



C305- Eastern Running Tunnels

Close out report for "MS I&M VDP Electrolevels and additional Long LP in soft ground - C305-DSJ-C4-GMS-CR144-PT003-50003"

CRL Document Number: C305-DSJ-C2-RGN-CRG03-50326

Supplier Document Number:
Contract MDL reference C12.003

1. Contractor Document Submittal History:

Revision:	Date:	Prepared by:	Checked by:	Approved by:	Reason for Issue:
4.0	11/07/2016	[Redacted]	[Redacted]	[Redacted]	For approval

2a. Stakeholder Review Required? YES NO

Stakeholder submission required: LU NR DLR RIL LO Other: _____

Purpose of submission: For no objection For information

This document has been reviewed by the following individual for coordination, compliance, integration and acceptance and is acceptable for transmission to the above stakeholder for the above stated purpose.

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2b. Review by Stakeholder (if required):

Stakeholder Organisation	Job Title	Name	Signature	Date	Acceptance
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GEOCISA UK

C305-CLOUT-150204

Close out report for “MS I&M VDP Electrolevels and additional Long LP in soft ground - C305-DSJ-C4-GMS-CR144-PT003-50003”

C305 Crossrail Eastern Running Tunnels

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Current Version of the Documents & Signatures :

Revision:	Date:	Prepared by:	Checked by:	Engineering Approved by:
4.0	11.07.2016	[Redacted]	[Redacted]	[Redacted]
		[Redacted]	[Redacted]	[Redacted]

Document History :

Revision:	Date:	Prepared by:	Checked by:	Engineering Approved by:
1.0	11.03.2015	[Redacted]	[Redacted]	[Redacted]
2.0	13.05.2016	[Redacted]	[Redacted]	[Redacted]
3.0	09.06.2016	[Redacted]	[Redacted]	[Redacted]

TABLE OF CONTENTS

1. CLOSE OUT REPORT PURPOSE.....	4
2. LOCATION OF THE WORKS.....	4
3. DOCUMENTATION SUMMARY.....	4
4. SUMMARY OF INSTALLED INSTRUMENTATION ON SITE.....	4
5. CONSTRUCTION ACTIVITY.....	10
6. SUMMARY OF THE DATA.....	11

APPENDIX A: ELECTROLEVELS AND SOFT GROUND PINS LOCATION

APPENDIX B: ELECTROLEVELS AND LONG LEVELLING POINTS DATA

APPENDIX C: SOFT GROUND PINS DATA

APPENDIX D: GROUTING AREA LEVELLING POINTS SUMMARY

Learning Legacy Document

1. CLOSE OUT REPORT PURPOSE

The purpose of this “close-out” report is, prior to de-commissioning, to summarise the data from the instrumentation included in this document and to relate it to the tunnel construction activities which produce any observed changes.

In this specific case, the electrolevels have been de-commissioned. DSJV and Crossrail made the decision after the demonstration that the rate of change in the data has reached an acceptably small rate. (Materials and Workmanship Specification Instrumentation and Monitoring C122-OVE-Z4-RSP-CR001-00007 Rev 6.0). DSJV was instructed to decommission these instruments after agreement with the asset owner (C305-PMI-00866).

2. LOCATION OF THE WORKS

The instrumentation included within this report is situated within Area 2. The electrolevels line has been installed between the boundary of Royal Victoria DLR Station and the Victoria Dock Portal along Victoria Dock Road. See Appendix A for the electrolevels and soft ground pins location.

3. DOCUMENTATION SUMMARY

CROSSRAIL NUMBER	DOCUMENT NAME	REASON FOR ISSUE	TYPE AND NUMBER OF INSTRUMENTATION INSTALLED
C305-DSJ-C4-GMS-CR144-PT003-50003	Victoria Dock Portal Trench. Electrolevels Installation and Monitoring	Main Method statement	50 Electrolevels
			51 Long levelling points
C305-DSJ-C2-CNN-CR144_WS155-50003	Short Notice Change-Additional Soft Ground Pins in Victoria Dock Portal	Soft ground instead of concrete.	10 Soft ground Pins
C305-DSJ-C2-RGN-CRG03-50296	Installation Report for I&M MS “Victoria Dock Portal-Trench –Electrolevels, C305-DSJ-C4-GMS-CR144_PT003-50003”	Installation report	-
C305-DSJ-C2-RGN-CRG03-50295	Installation report for I&M MS “Studs Installation and Monitoring along Drive G, chainage 84960 to 85800, C305-DSJ-C2-GMS-CR144_WS155-50002”	Installation report	-

4. SUMMARY OF INSTALLED INSTRUMENTATION ON SITE

The instruments were installed part way through the works: electrolevel line during grouting works; soft ground pins immediately prior to westbound TBM passage.

- 50 Electrolevels
- 51 Long Levelling Points

Please refer to Appendix A for a drawing of the location of this instrumentation.

