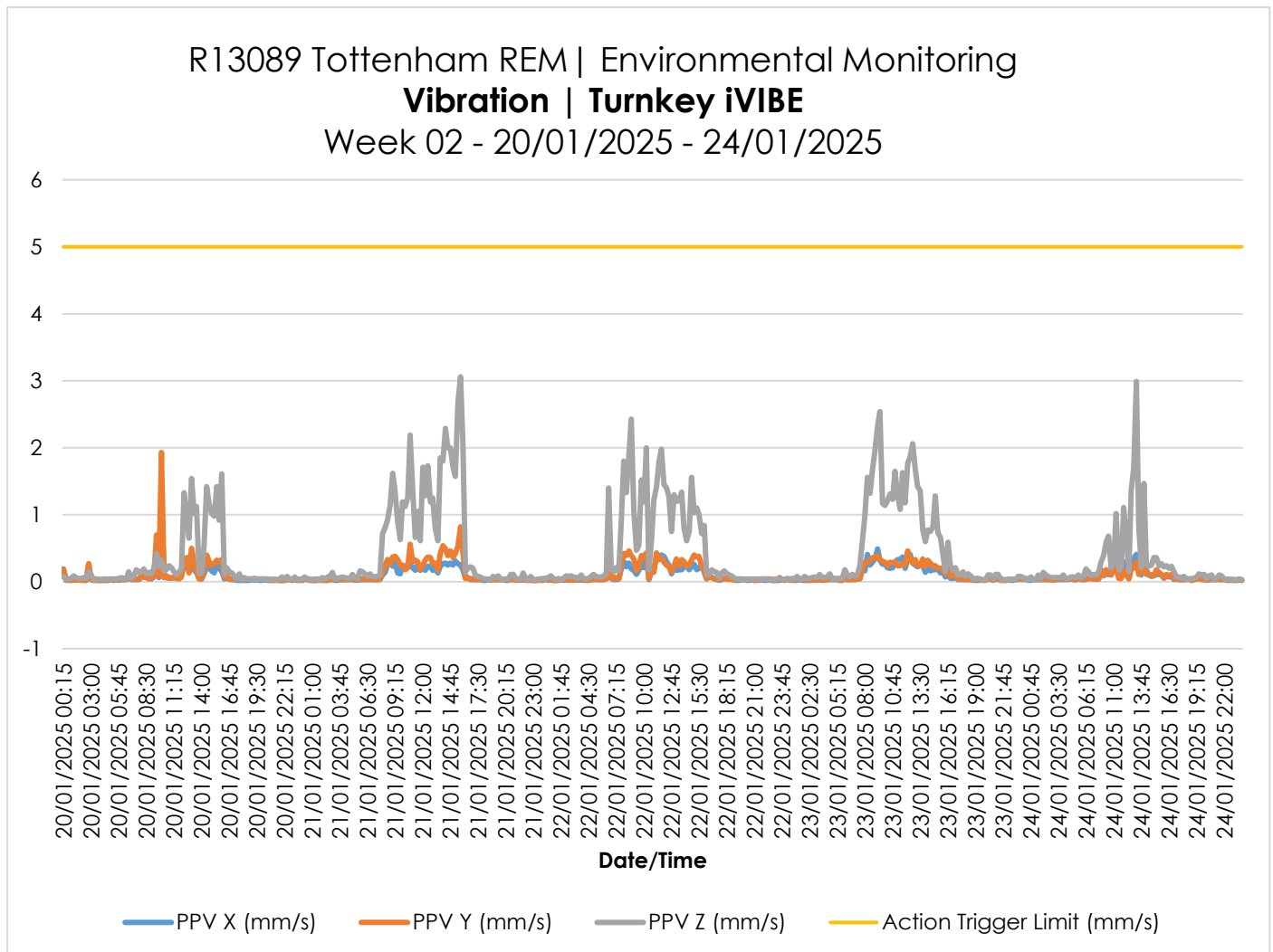
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

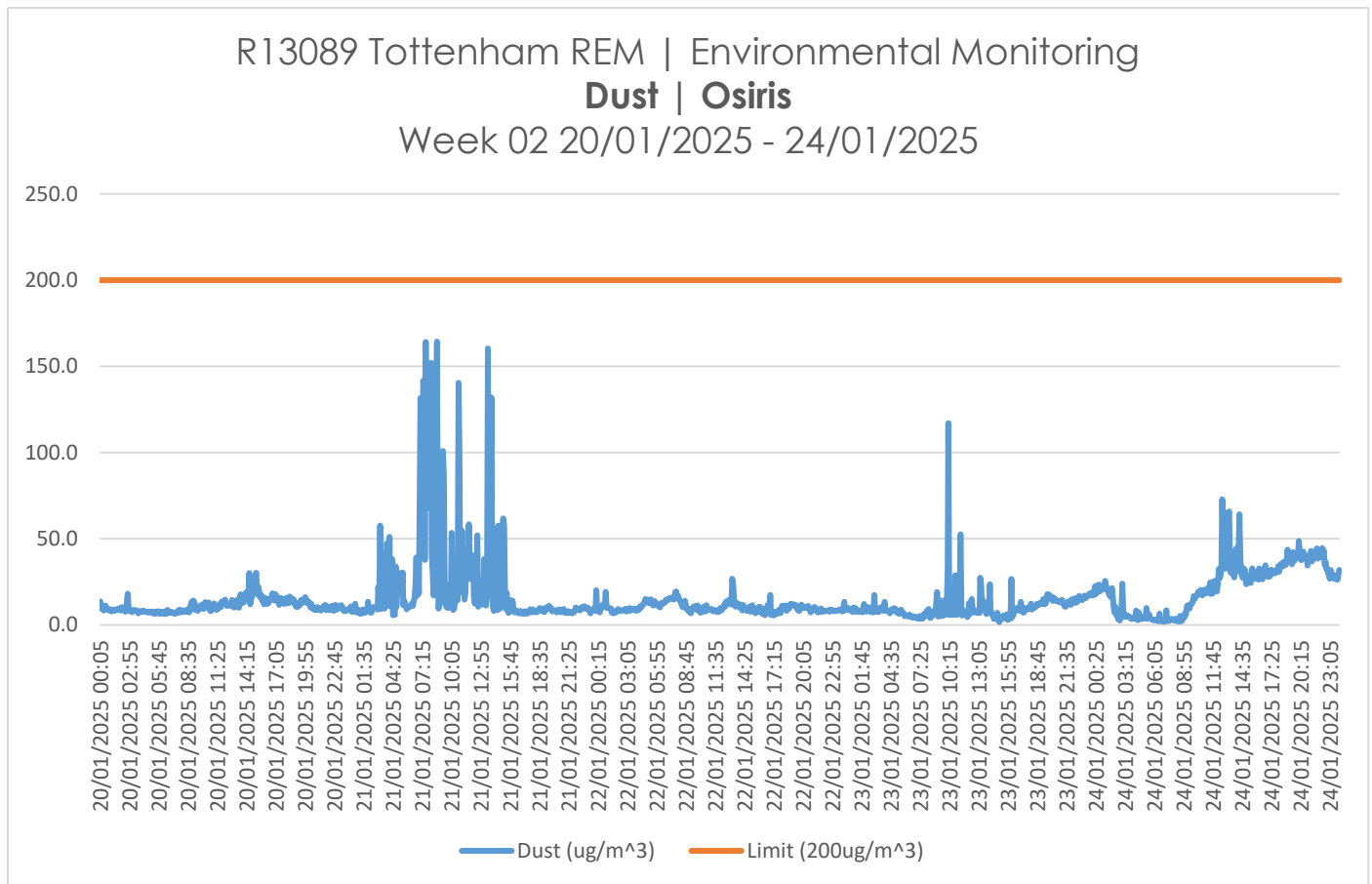
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 µg/m³ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

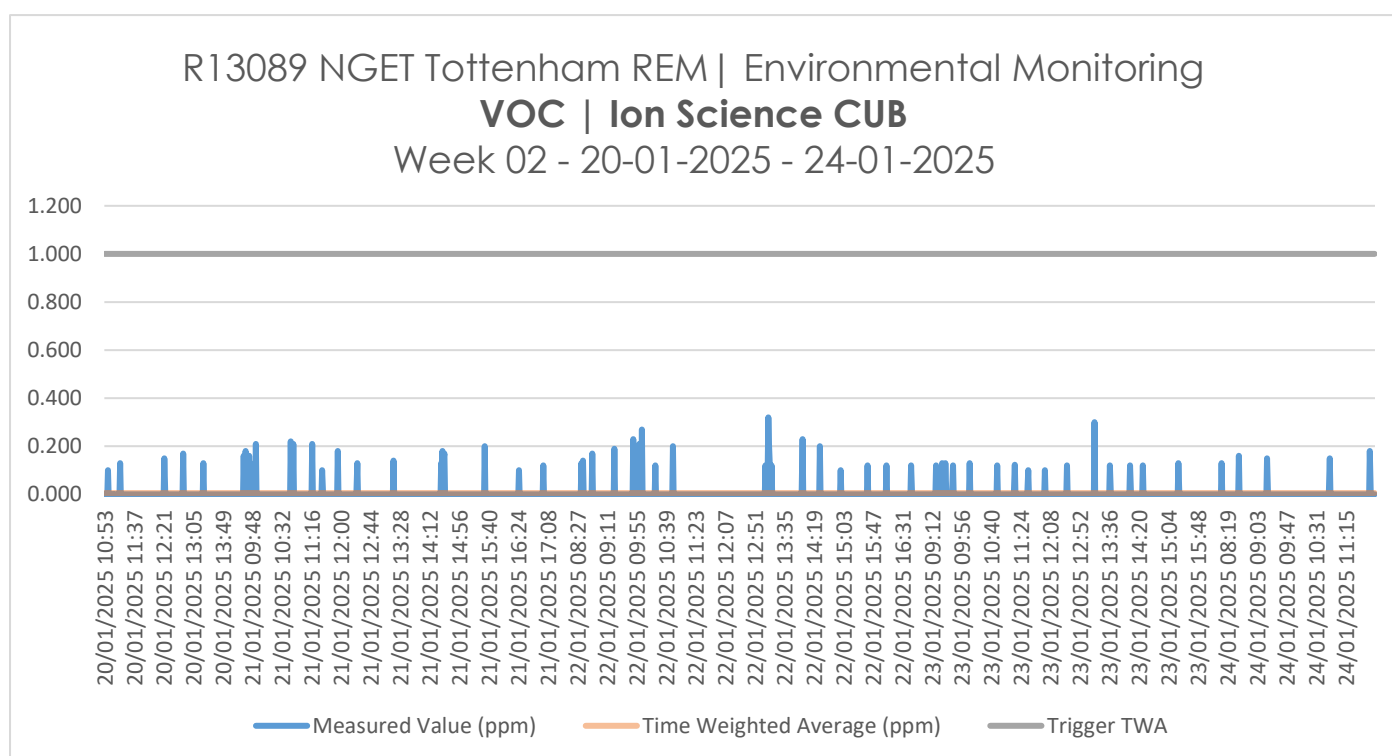
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

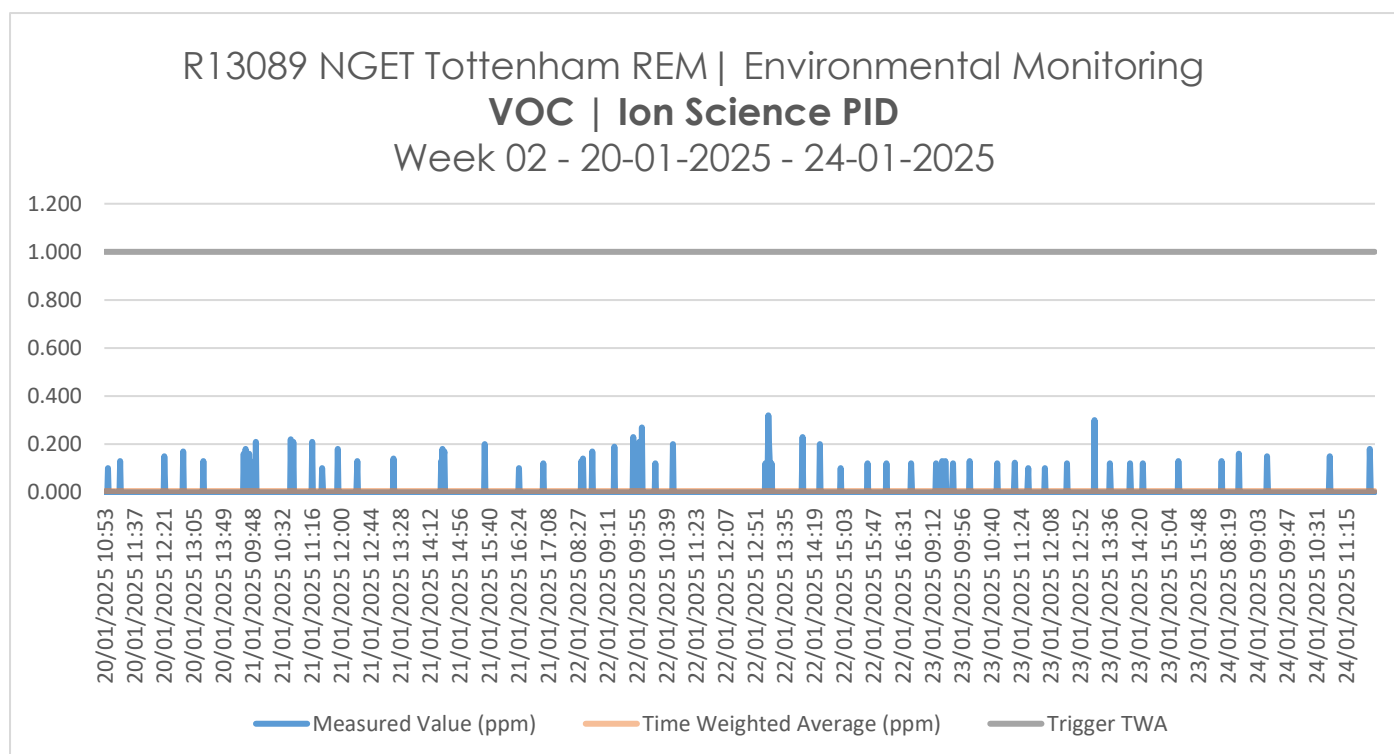
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The Cub is placed with the Site Foreman. The following data has been obtained from the onsite Photo Ionising Detector (PID) and Tiger Select Cub and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 03

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 03
Monitoring Period	27/01/2025 – 31/01/2025

Document Revision / Authorisation Record

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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837	81160	17/10/2025
Ion Science PID VOC gas detector	Tiger Select 136	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue trench excavations in Section 1.
- Stockpile imported materials (7J, 1A).
- Move the broken out concrete to the stockpiling area of site.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

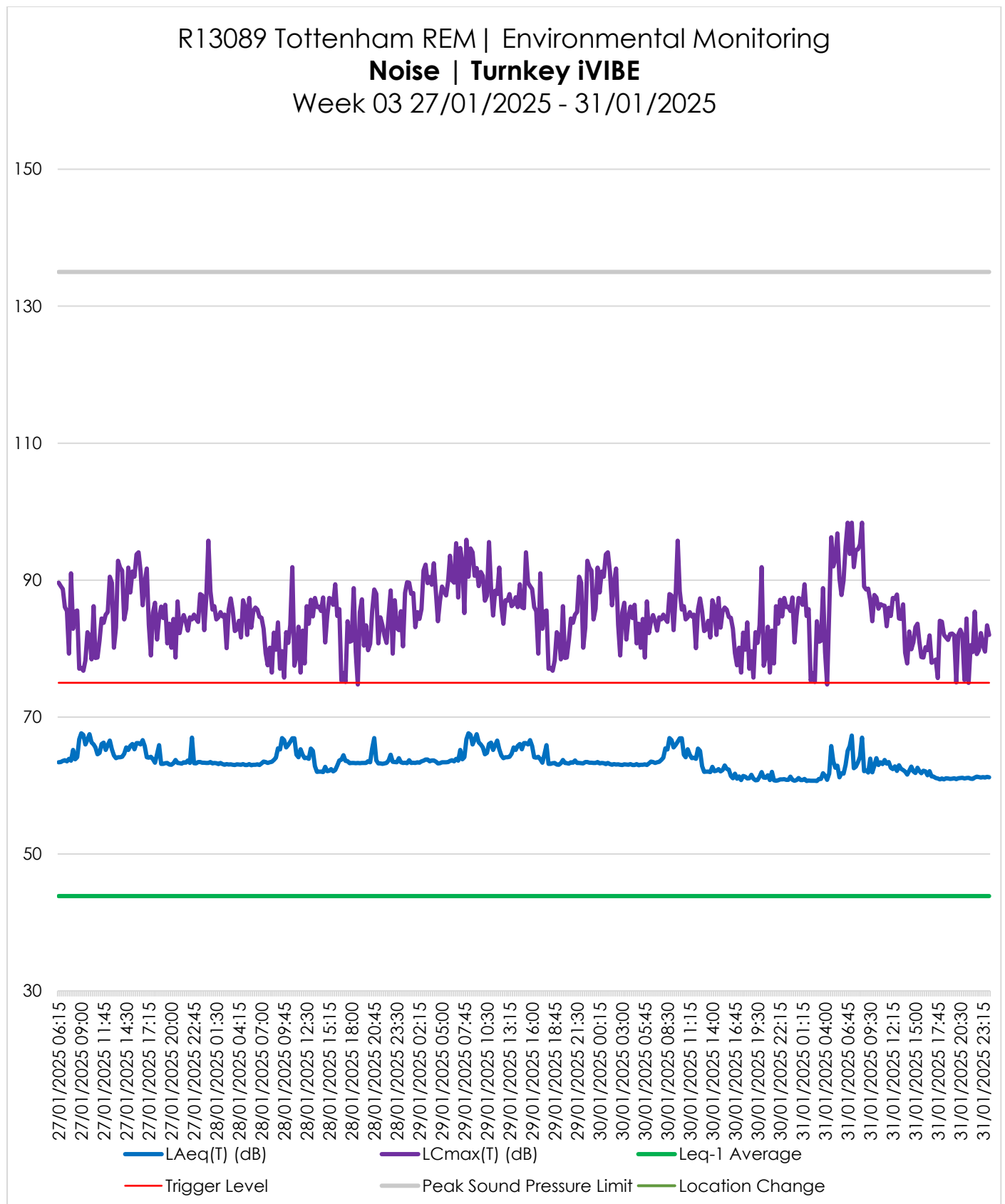
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum LAeq, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

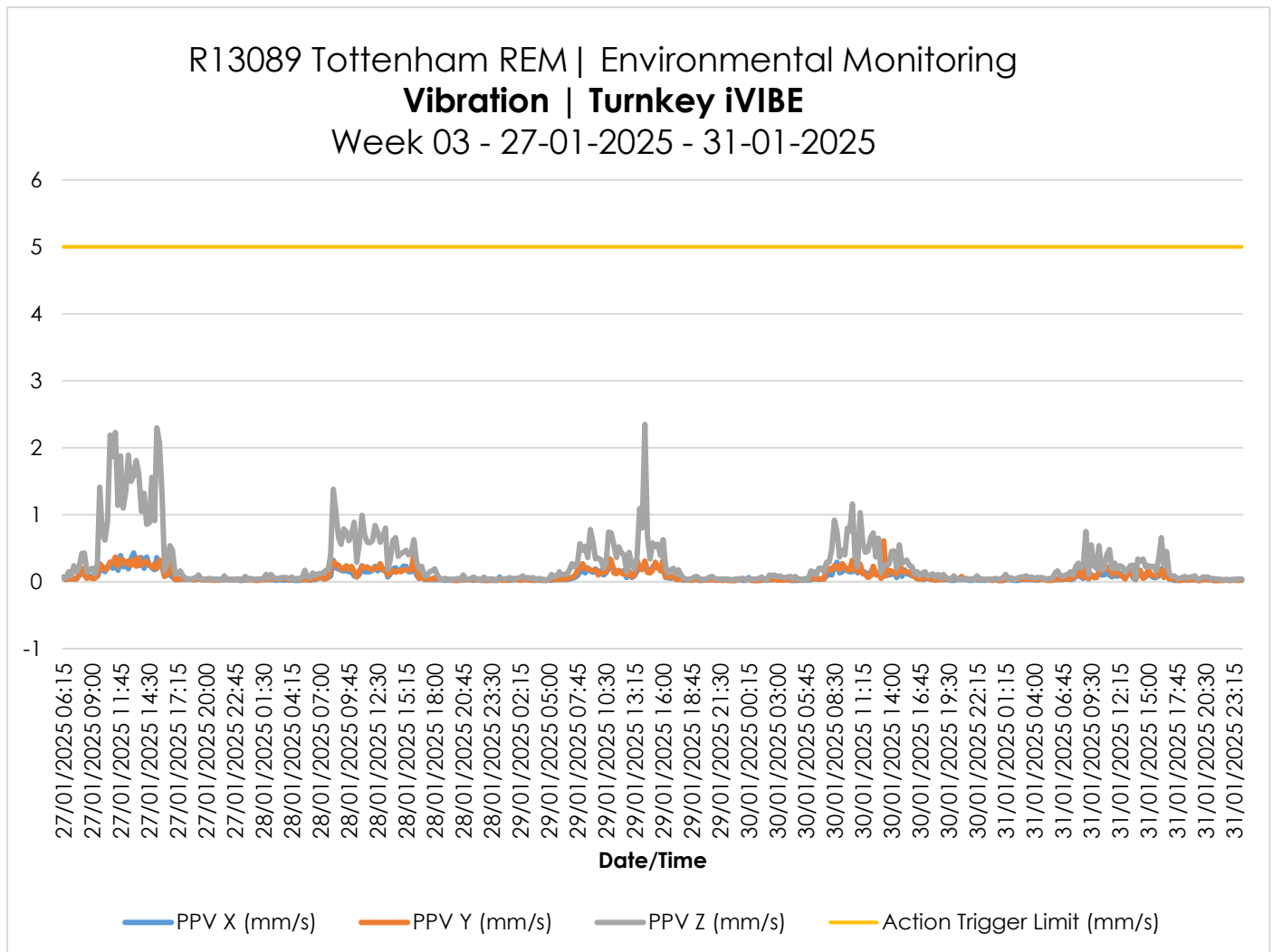
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

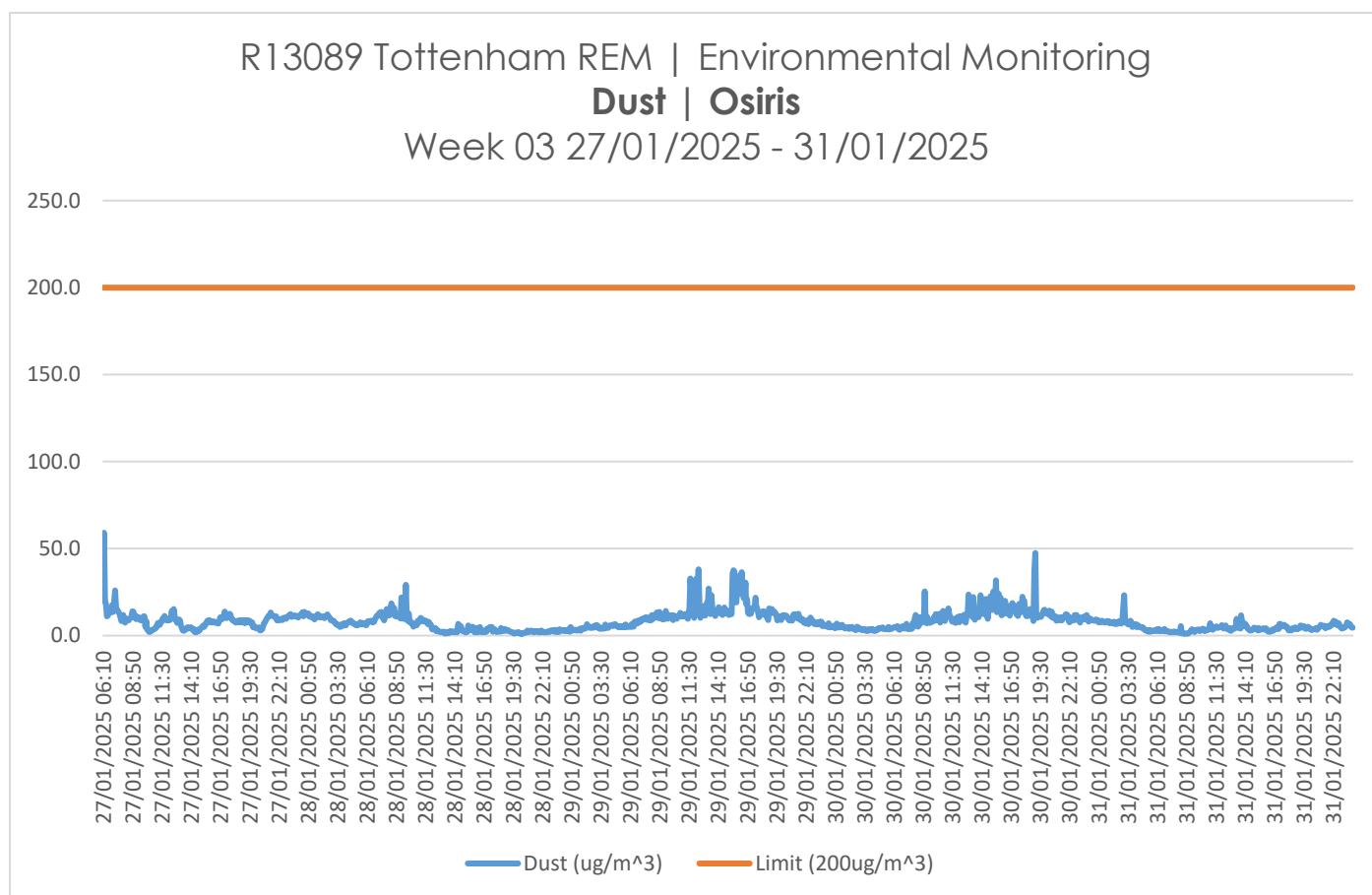
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM10 are not to exceed 200 $\mu\text{g}/\text{m}^3$ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

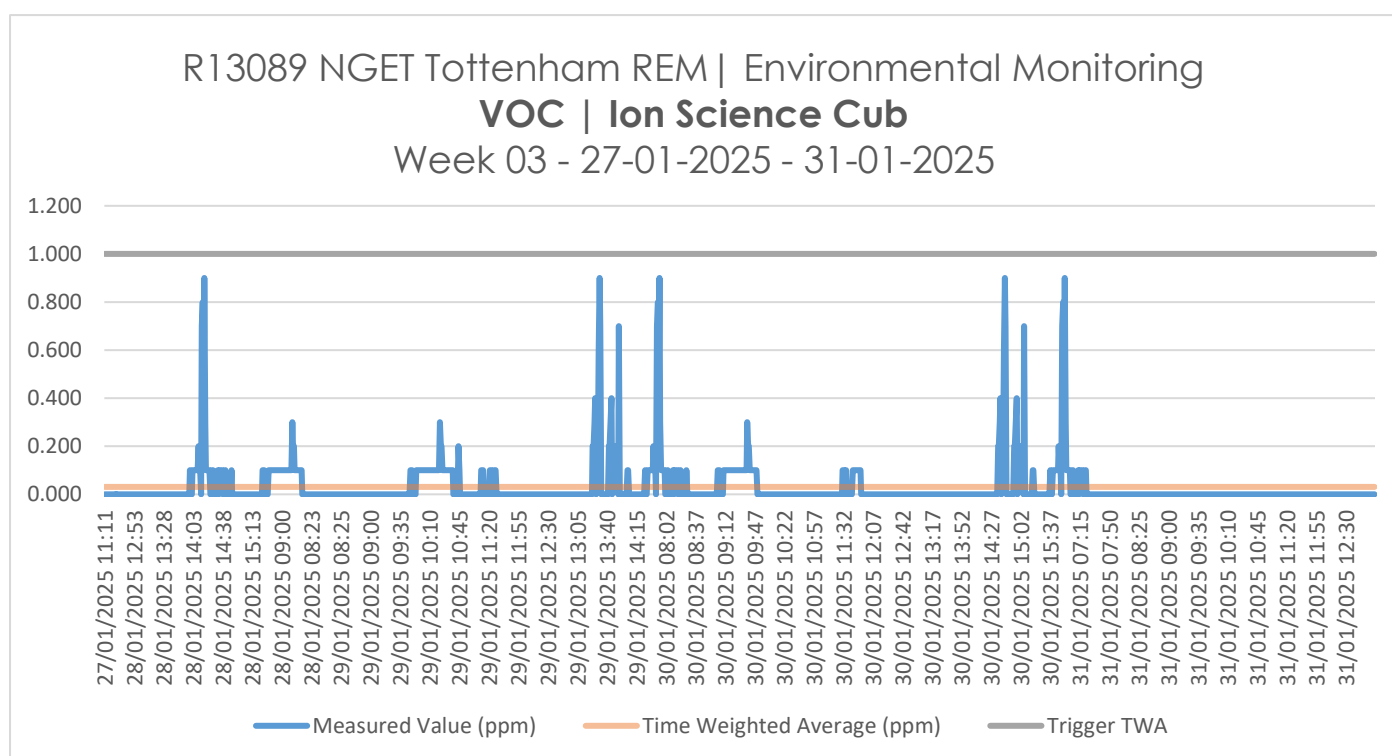
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

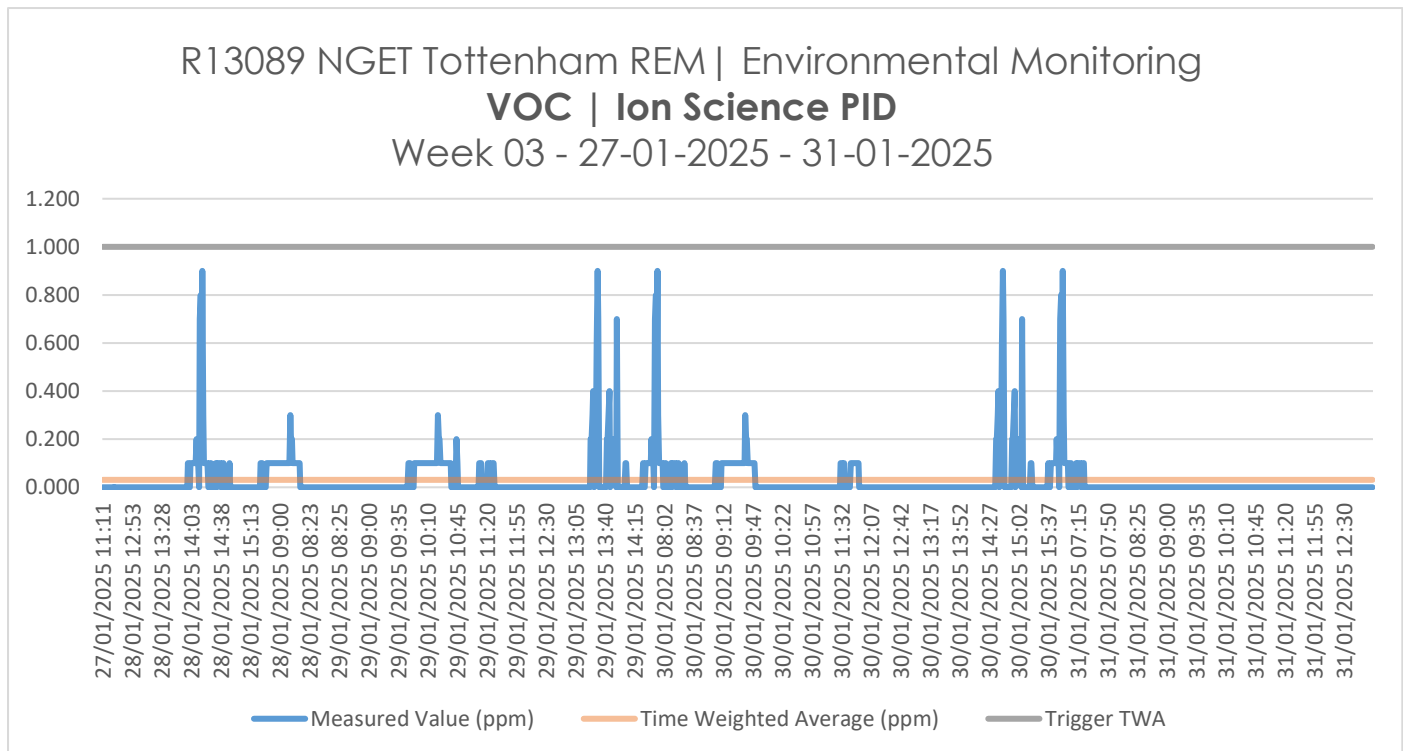
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The Cub is placed with the Site Foreman. The following data has been obtained from the onsite Photo Ionising Detector (PID) and Tiger Select Cub and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 04

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 04
Monitoring Period	03/02/2025 – 07/02/2025

Document Revision / Authorisation Record

Rev No.	Prepared by Position Date	Authorised By Position	Details
1.0	James Hardy Site Manager 10/02/2025	Owain Davey Project Manager	

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Site Manager	James Hardy	Email	James.hardy@erith.com

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7.3 Findings on VOC	11
8. APPLICABLE LEGISLATION/ REGULATIONS AND GUIDANCE	12
9. GLOSSARY OF TERMS	13

1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837	81160	17/10/2025
Ion Science PID VOC gas detector	Tiger Select 136	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue trench excavations in Section 1.
- Water extraction from the excavation.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

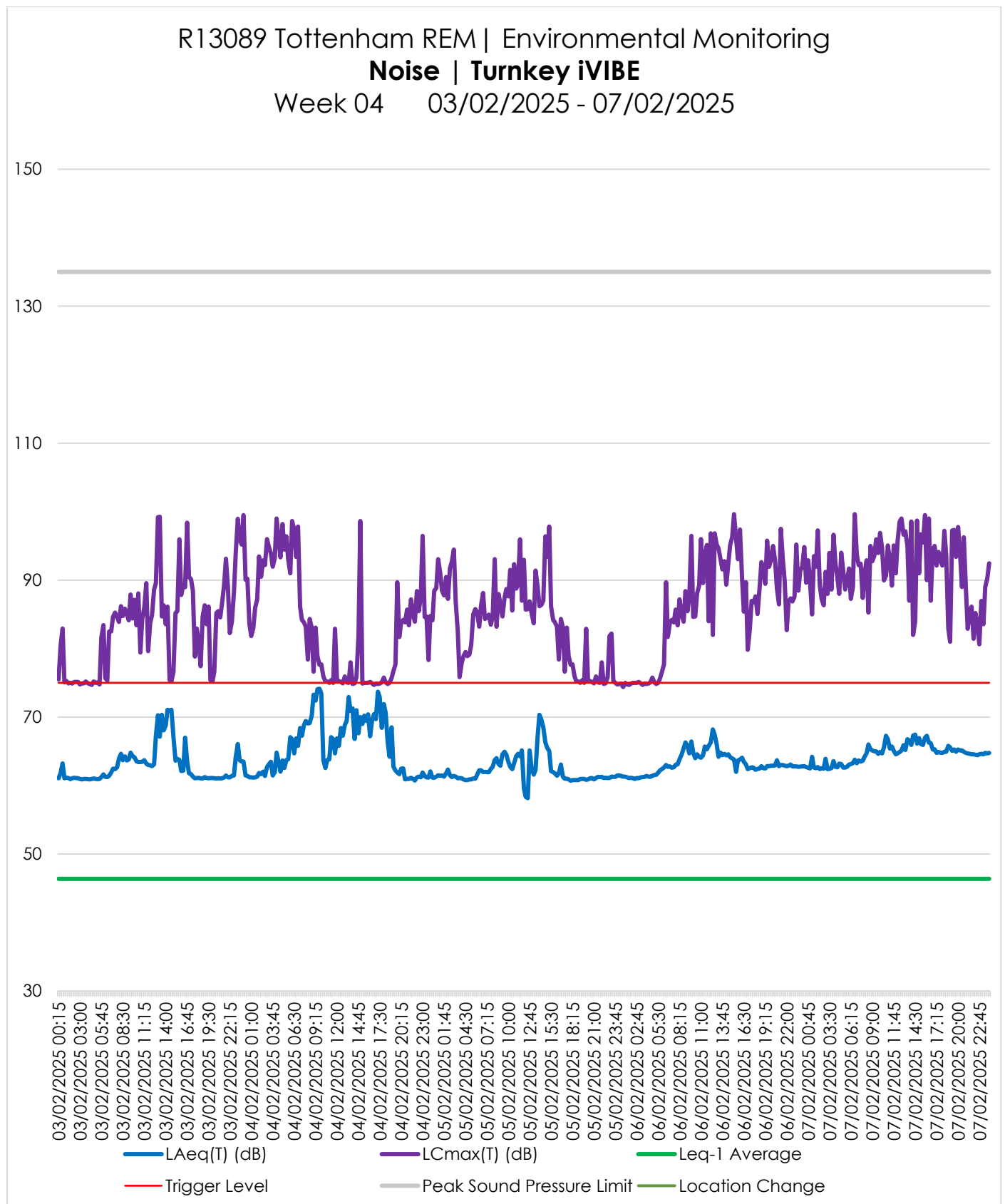
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum LAeq, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

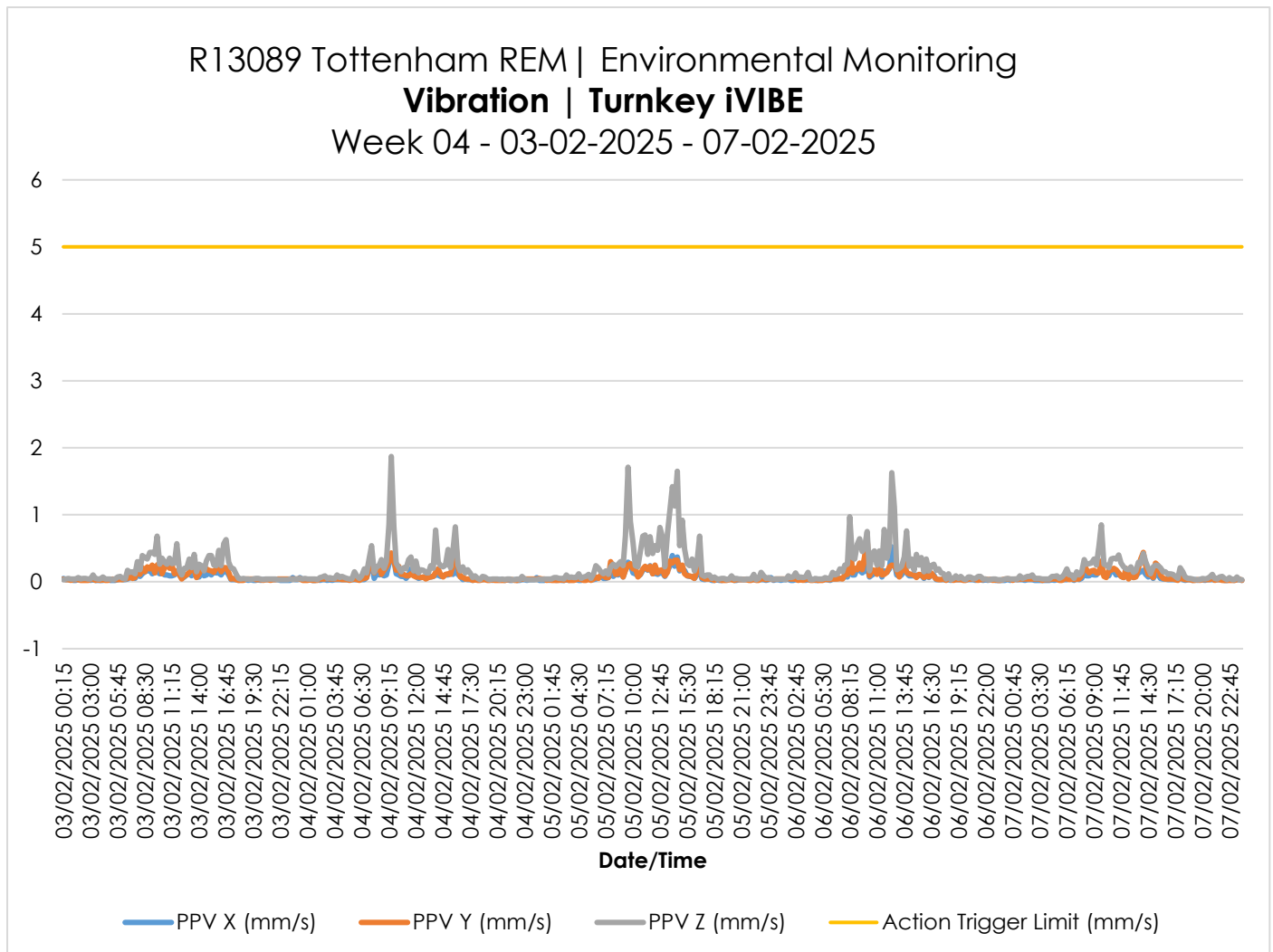
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

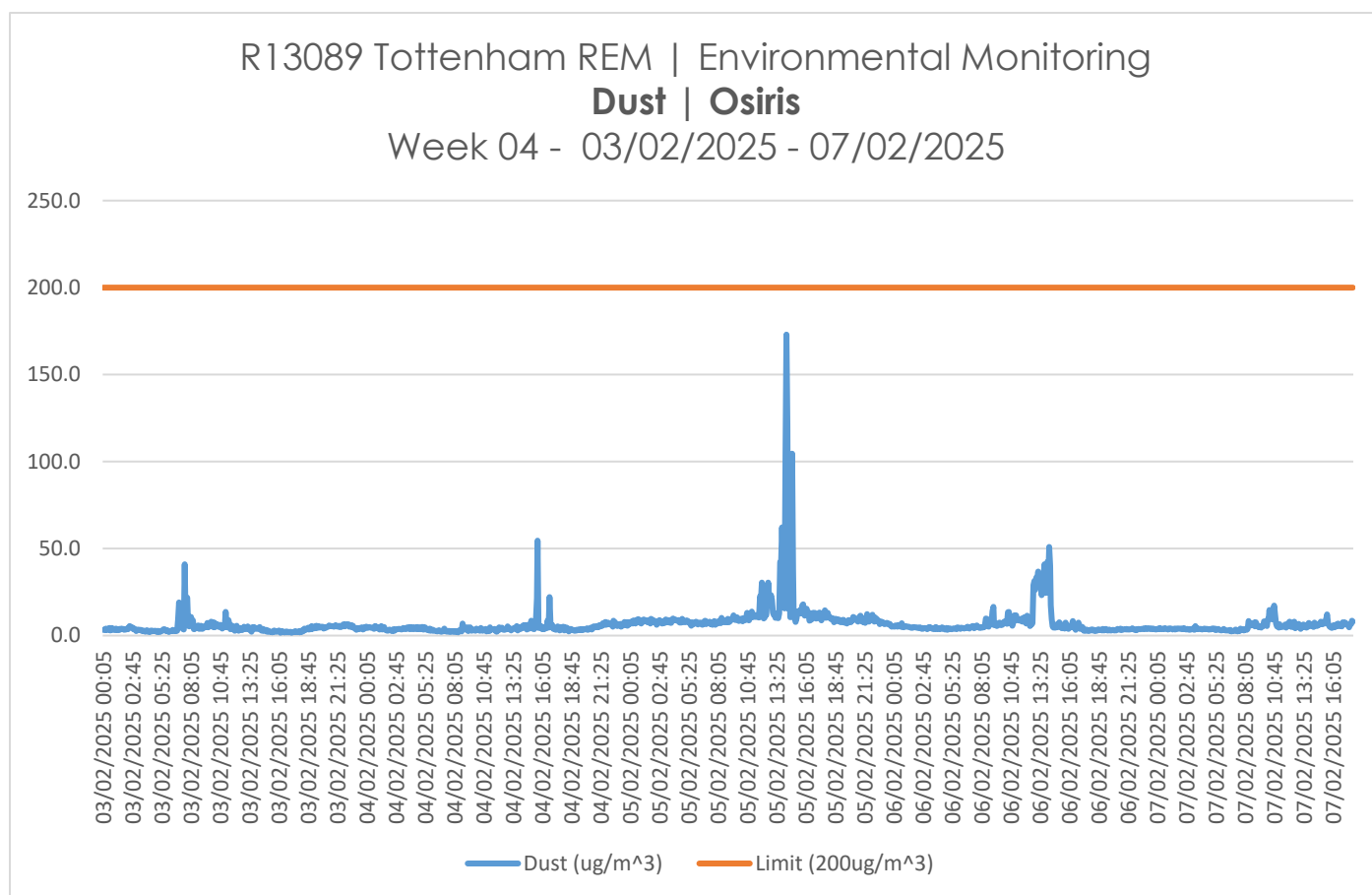
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 µg/m³ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

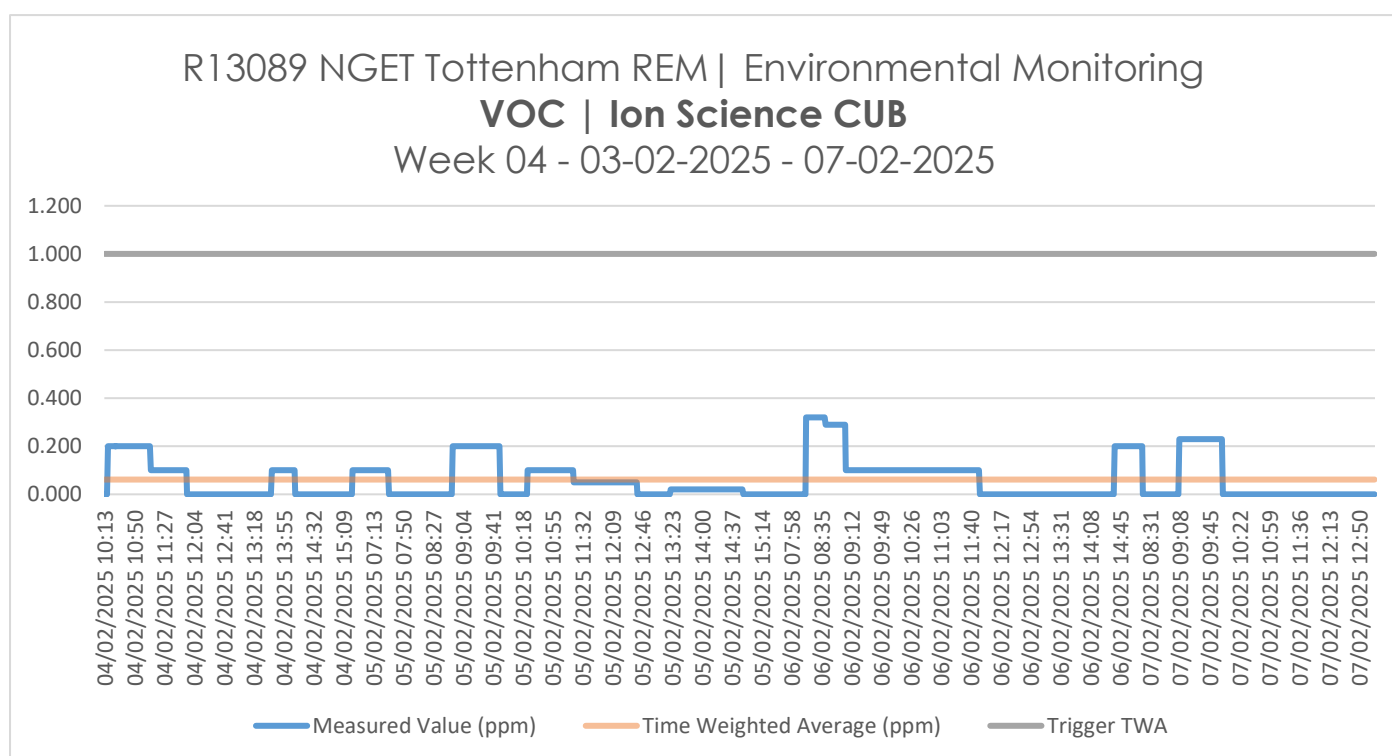
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

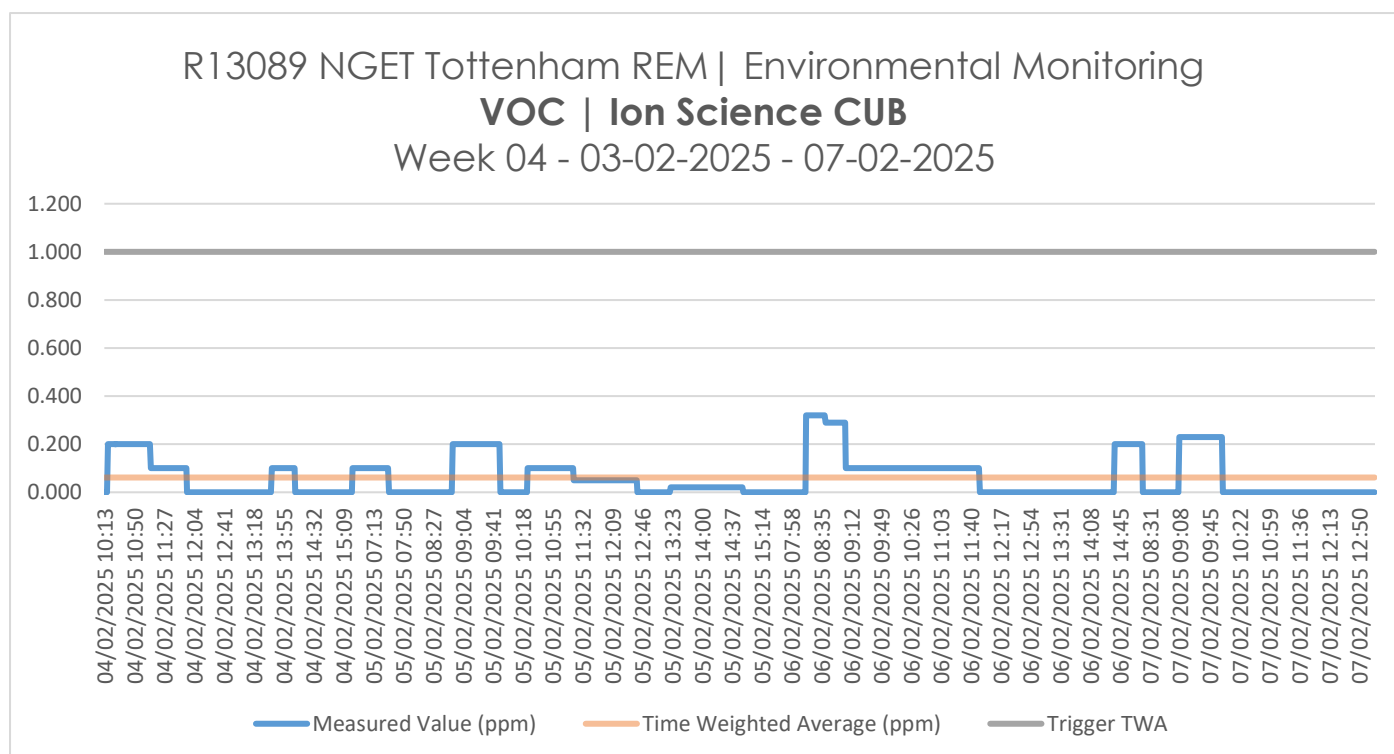
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The Cub is placed with the Site Foreman. The following data has been obtained from the onsite Photo Ionising Detector (PID) and Tiger Select Cub and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 05

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 04
Monitoring Period	10/02/2025 – 14/02/2025

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1.0	James Hardy Site Manager 17/02/2025	Owain Davey Project Manager	

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Site Manager	James Hardy	Email	James.hardy@erith.com

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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837	81160	17/10/2025
Ion Science PID VOC gas detector	Tiger Select 136	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue trench excavations and infilling in Section 1.
- Water extraction from the excavation.
- Disposal of contaminated soil.
- Import of 1A, 7J and 6A materials.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

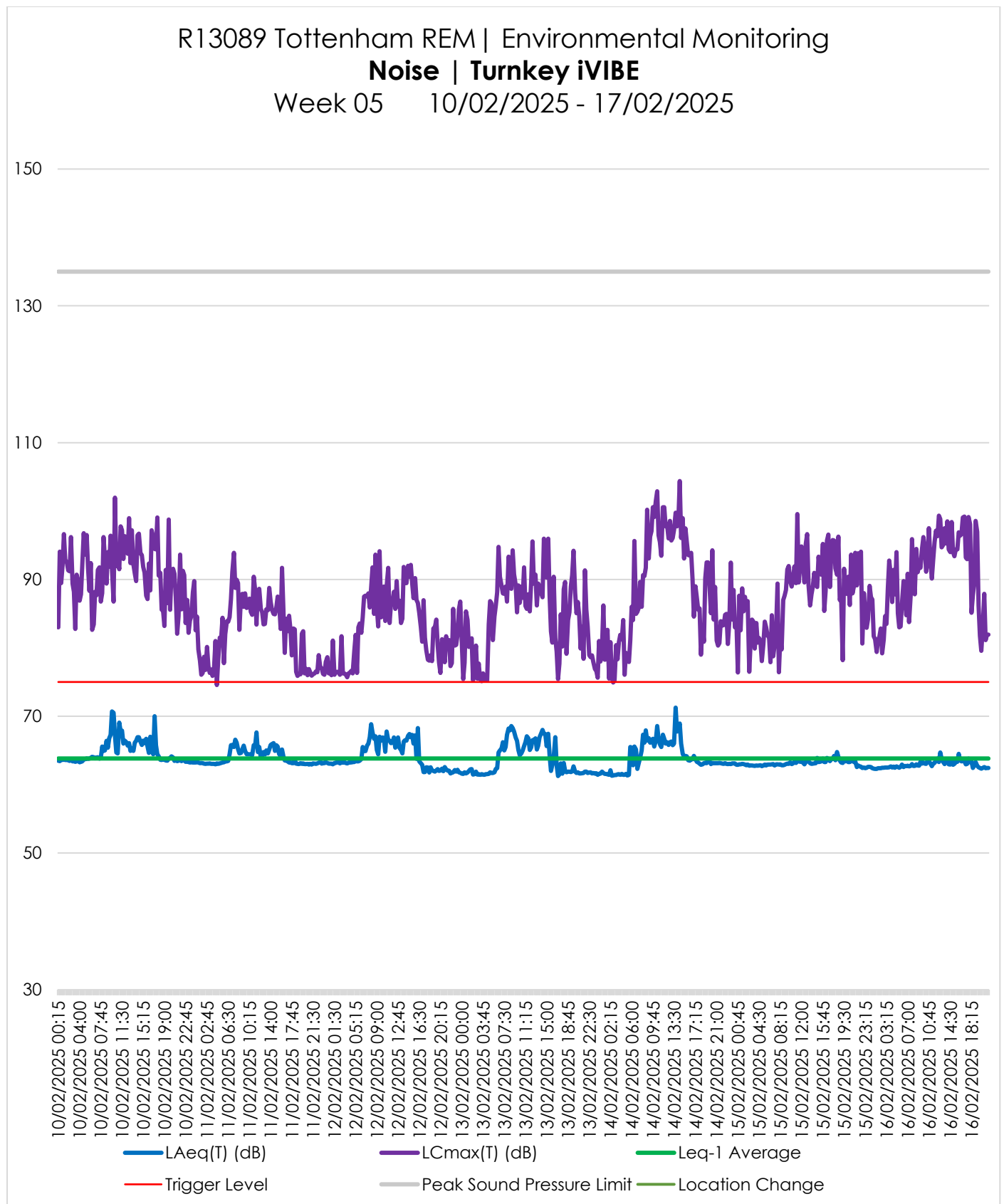
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum LAeq, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

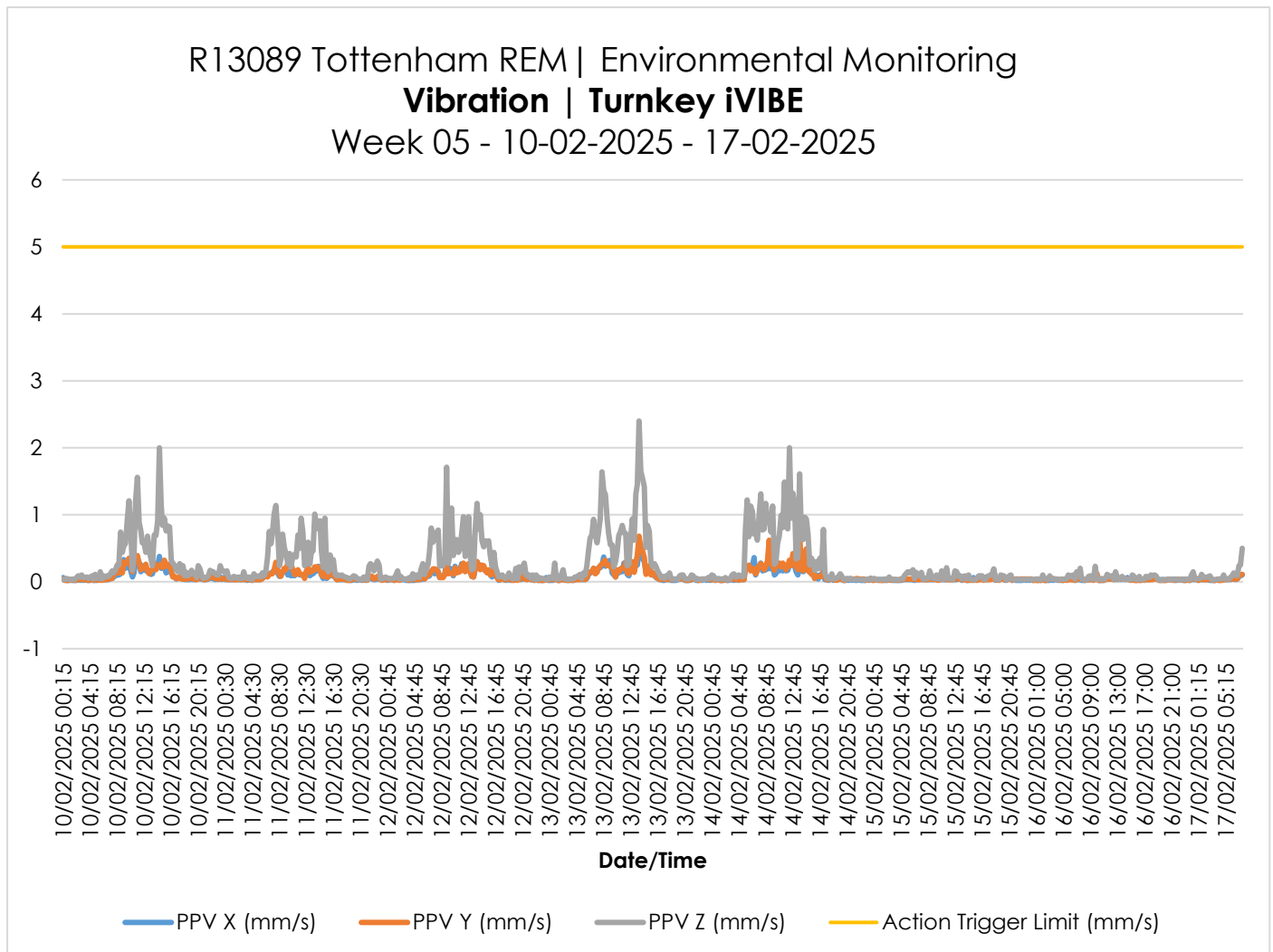
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

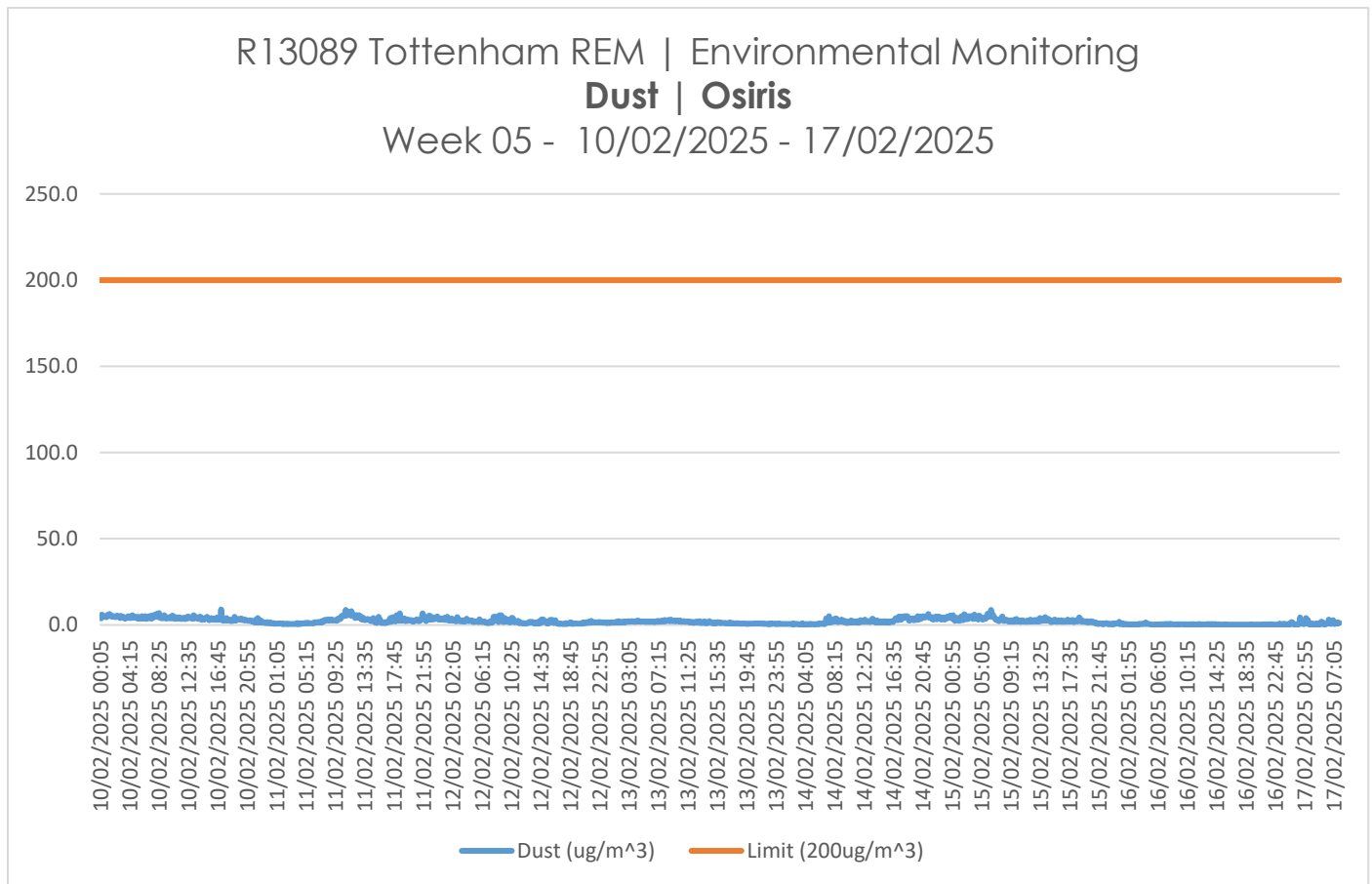
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 $\mu\text{g}/\text{m}^3$ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

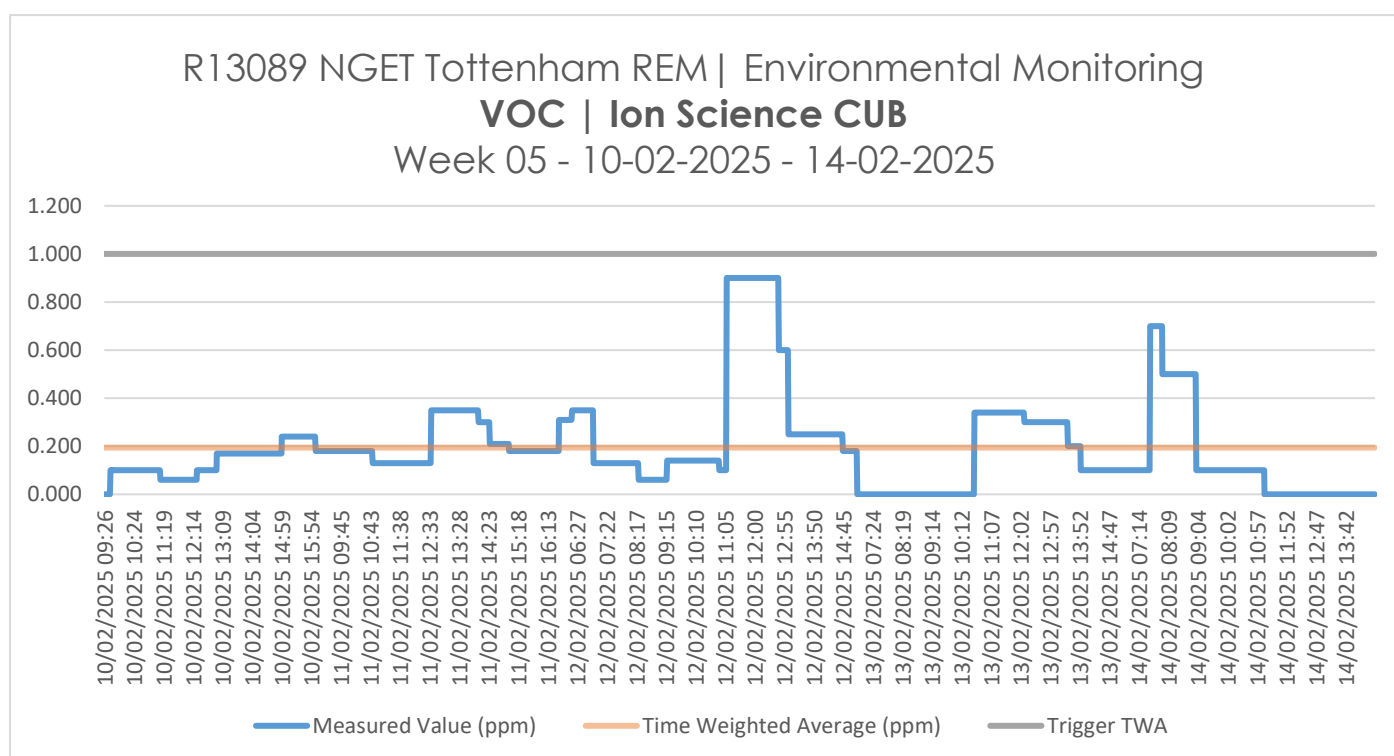
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

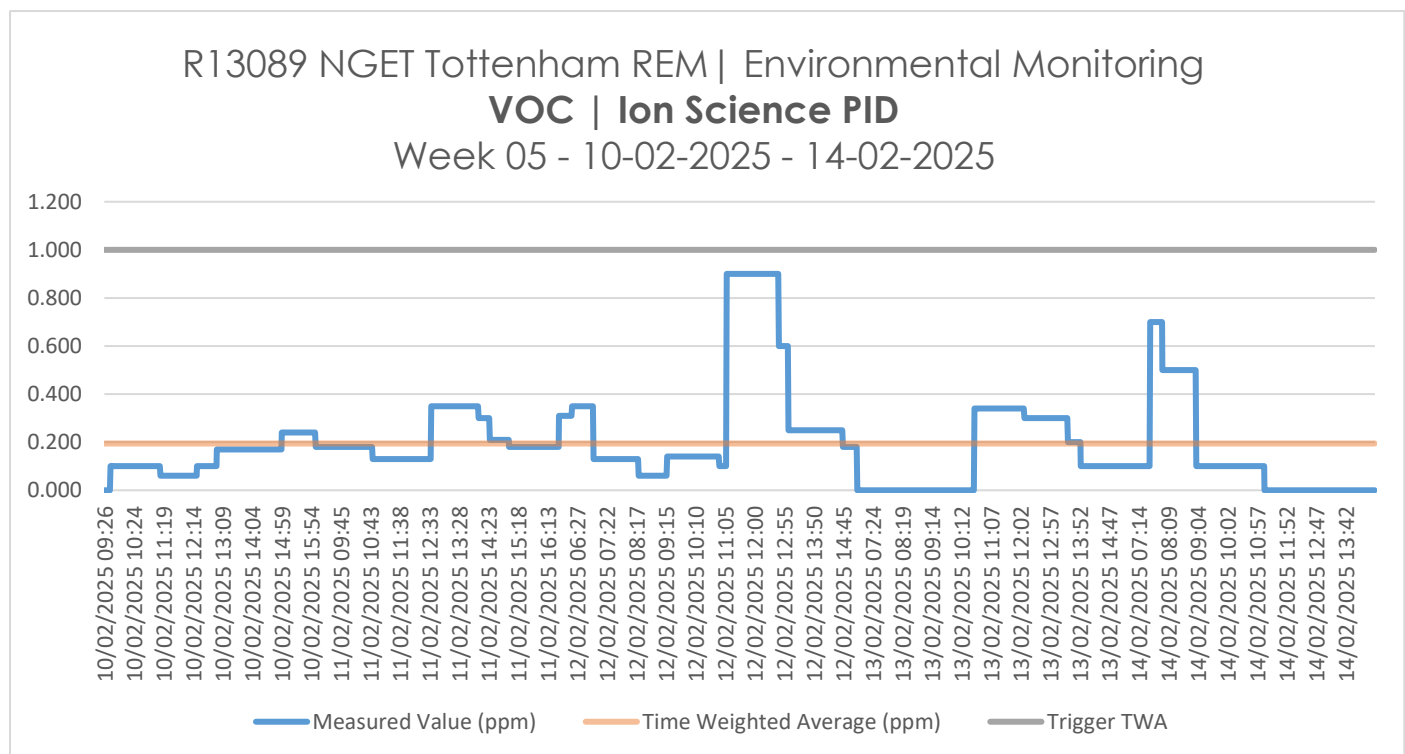
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The Cub is placed with the Site Foreman. The following data has been obtained from the onsite Photo Ionising Detector (PID) and Tiger Select Cub and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 06

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 06
Monitoring Period	17/02/2025 – 21/02/2025

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1.0	James Hardy Site Manager 24/02/2025	Owain Davey Project Manager	

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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837 (D. Waters)	81160	17/10/2025
Ion Science Cub VOC gas detector	TC202871 (Spare - 3 rd Man)	81806	10/01/2026
Ion Science Cub VOC gas detector	TC202994 (D. Waller)	80767	11/09/2025
Ion Science PID VOC gas detector	Tiger Select T-117634 (West Boundary)	79599	26/04/2025
Ion Science PID VOC gas detector	Tiger Select 136 (North Boundary)	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue trench excavations and infilling.
- Water extraction from the excavation.
- Disposal of contaminated soil.
- Import of 1A, 7J and 6A materials.
- Odour Mitigation

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 *Code of practice for noise and vibration control on construction and open sites*.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB

- Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

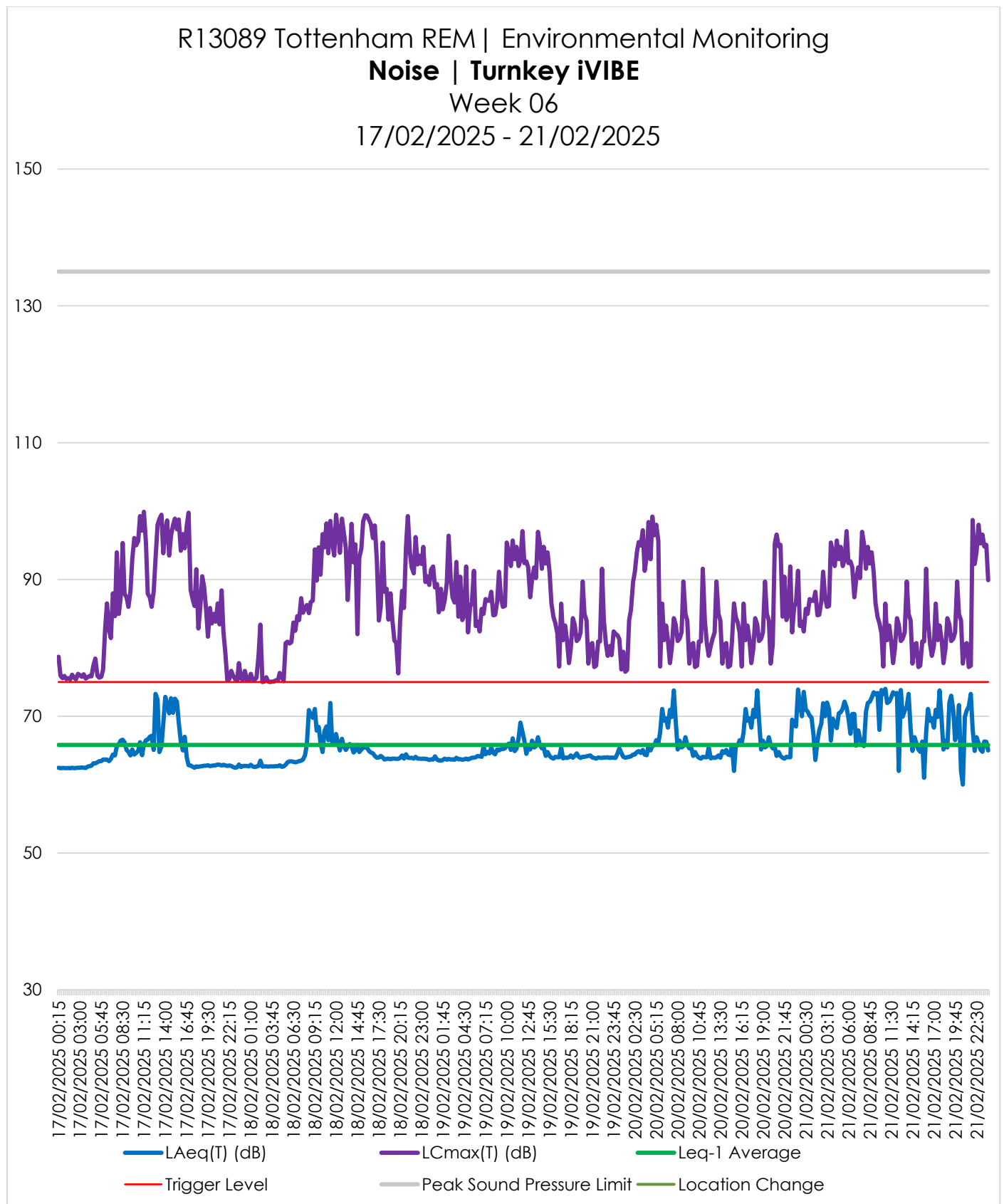
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum L_{Aeq}, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

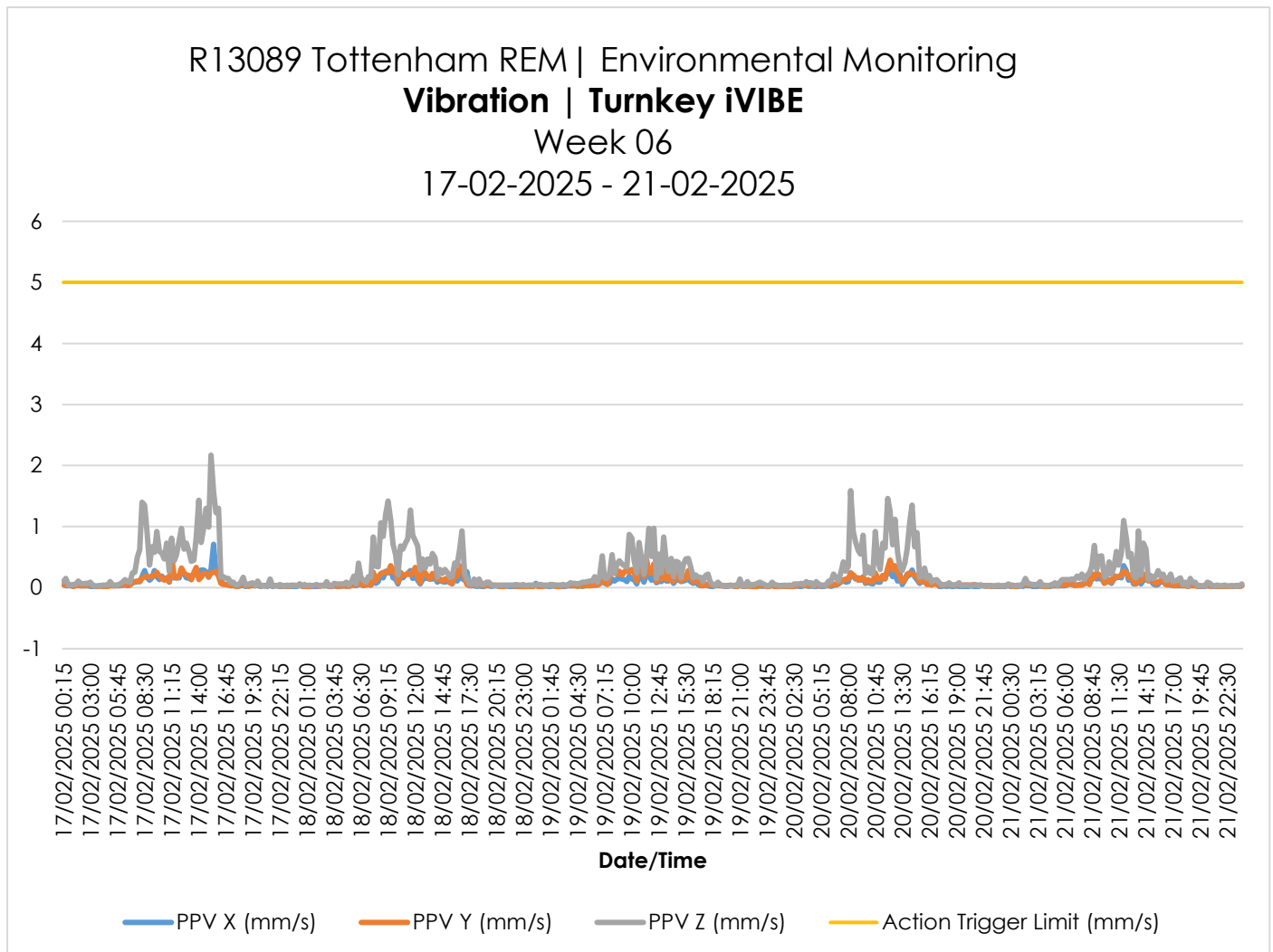
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

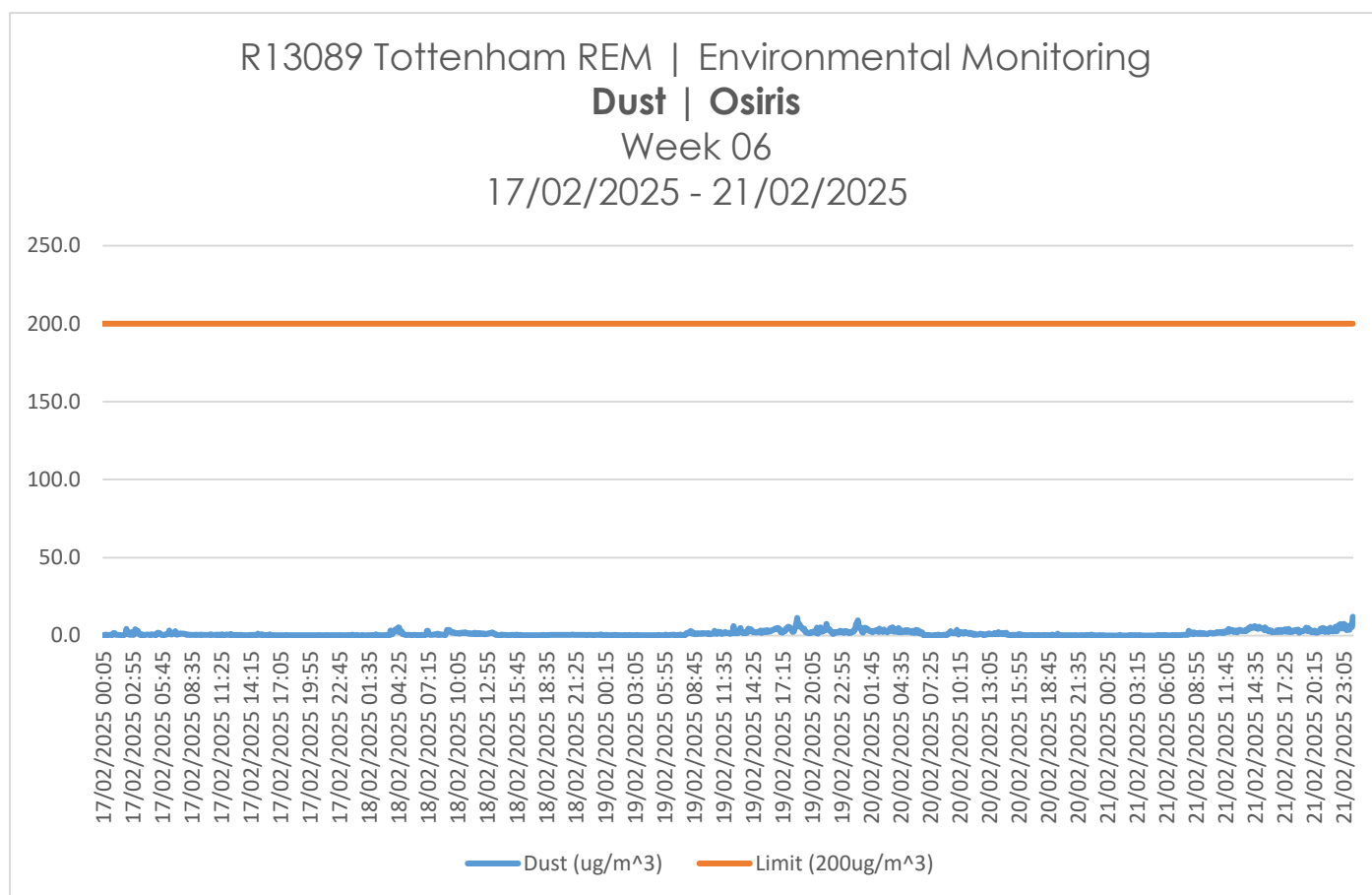
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 $\mu\text{g}/\text{m}^3$ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

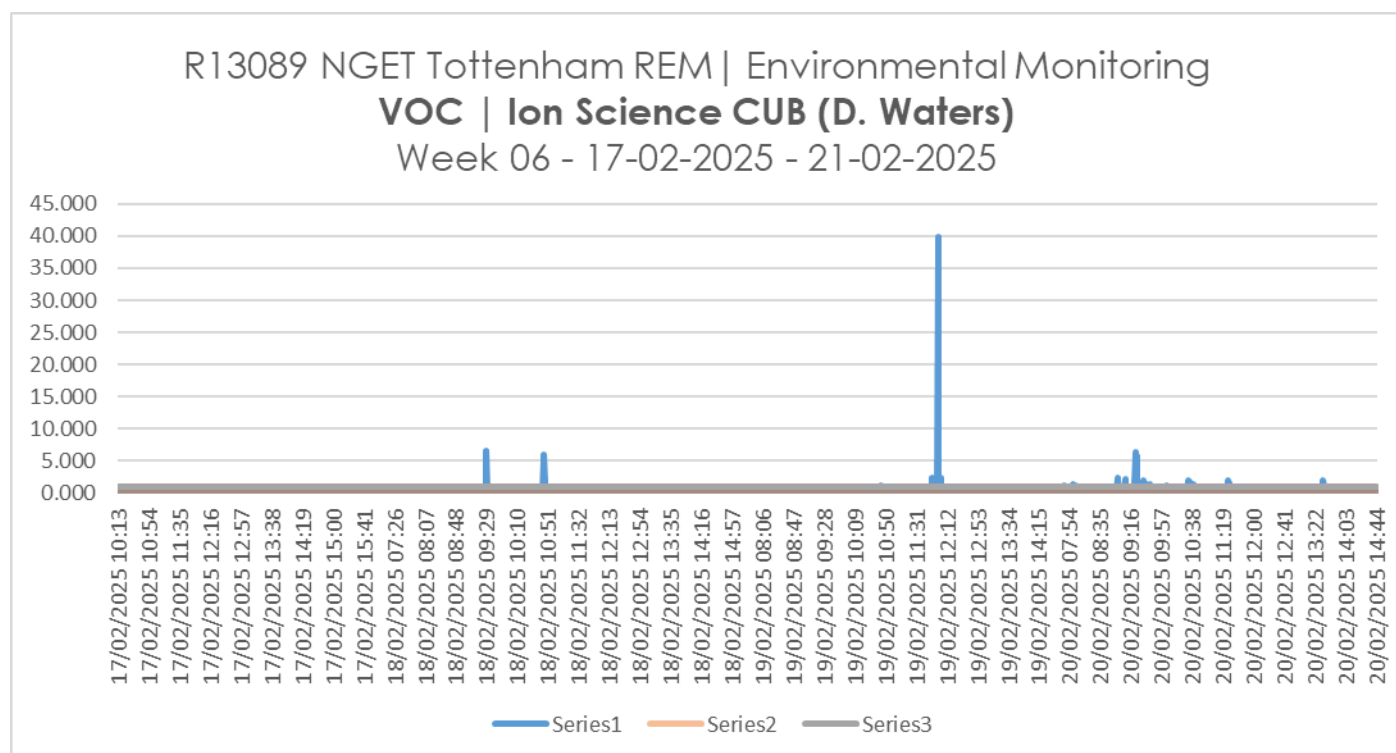
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

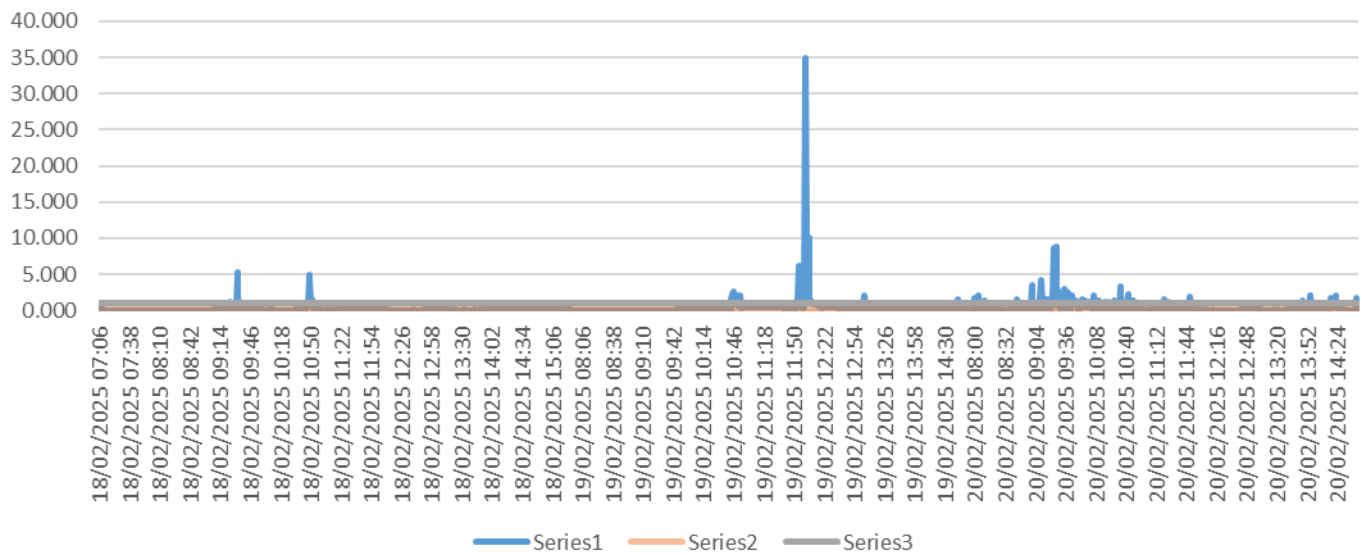
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The s are placed with the Site Foreman and Excavator Operator. The following data has been obtained from the onsite Photo Ionising Detectors (PID) and Tiger Select Cubs and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data

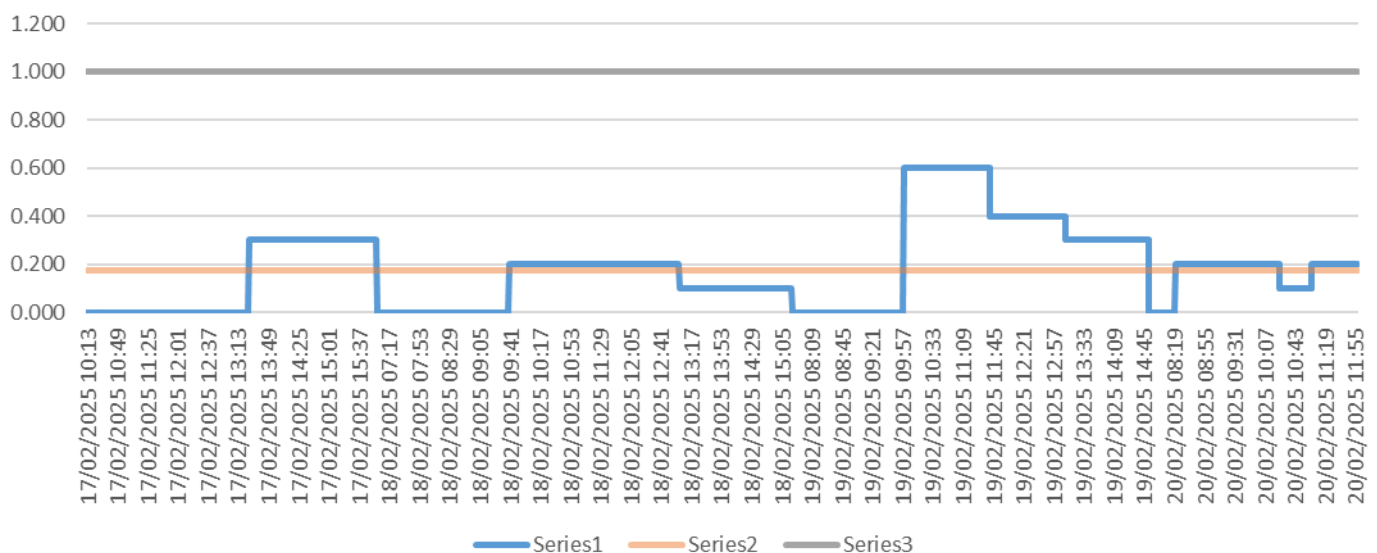


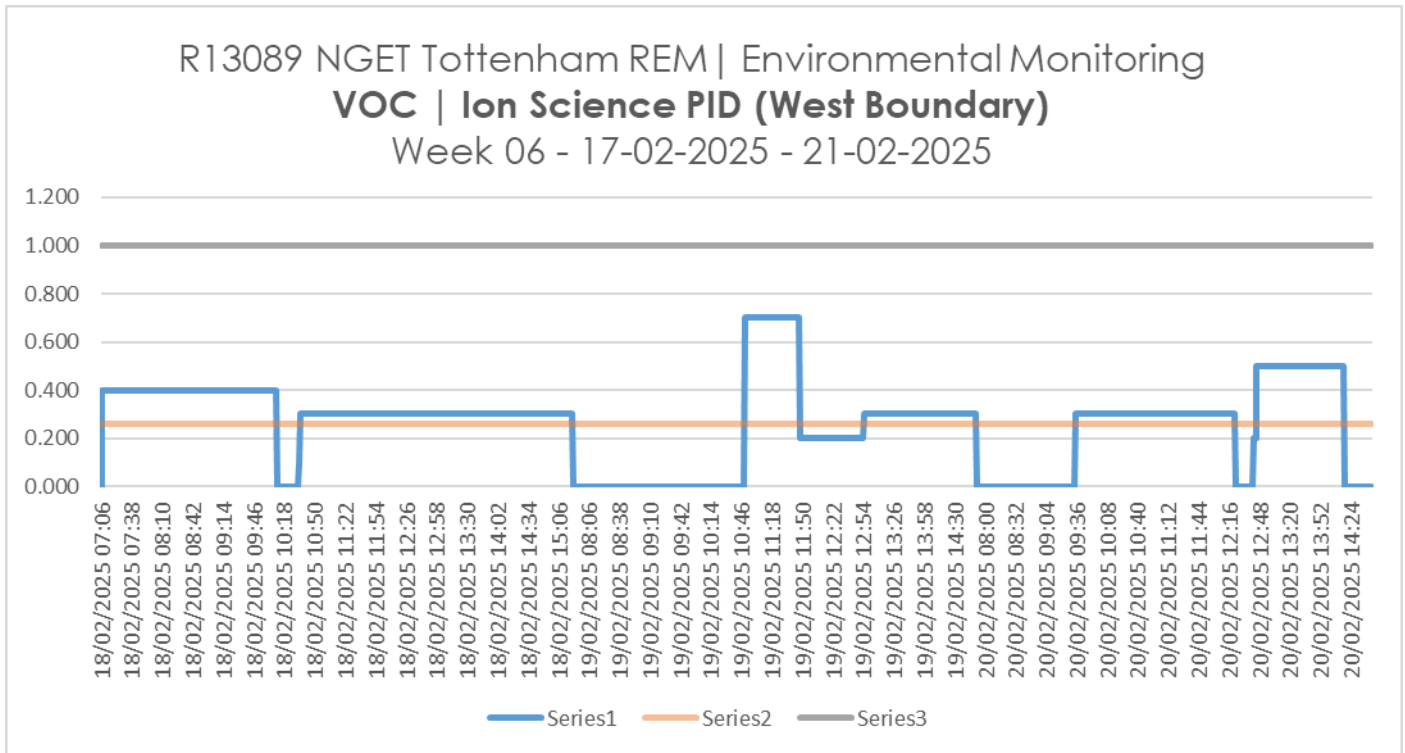
R13089 NGET Tottenham REM | Environmental Monitoring
VOC | Ion Science CUB (D. Waller)
 Week 06 - 17-02-2025 - 21-02-2025



7.2 Graphical Representation of Logged PID Data

R13089 NGET Tottenham REM | Environmental Monitoring
VOC | Ion Science PID (North Boundary)
 Week 06 - 17-02-2025 - 21-02-2025





7.3 Findings on VOC

Exceedances were detected on both personal monitors throughout the week during excavation operations. At all times when the alarms sounded, the wearers of the monitors vacated the working area immediately and followed the guidance outlined in the Safe System of Work titled *Workplace Respiratory Protective Equipment (RPE)*, utilising the Foam Chief to neutralise the odour.

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week for either of the two boundary monitors.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 07

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
Document Reference	Environmental Monitoring Report – Week 07
Monitoring Period	24/02/2025 – 28/02/2025

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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025
Ion Science Cub VOC gas detector	TC201837 (D. Waters)	81160	17/10/2025
Ion Science Cub VOC gas detector	TC202871 (Spare - 3 rd Man)	81806	10/01/2026
Ion Science Cub VOC gas detector	TC202994 (D. Waller)	80767	11/09/2025
Ion Science PID VOC gas detector	Tiger Select T-117634 (West Boundary)	79599	26/04/2025
Ion Science PID VOC gas detector	Tiger Select 136 (North Boundary)	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue trench excavations and infilling – stopped on 26th February
- Disposal of contaminated soil.
- Import of 1A, 7J and 6A materials.
- Odour Mitigation
- Environmental Monitoring Equipment taken down and switched out with temporary hire equipment on 28th February so that it can be calibrated. No data for February 28th.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS 5228-1:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

Action values are as follows:

- Lower exposure action values:

- Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

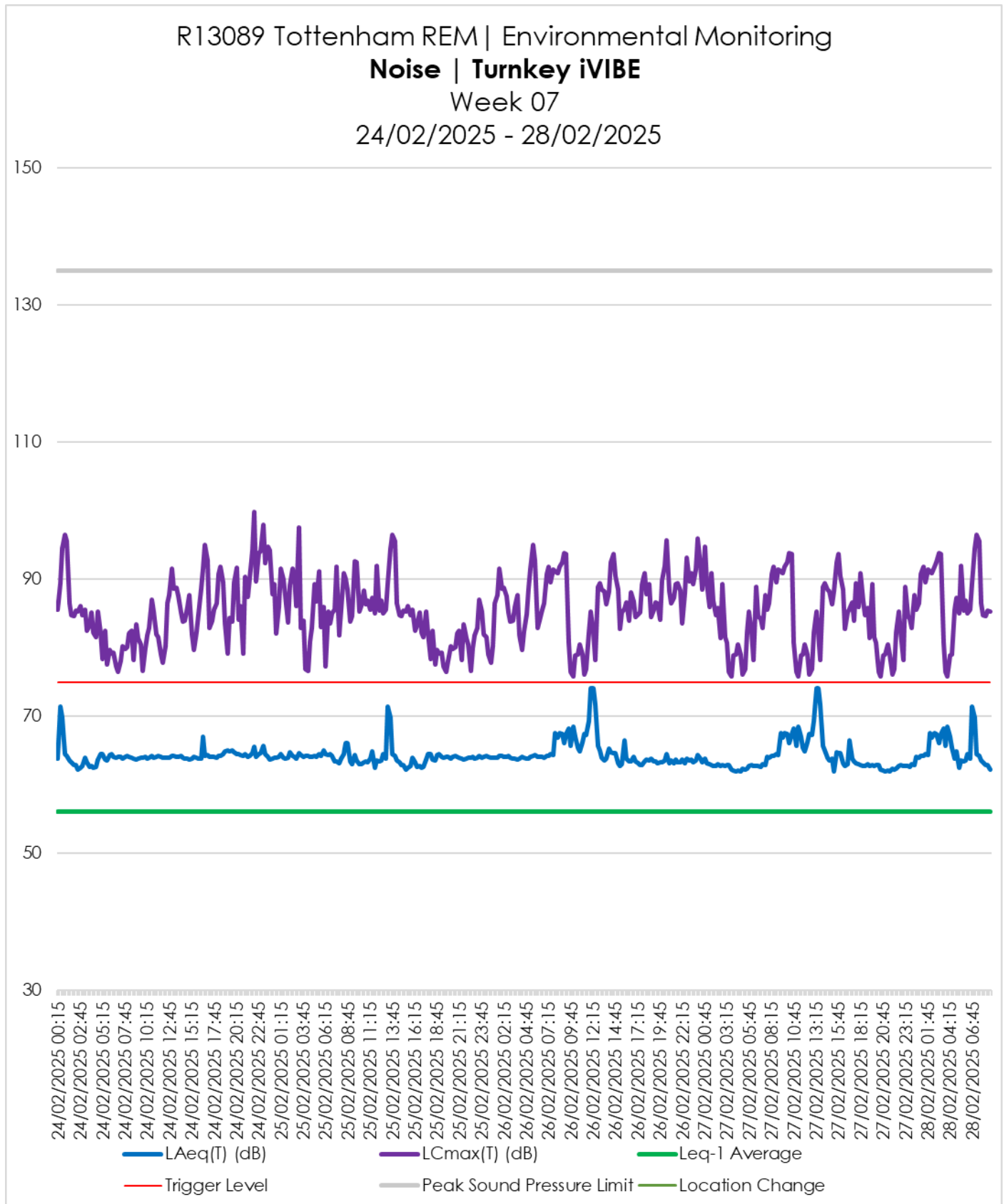
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum L_{Aeq}, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

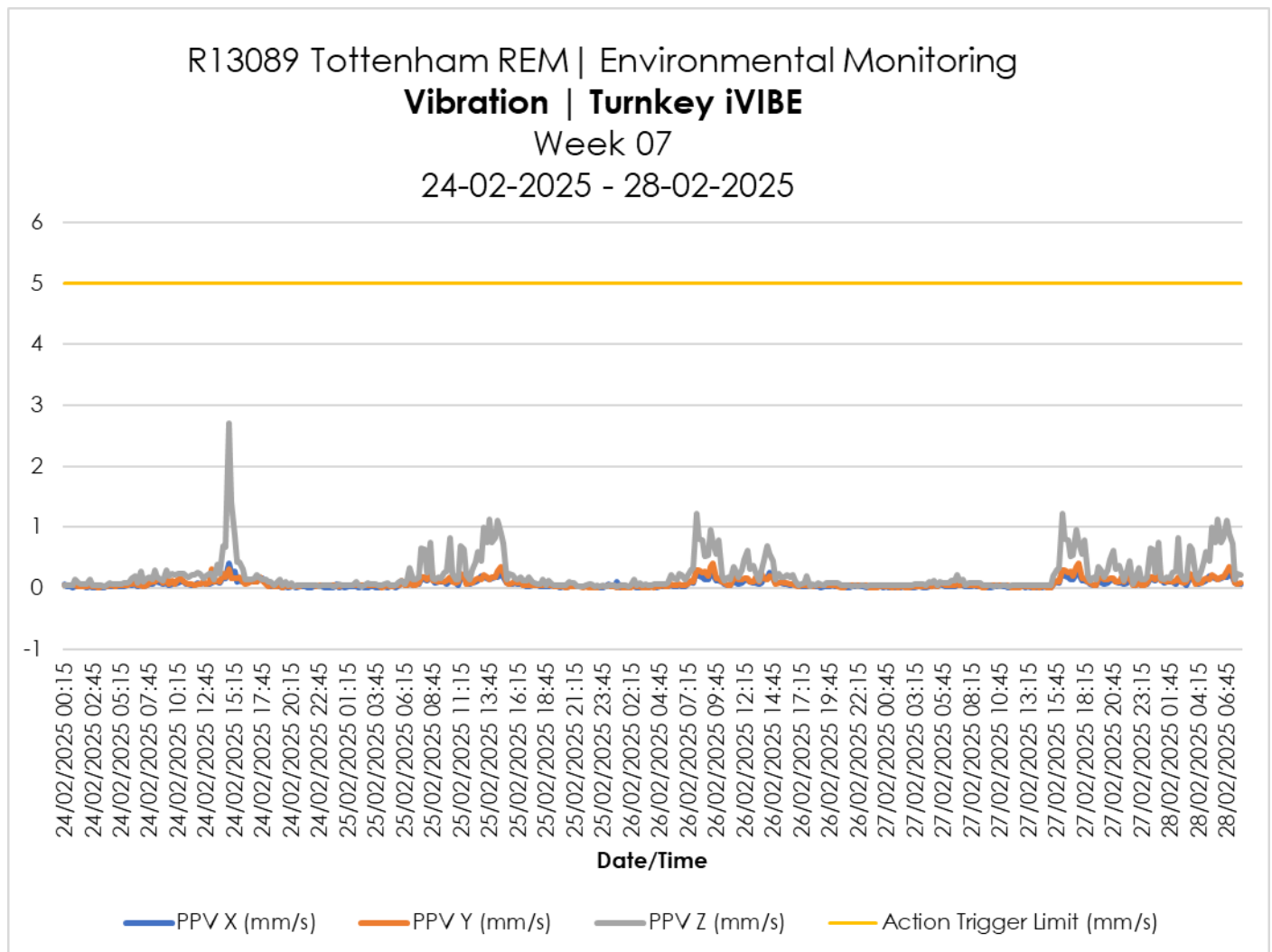
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

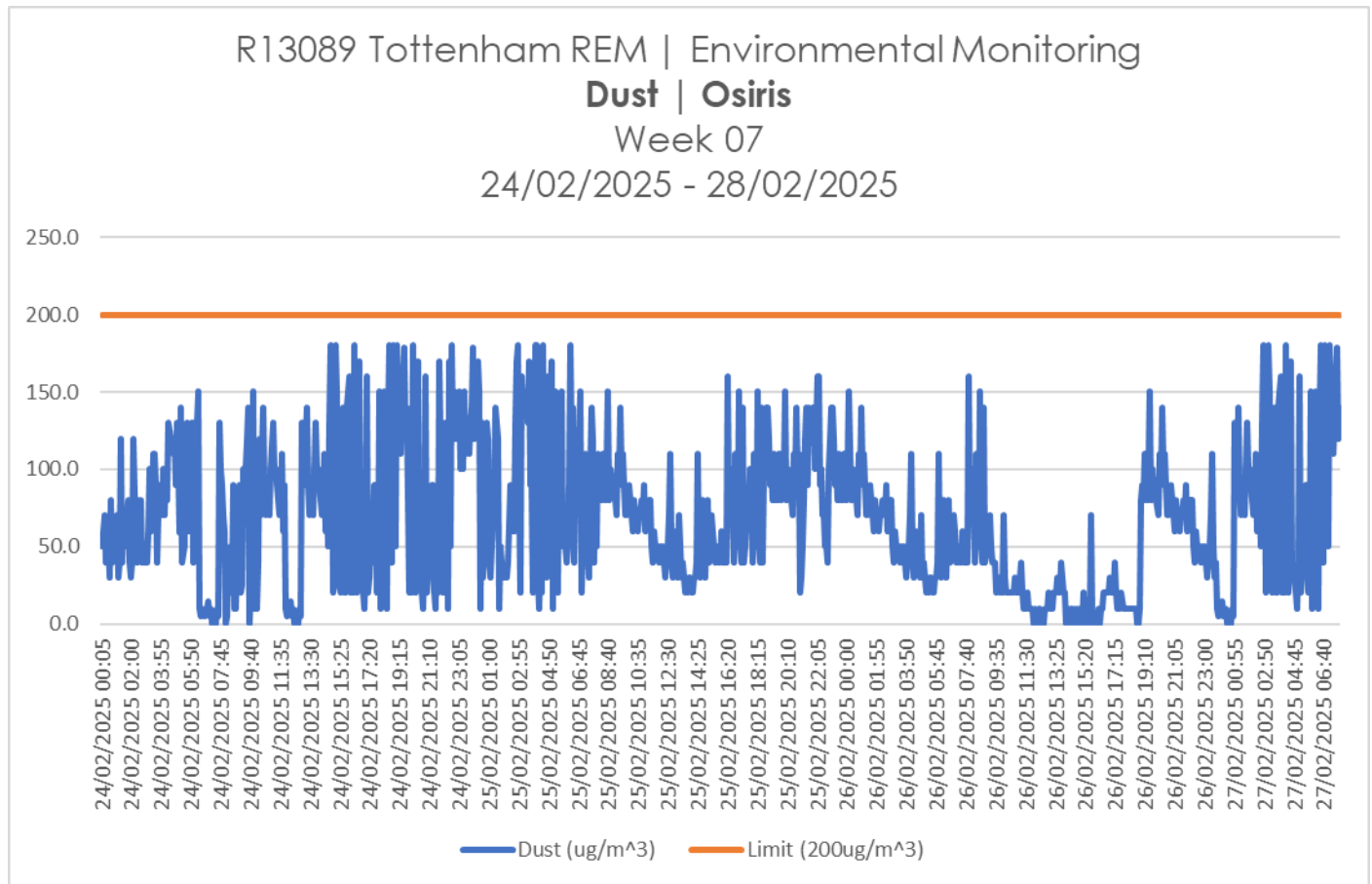
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 $\mu\text{g}/\text{m}^3$ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

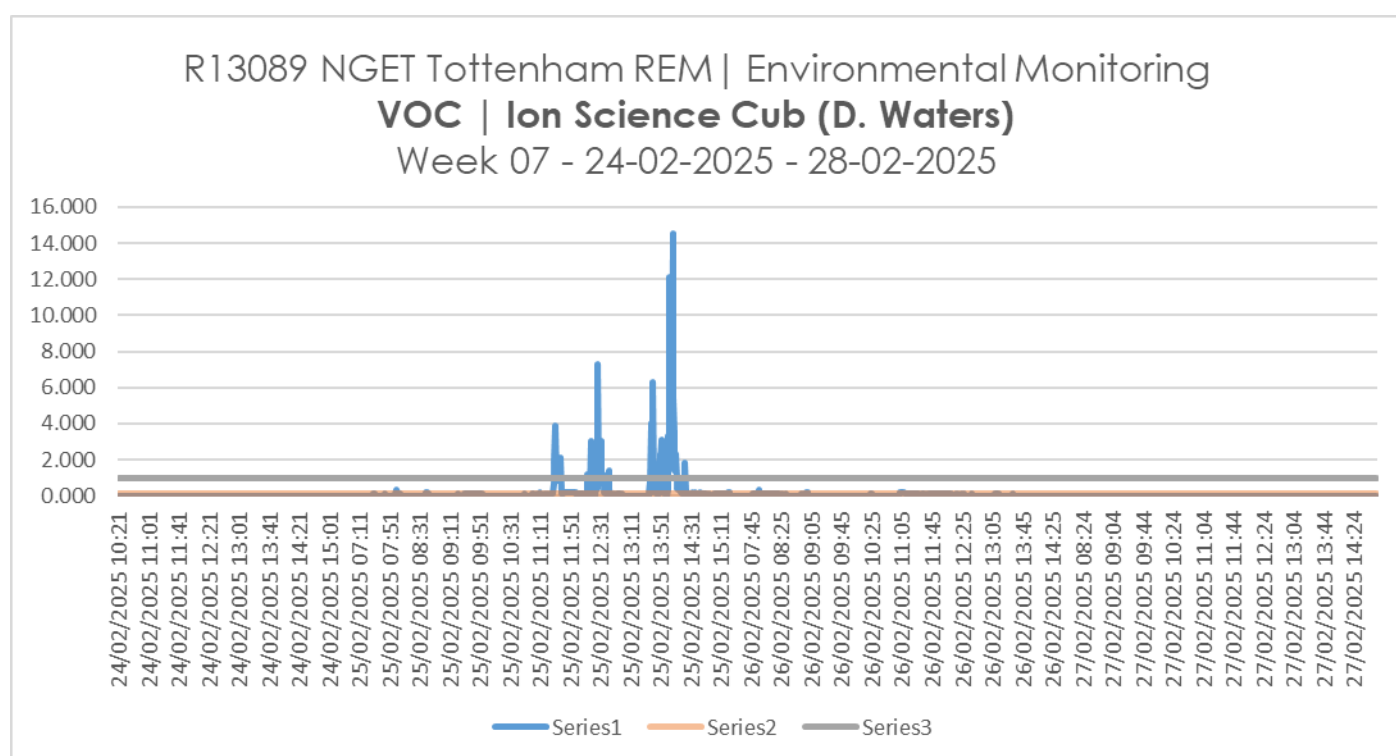
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

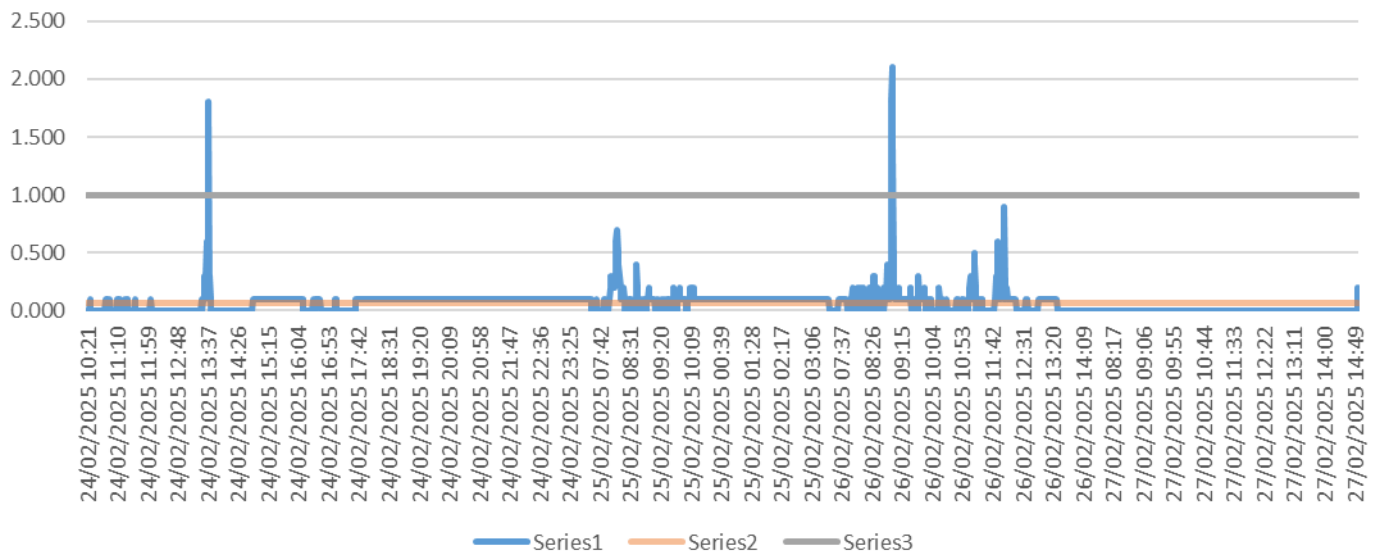
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The s are placed with the Site Foreman and Excavator Operator. The following data has been obtained from the onsite Photo Ionising Detectors (PID) and Tiger Select Cubs and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

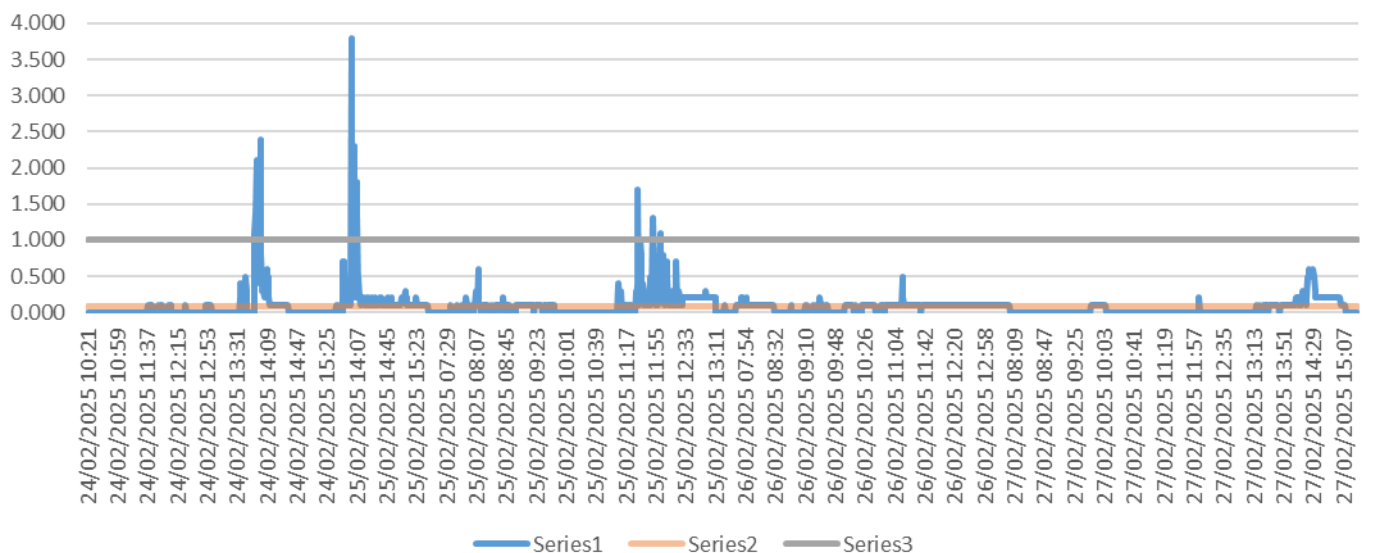
7.1 Graphical Representation of Logged VOC Data



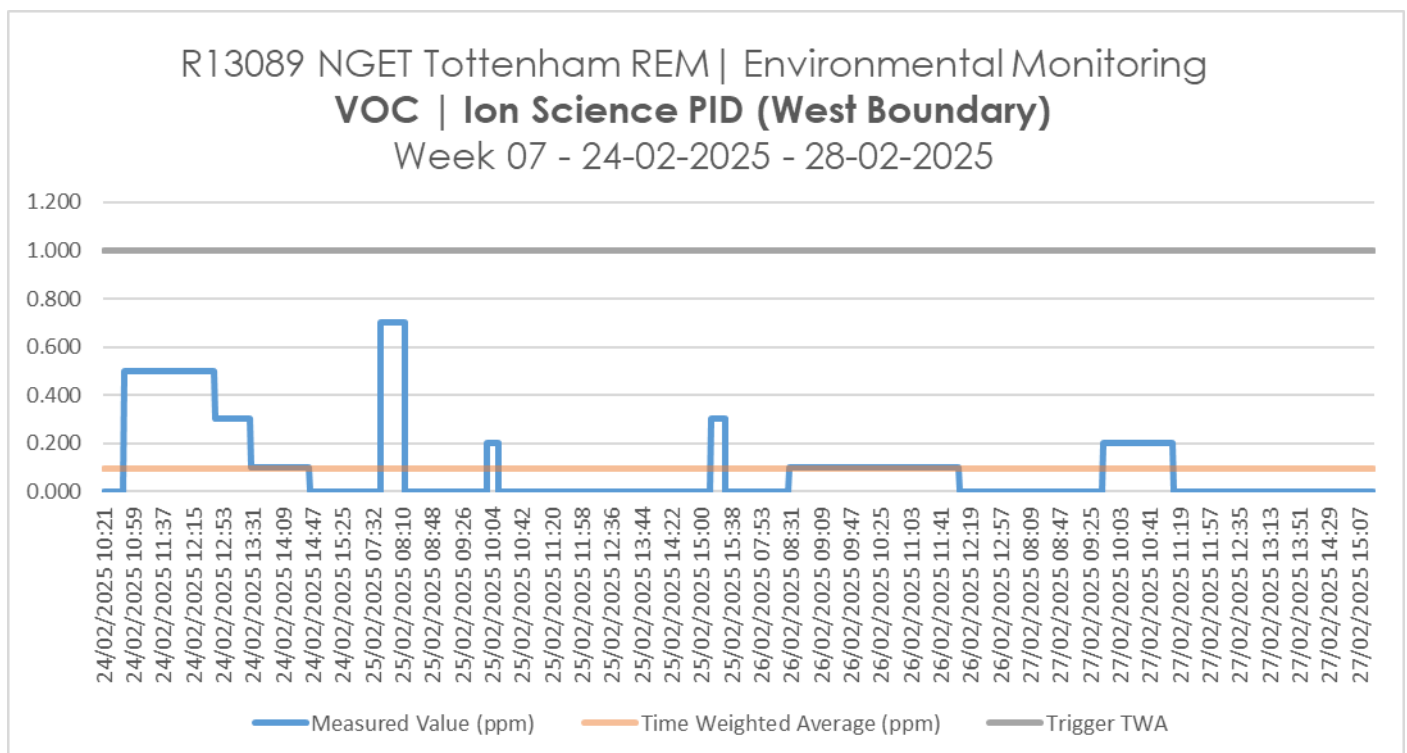
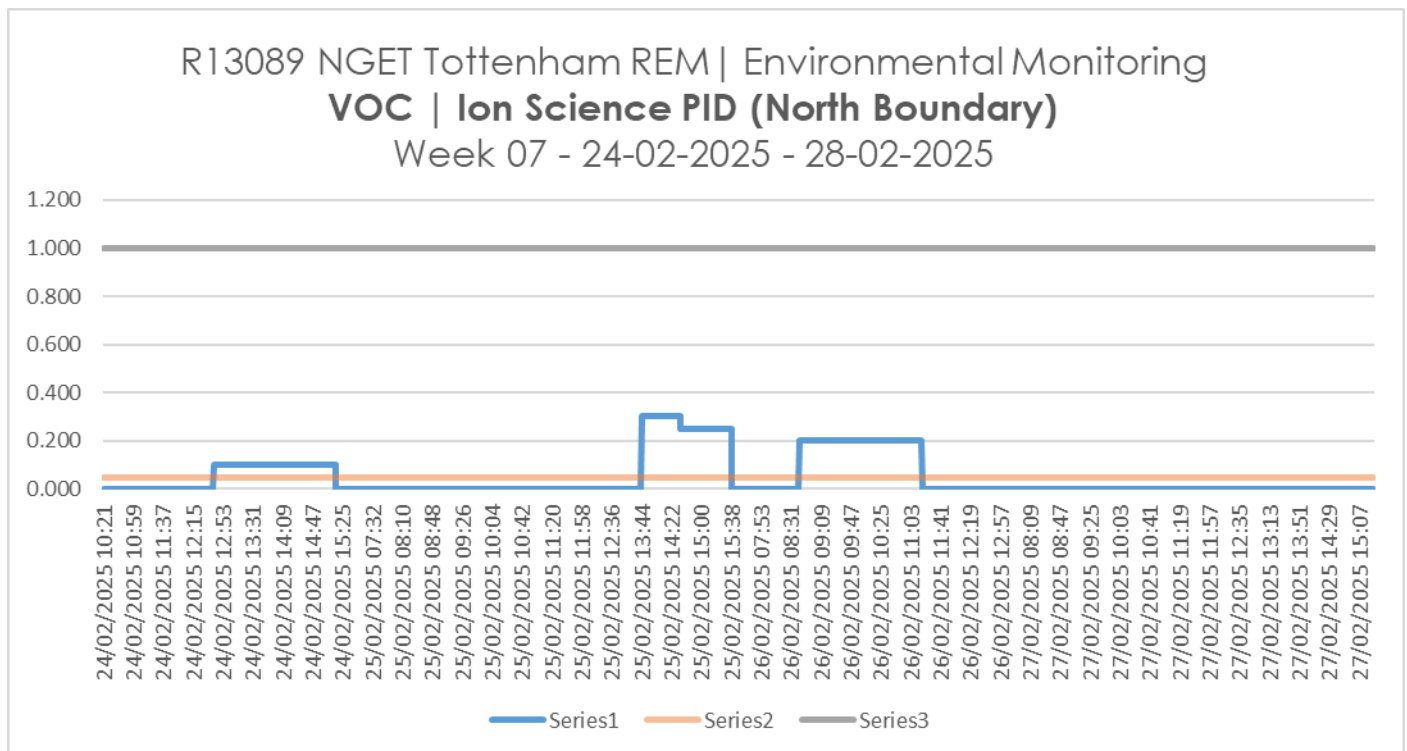
R13089 NGET Tottenham REM | Environmental Monitoring VOC | Ion Science Cub (D. Waller) Week 07 - 24-02-2025 - 28-02-2025



R13089 NGET Tottenham REM | Environmental Monitoring VOC | Ion Science Cub (Spare Persons Cub) Week 07 - 24-02-2025 - 28-02-2025



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

Exceedances were detected on the personal monitors throughout the week during excavation operations. At all times when the alarms sounded, the wearers of the monitors vacated the working area immediately and followed the guidance outlined in the Safe System of Work titled *Workplace Respiratory Protective Equipment (RPE)*, utilising the Foam Chief to neutralise the odour.

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week for either of the two boundary monitors.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 08

NGET REM Tottenham



Prepared For	National Grid Electricity Transmission
Prepared By	Erith Contractors
Project Reference	R13089
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1. Summary of Works

The project scope of works involves the remediation of the former bus depot. This includes excavation of contaminated soils, protection of a number of groundwater monitoring wells and the installation of a cable ducting trench to accommodate future works on site.

1.1 Monitoring Locations

	Welfare	
	Noise (Real Time Monitor)	
	Dust (Real Time Monitor)	
	Dust (Static Frisbee Gauges)	
	Vibration (Real Time Monitor)	

2. Equipment Used

Name	Serial Number	Certificate Number	Calibration Due Date
Turnkey iVIBE Sound and vibration meter	V0023	1248	04/03/2025 In for calibration
Turnkey Osiris Dust monitor	TNO4506	18179	24/04/2025 In for calibration
Turnkey iVIBE Sound and vibration meter	Hire 0112	1292	25/09/2025
Turnkey Osiris Dust monitor	Hire 4326	18181	24/04/2025
Ion Science Cub VOC gas detector	ECL CUB 067 TC201837 (D. Waters)	81160	17/10/2025
Ion Science Cub VOC gas detector	ECL CUB 106 TC103454 (Spare Person)	82158	19/02/2026
Ion Science Cub VOC gas detector	ECL CUB 120 TC202018 (D. Waller)	82157	19/02/2026
Ion Science PID VOC gas detector	Tiger Select T-117634 (West Boundary)	79599	26/04/2025
Ion Science PID VOC gas detector	Tiger Select 136 (North Boundary)	74675	27/06/2025

3. Works Undertaken

The below details the works completed during the week of this report:

- Continue infilling works on remediation area 1.
- Import of 1A material.
- Odour Mitigation.
- Movement of equipment out of the upcoming Morrison CDM area.

4. Noise Monitoring

A Turnkey iVIBE is a sound level meter and is intended for general acoustic measurements, occupational health, and environmental noise measurements.

Noise monitoring was recorded at the locations shown in Section 1.

The monitoring equipment complies with IEC 61326-1 (2005), IEC 61672-1 (2002), ANSI S1.4 (R2006), ANSI S1.43 (R2007), IEC 61260 (2001), ANSI S1.11 (R2009), CE, WEEE, RoHS and is compliant with BS

5228-1:2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites.

Action values are as follows:

- Lower exposure action values:
 - Daily or weekly exposure of 70 dB
 - Peak sound pressure of 130 dB
- Upper exposure action values
 - Daily or weekly exposure of 75 dB
 - Peak sound pressure of 135 dB

L_{Aeq} (15 min) noise levels were recording continuously for 15-minute periods over an 8-hour duration.

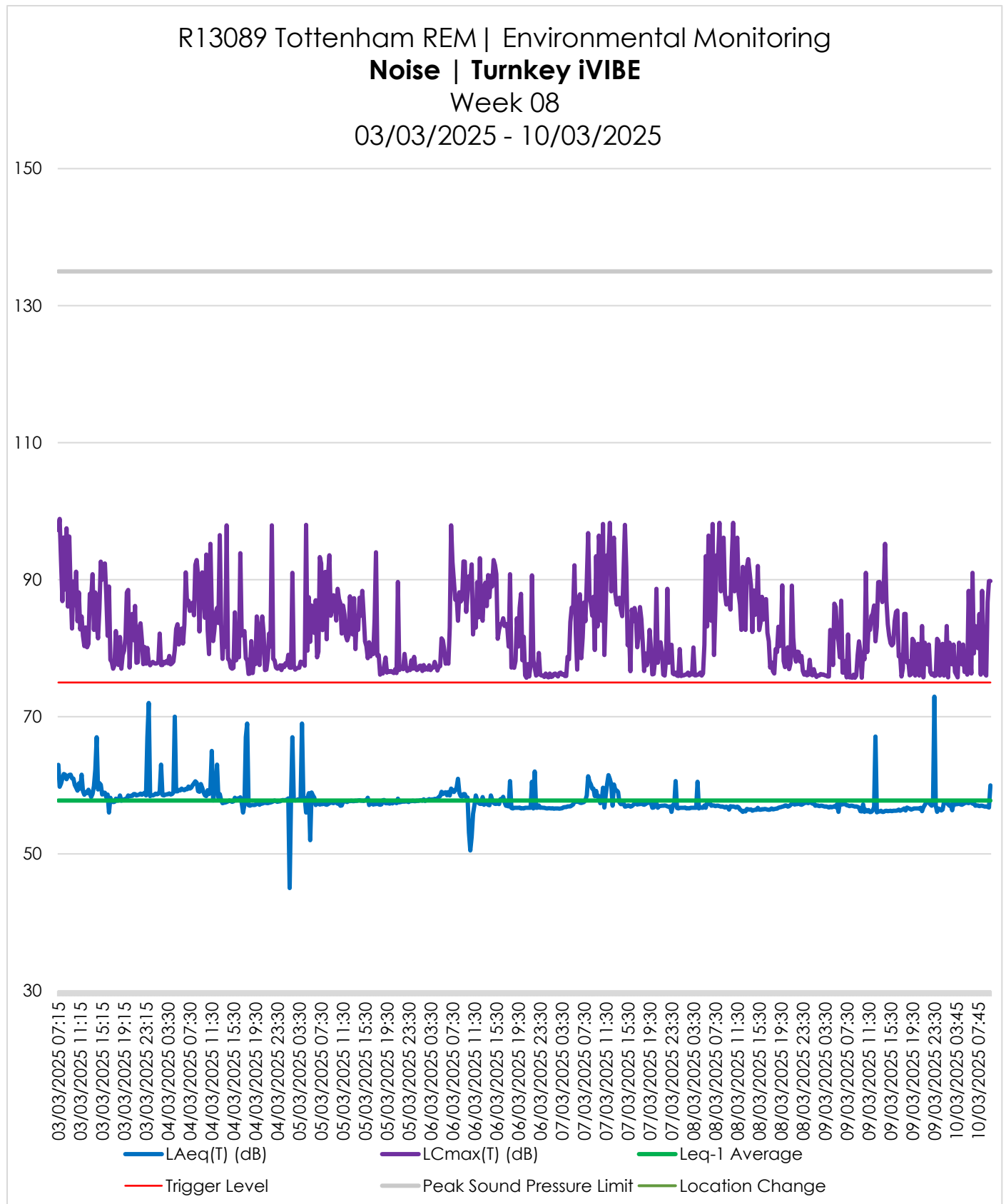
Action values for receptors are taken from the Code of Construction Practice London:

- During normal working hours (08:00 – 18:00), the maximum L_{Aeq}, period noise level measured 1 m from the façade (or boundary of the site if the property is greater than 1 m away) of any occupied or other building used for residential purposes, generated by construction plant and equipment, including the movements of vehicles to and from the site should not exceed the following:

Period	Hours	Residential / Commercial Premises	Schools or Hospitals
Monday - Friday	08:00 – 18:00	75 dB(A)	65 dB(A)
Saturday	08:00 – 13:00	75 dB(A)	65 dB(A)

In every case, control targets for nuisance noise will be agreed by the Contractor with the Local Environment Health Officer (EHO). Should the need arise (for example in the event that substantiated noise complaints are received during the site works in relation to high-risk activities) further detailed noise monitoring and assessment may be required to be undertaken by appropriately qualified persons in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

4.1 Graphical Representation of Logged Noise Data



LAeq - A-weighted equivalent continuous sound level in decibels equivalent to the total sound energy measured over a stated period.

LCmax - C-weighted peak sound pressure measurement.

(T) - Stated measured period of time.

Decibel (dB) - A unit used to measure the intensity of a sound.

4.2 Findings on Noise

Logged noise data for the week is displayed in the above graph.

No exceedances were recorded during the week.

5. Vibration Monitoring

An iVIBE data logger and 3 axis geophone was used for the duration of the works. The equipment is designed for high accuracy vibration monitoring in a construction environment.

Vibration monitoring was recorded at the locations shown in Section 1.

The monitor was set to run in continuous mode and was able to digitally record vibration levels up to 20 mm.s⁻¹, peak particle velocity, for frequencies between 5 Hz and 250 Hz. Weighting filters comply with ISO 2631, BS 6472 and BS 7385, and KB filters according to DIN 4150 and DIN 45669. Results are given in Root Mean Square (RMS) format. Data was exported from the logger and input into an Excel document, from which a graphic in the form a line graph was generated.

The geophone was levelled using the integrated bubble level and adjustable legs. It was loosely orientated by eye so that the axis conformed to the following compass bearings.

Geophone Axis	Bearing	Compass Point
X	51.60593	North
Y	-0.04660	West
Z	N/a	Zenith

Ground-borne vibration is to be undertaken by appropriately qualified persons and assessed using the guidelines provided in accordance with 'BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites'.

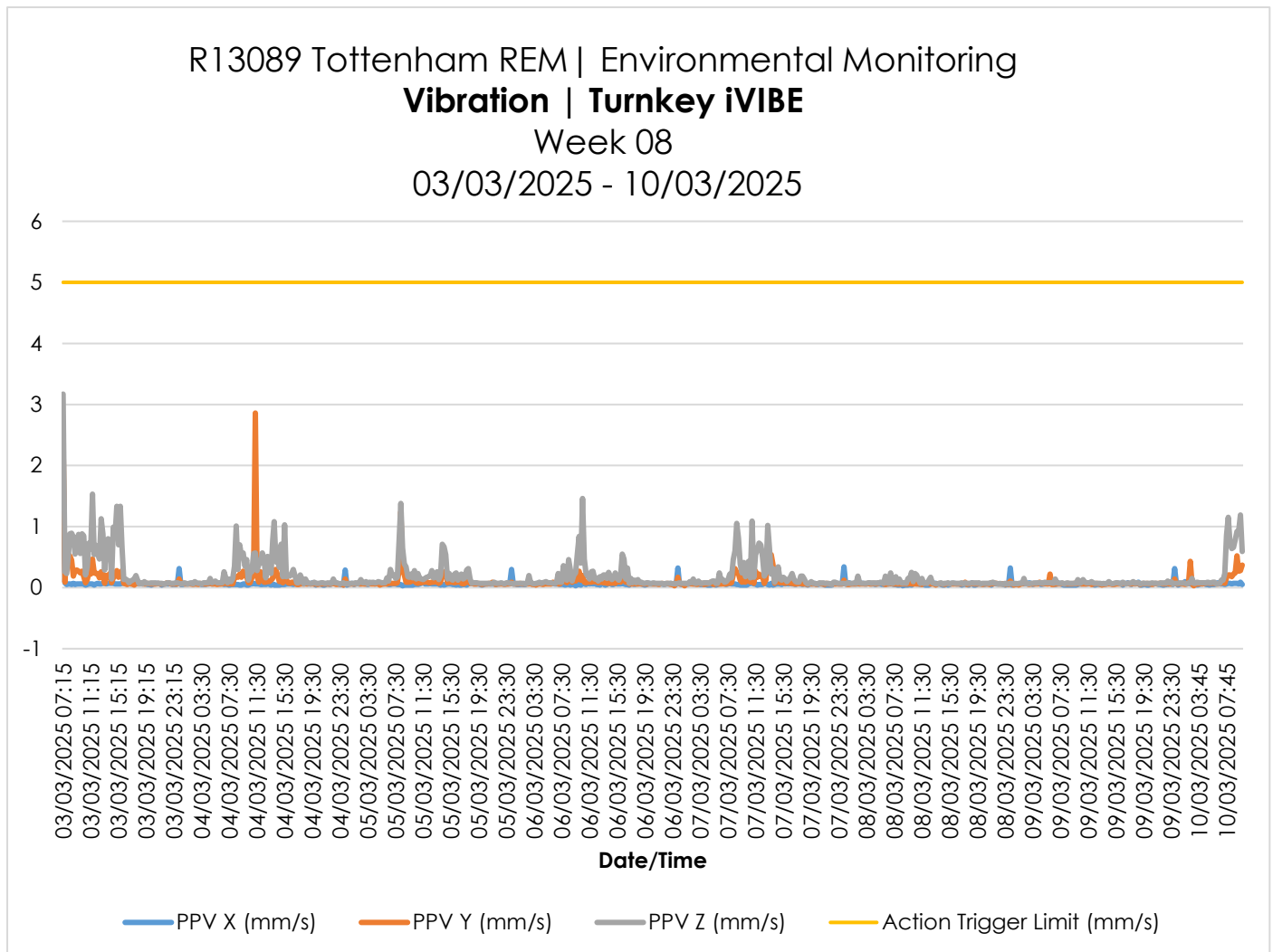
Trigger levels are based upon guidance given in 'BS 7385-2: 1993 Evaluation and measurement for vibration in buildings — Part 2: Guide to damage levels from ground borne vibration'.

Type of building	Peak component particle velocity in frequency of predominant pulse	
	4 Hz to 15 Hz	15 Hz and above
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s at 4 Hz and above	
Unreinforced or light framed structures. Residential or light commercial type buildings	15 mm/s at 4Hz increasing to 20 mm/s at 15 Hz	20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above

Vibration Limits Relating to Minor or Cosmetic Damage to Buildings:

Building Classification	Intermittent Vibration (PPV, mm/s ⁻¹)	Continuous Vibration (PPV, mm/s ⁻¹)
Residential in generally good repair	10	5
Residential where preliminary survey reveals significant defects (party wall)	5	3.5
Industrial/commercial – light and flexible structure	20	15
Industrial/commercial – heavy and stiff structure	30	15

5.1 Graphical Representation of Logged Vibration Data



5.2 Findings on Vibration

Logged vibration data for the week is displayed in the above graphs.

No exceedances were recorded during the week.

6. Dynamic Dust Monitoring

6.1 Dynamic Dust

The Osiris uses a light-scattering laser photometer to measure airborne particle monitors (PM10) in real-time with history data logging capability. The Osiris has been Environment Agency MCERTS certified.

This instrument is designed to measure dust deposition. Action values for personal exposure to Dust for Particulate Matter PM10 are set to a lower action level of 180 µg/m³ averaged over a 15-minute period as our warning trigger but not to exceed 200 µg/m³ averaged over a 15-minute period, as per the 'Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites'.

Should the action value be exceeded, measures in the Safe System of Work will be implemented including stopping work and an increased dampening down of the site.

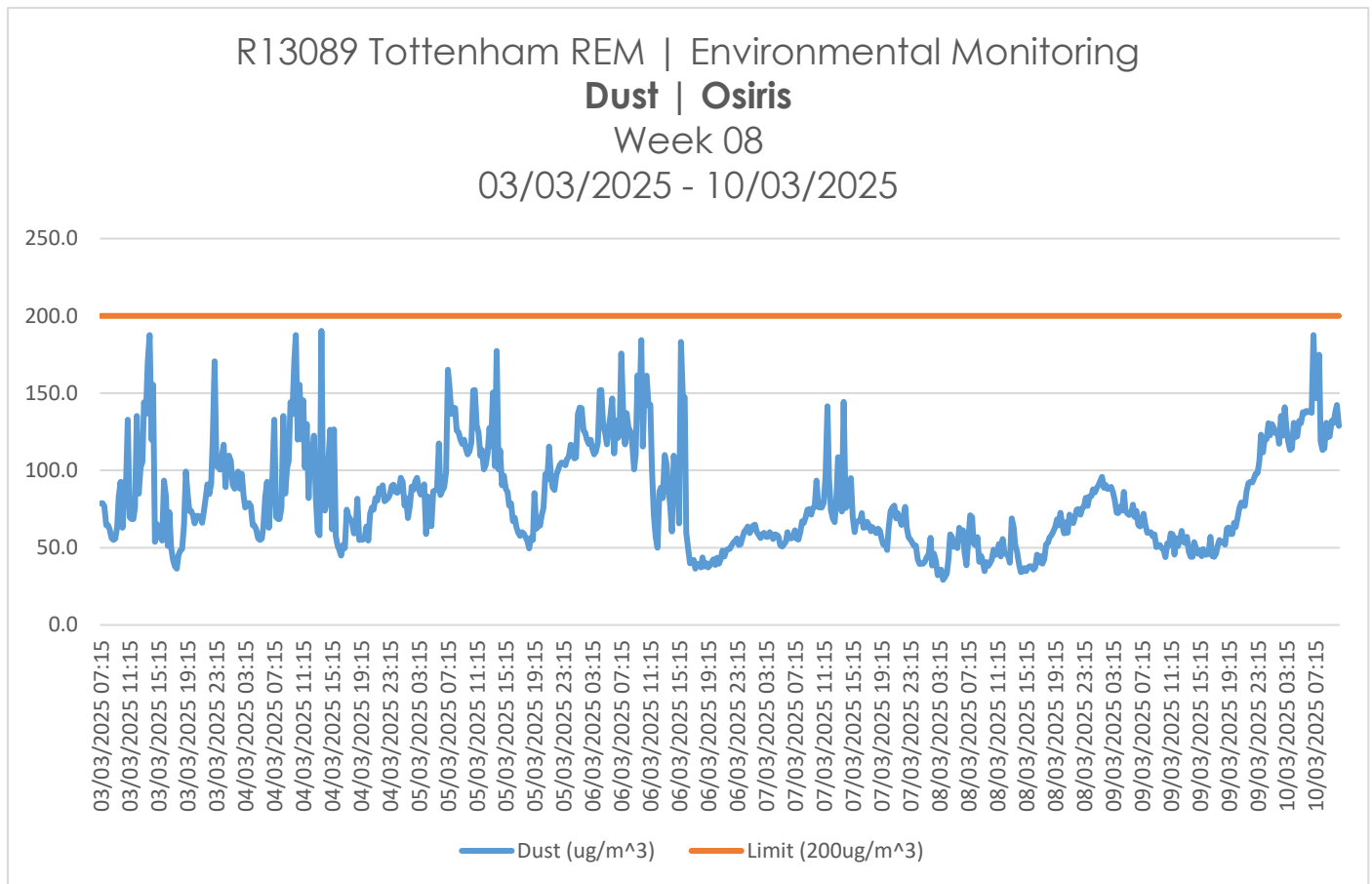
The DEFRA Daily Air Quality Index (DAQ) is numbered 1-10 and divided into four bands. Low (1) to very high (10), to provide detail about air pollution levels in a simple way. For PM10 particles, this based on the daily mean concentration.

Index	1	2	3	4	5	6	7	8	9	10
Band	Low	Low	Low	Moderate	Moderate	Moderate	High	High	High	Very High
µg/m ³	0-16	17-33	34-50	51-58	59-66	67-75	76-83	84-91	92-100	101 or more

The data below was obtained from the onsite monitor and represents the Particulate Matter suspended in the air up to 10 microns (PM10) in size during the period of this report.

Dust monitoring was recorded at the locations shown in Section 1.

6.2 Graphical Representation of Logged Dust Data



6.3 Findings on Dust

Logged dust data for the week is displayed in the above graph.

Action values for personal exposure to dust as defined in the air quality objectives for Particulate matter PM₁₀ are not to exceed 200 µg/m³ averaged over a 15-minute period as per the *Institute of Air Quality Management (2018), Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites*.

No exceedances were recorded during the week.

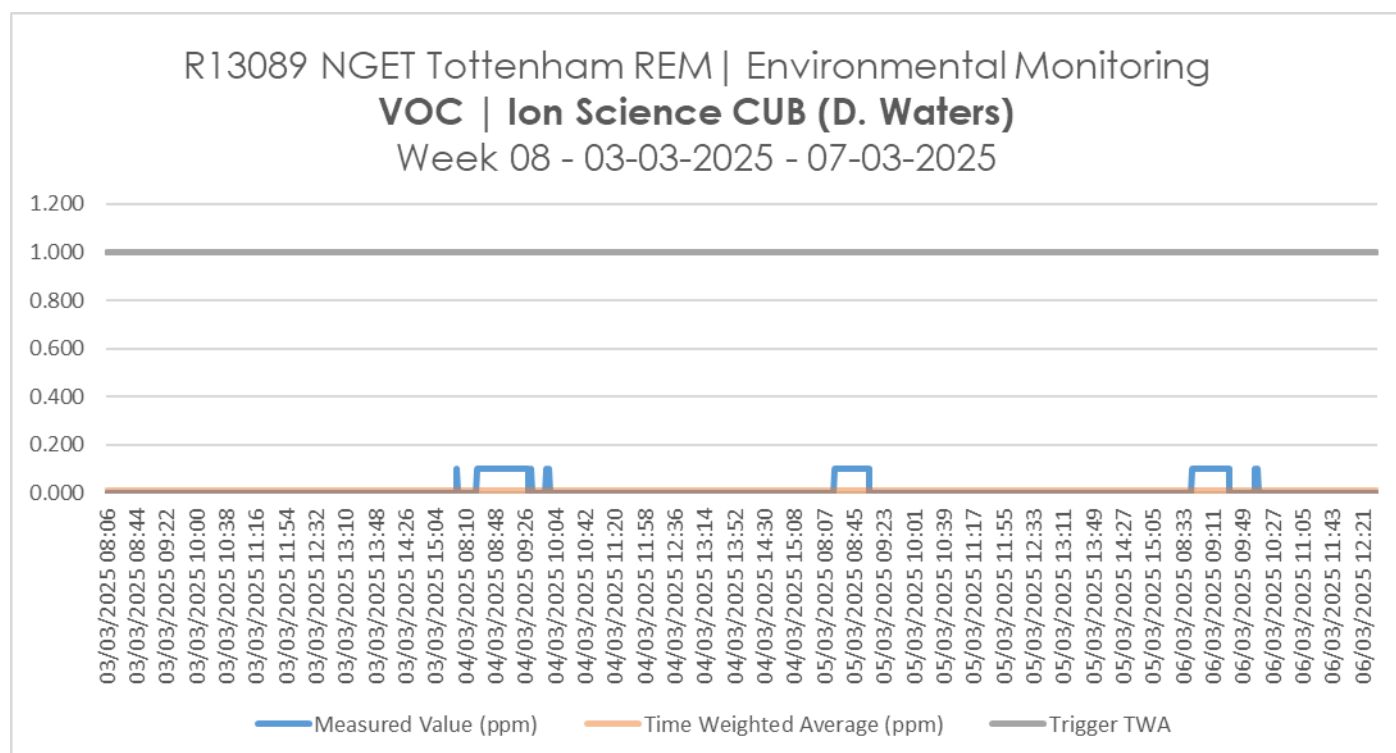
7. Volatile Organic Compounds (VOC) Monitoring

Under the Control of Substances Hazardous to Health Regulations, 2002 (COSHH), as amended in 2004), we used Ion Science Cubs, Photo Ionising Detectors (PID) which are capable of data logging and have an audio/visual alarm set to trigger in response to any exceedances of the occupational guideline value of an appropriate organic contaminant (benzene). This device meets the following European standards: ATEX: CE, Ex II 1G, Ex IA IIC T4; $-20^{\circ}\text{C} \leq T_a \leq 55^{\circ}\text{C}$.

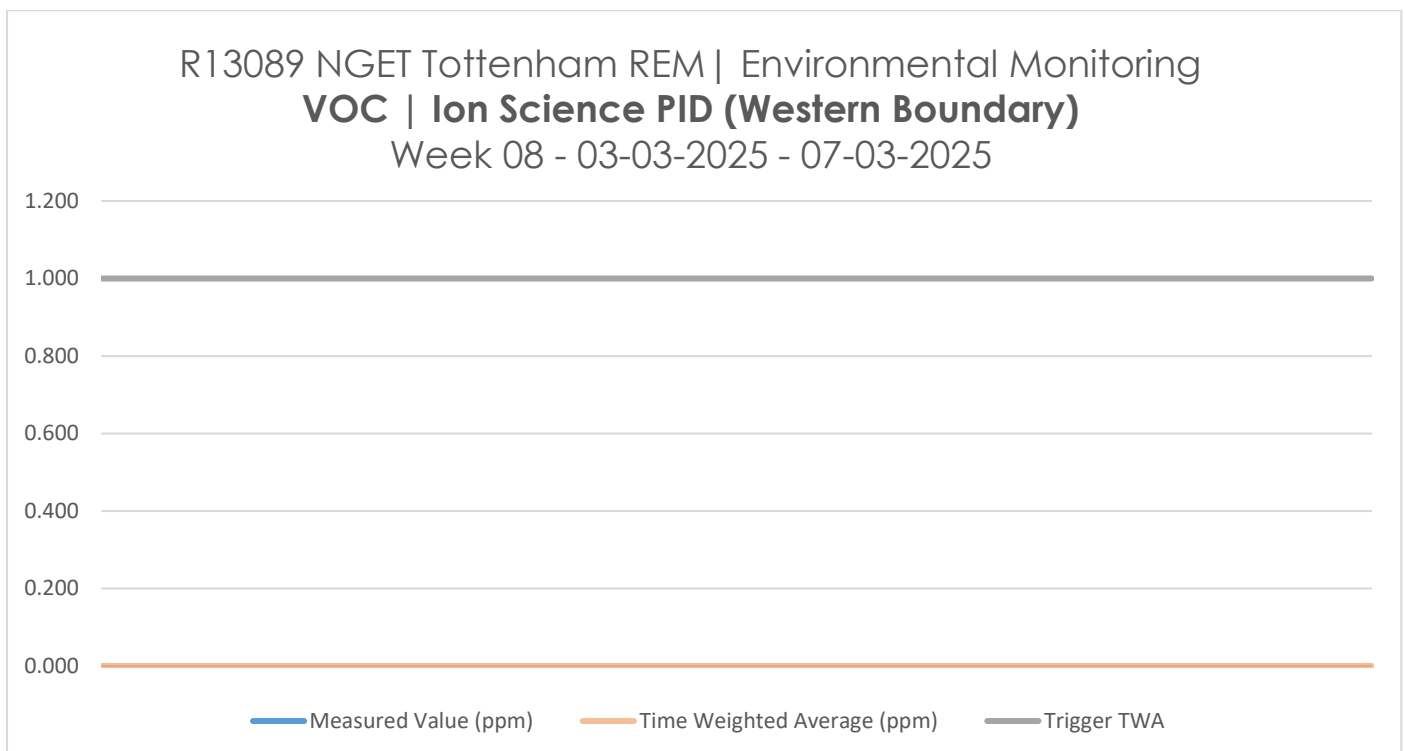
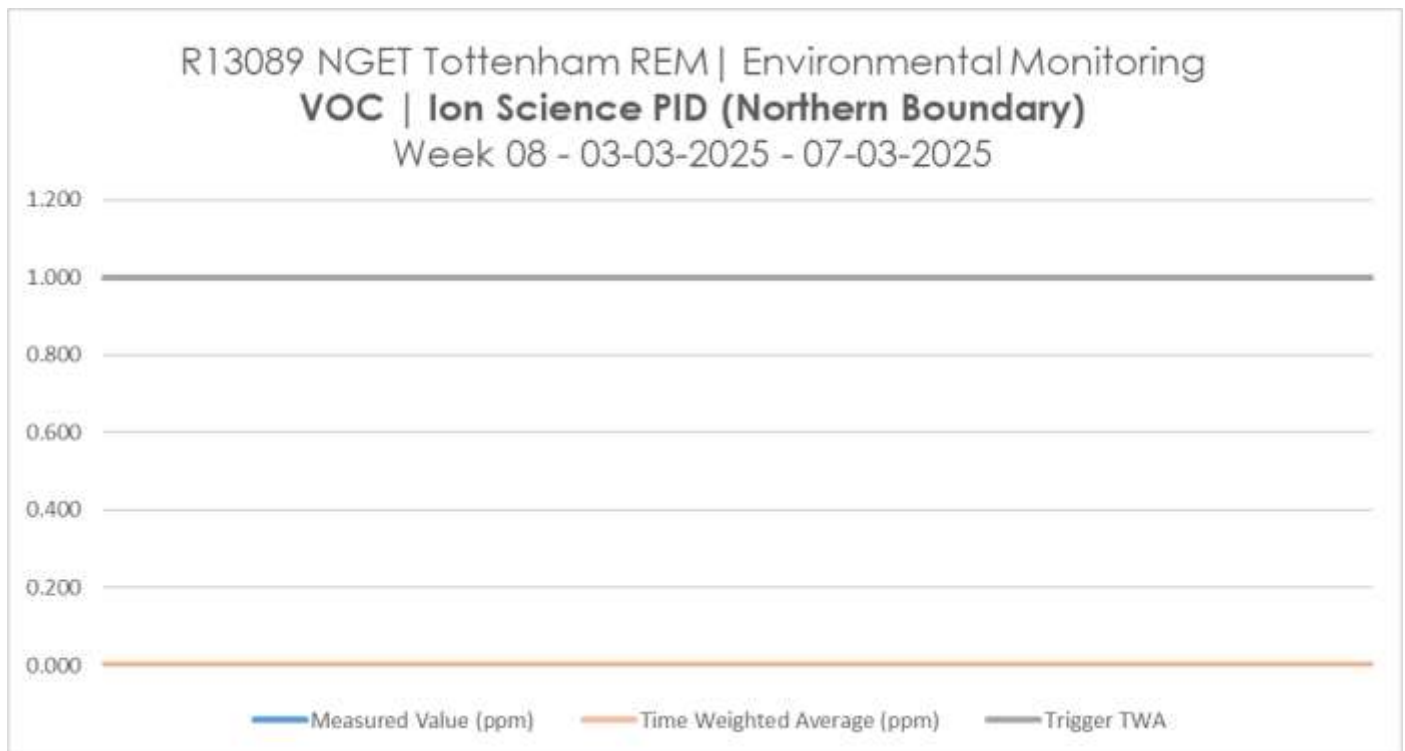
Action values for personal exposure to VOC (calibrated to benzene standard) as defined in the COSHH Regulations. VOC readings not to exceed 1 ppm of benzene. Should target limits be exceeded, measures in the SSoW will be implemented.

The s are placed with the Site Foreman and Excavator Operator. The following data has been obtained from the onsite Photo Ionising Detectors (PID) and Tiger Select Cubs and represents the potential exposure to Volatile Organic Compounds (calibrated to benzene standard) during the week of this report.

7.1 Graphical Representation of Logged VOC Data



7.2 Graphical Representation of Logged PID Data



7.3 Findings on VOC

No exceedances of HSE'S document '*EH40: workspace exposure limits*' given workspace exposure limit (WEL) value of 1ppm 8-hour TWA were recorded for the week for either of the two boundary monitors or any of the personal monitors.

8. Applicable Legislation/ Regulations and Guidance

	Current Legislation	Activity	Impacts On
Reference Documents	Environmental Protection Act 1990 Part II	Demolition, asbestos, remediation works.	Air pollution, waste on land, contaminated land, nuisances and clean air, litter, radioactive substances, conservation.
	Pollution Prevention and Control Act 1999 & Pollution Prevention and Control (England & Wales) Regulations as amended 2000	Demolition, asbestos, remediation works.	Oil pollution, clean air, railway.
	Air Quality Standards Regulations 2010	Demolition, asbestos, remediation works.	Public exposure, ozone.
	The Environment Act (Commencements 1-18) Order 1995-1999	All projects.	EA, contaminated land, national parks, air quality, waste, drainage.
	Noise Emissions in the Environment by Equipment for use Outdoors (Amendment Regulations SI 2005/98	All projects, specifically in sensitive areas.	Human health, local noise levels.
	The Clean Air Act	All sites and projects.	Human health, environment.

Guidance:

- Institute of Air Quality Management – Guidance on the Assessment of Dust from Demolition and Construction - February 2014
- Institute of Air Quality Management – Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction sites – 2014
- BS 5228-1: 2009 + A1: 2014 – Code of Practice for Noise and Vibration Control on Construction and Open Sites.
- BS 7385-2: 1993 Evaluation and Measurement for Vibration in Buildings- Part2: Guide to damage levels from Ground Borne Vibration.
- BS 6742-1: 2008 – Guide to Evaluation of Human Exposure to Vibration in Building.
- DEFRA – Noise database for Prediction of Noise on Construction and Open Sites.
- HSE- EH40: Occupational Exposure Levels

9. Glossary of Terms

Trigger Levels	The limits of which one of the elements (noise/dust/vibration) cannot exceed external to the hoarding. The trigger levels may be agreed with the local council, according to the client requirements.
Baselines	The values recorded pre-works.
A weighting, dB(A)	The unit of sound level weighted according to the A-scale. Is the mechanism who correspond the best to response of the human ear.
LA_{eq}	The equivalent continuous noise level over any specified period.
PM10	The particulate matter of diameter less than or equal to 10 micrometres.
mg/m³	Milligrams of a substance in a cubic meter of air. It is a measure of concentration (weight/volume).
Peak	It is particularly valuable for indicating the level of short duration shocks, etc. (m/s ²).
P-P	Peak-to-Peak, indicates the maximum excursion of the wave, (m/s ²).
m/s²	Metres per second squared. It is a measure of acceleration.
m/s	Metres per second. It is a measure of velocity.

Environmental Monitoring Report

Week 09

NGET REM Tottenham



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