Summary Installed Instrumentation - Electrolevels											
Sensor Type	Sensor ID	Sensor Serial Number	Date Installation	Status	Monitoring ID	Location MONR			Commissioning Readings (mm)		
						Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	08/07/2014		
Electrolevels	C305-EL010001-S	14085031	23/06/2014	INSTALLED	C305-EL010001	90500.860	35389.275	101.325	0.000	0.000	0.000
					C305-EL010002	90503.816	35389.777	101.253	-0.002	-0.009	-0.031
Electrolevels	C305-EL010002-S	14125015	23/06/2014	INSTALLED	C305-EL010003	90506.765	35390.191	101.250	-0.011	-0.018	-0.066
Electrolevels	C305-EL010003-S	14125019	23/06/2014	INSTALLED	C305-EL010004	90509.717	35390.664	101.280	-2.002	-2.029	-2.103
Electrolevels	C305-EL010004-S	14125020	23/06/2014	INSTALLED	C305-EL010005	90512.699	35391.149	101.306	-0.060	-0.040	-0.140
Electrolevels	C305-EL010005-S	14125021	23/06/2014	INSTALLED	C305-EL010006	90515.631	35391.619	101.333	8.003	7.949	7.823
Electrolevels	C305-EL010006-S	14125022	23/06/2014	INSTALLED	C305-EL010007	90518.578	35392.084	101.363	26.256	25.937	25.787
Electrolevels	C305-EL010007-S	14125024	04/07/2014	INSTALLED	C305-EL010008	90521.568	35392.533	101.426	45.246	44.925	44.748
Electrolevels	C305-EL010008-S	14125023	04/07/2014	INSTALLED	C305-EL010009	90524.519	35392.986	101.421	59.642	58.922	58.762
Electrolevels	C305-EL010009-S	14125026	04/07/2014	INSTALLED	C305-EL010010	90527.500	35393.411	101.442	63.300	63.214	63.084
Electrolevels	C305-EL010010-S	14125025	04/07/2014	INSTALLED	C305-EL010011	90530.479	35393.912	101.485	65.240	65.143	64.990
Electrolevels	C305-EL010011-S	14125027	04/07/2014	INSTALLED	C305-EL010012	90533.444	35394.380	101.494	61.916	60.952	61.026
Electrolevels	C305-EL010012-S	14125028	04/07/2014	INSTALLED	C305-EL010013	90536.397	35394.837	101.479	63.713	62.946	64.126
Electrolevels	C305-EL010013-S	14121009	04/07/2014	INSTALLED	C305-EL010014	90539.353	35395.234	101.491	70.654	70.057	72.453
Electrolevels	C305-EL010014-S	14121010	04/07/2014	INSTALLED	C305-EL010015	90542.350	35395.714	101.517	75.248	74.920	76.297
Electrolevels	C305-EL010015-S	14122005	04/07/2014	INSTALLED							

Summary Installed Instrumentation - Electrolevels											
Sensor Type	Sensor ID	Sensor Serial Number	Date Installation	Status	Monitoring ID	Location MONR			Commissioning Readings (mm)		
						Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	08/07/2014		
Electrolevels	C305-EL010016-S	14122006	04/07/2014	INSTALLED	C305-EL010016	90545.300	35396.145	101.514	78.500	78.775	79.198
Electrolevels	C305-EL010017-S	14125004	04/07/2014	INSTALLED	C305-EL010017	90548.285	35396.569	101.559	86.357	87.359	88.235
Electrolevels	C305-EL010018-S	14125003	04/07/2014	INSTALLED	C305-EL010018	90551.264	35396.940	101.553	92.564	92.879	94.441
Electrolevels	C305-EL010019-S	14125012	04/07/2014	INSTALLED	C305-EL010019	90554.217	35397.449	101.571	92.541	92.885	94.425
Electrolevels	C305-EL010020-S	14125011	04/07/2014	INSTALLED	C305-EL010020	90557.207	35397.821	101.580	88.111	87.983	88.668
Electrolevels	C305-EL010020-S	14125011	04/07/2014	INSTALLED	C305-EL010021	90560.218	35398.232	101.546	76.622	76.641	77.097
Electrolevels	C305-EL010021-S	14122007	04/07/2014	INSTALLED	C305-EL010022	90563.187	35398.706	101.493	64.498	64.030	64.520
Electrolevels	C305-EL010022-S	14122008	04/07/2014	INSTALLED	C305-EL010023	90566.157	35399.060	101.479	55.633	55.781	56.247
Electrolevels	C305-EL010023-S	14122004	04/07/2014	INSTALLED	C305-EL010024	90569.074	35399.338	101.455	48.799	48.074	48.583
Electrolevels	C305-EL010024-S	14122003	04/07/2014	INSTALLED	C305-EL010025	90572.060	35399.542	101.313	43.123	43.042	43.515
Electrolevels	C305-EL010025-S	14125006	04/07/2014	INSTALLED	C305-EL010026	90575.080	35399.754	101.310	44.756	44.029	44.477
Electrolevels	C305-EL010026-S	14125005	04/07/2014	INSTALLED	C305-EL010027	90578.076	35400.070	101.330	48.654	48.015	48.437
Electrolevels	C305-EL010027-S	14125013	04/07/2014	INSTALLED	C305-EL010028	90581.059	35400.372	101.334	46.742	46.006	46.402
Electrolevels	C305-EL010028-S	14125014	04/07/2014	INSTALLED	C305-EL010029	90584.056	35400.681	101.331	37.943	37.062	37.437
Electrolevels	C305-EL010029-S	14125030	04/07/2014	INSTALLED	C305-EL010030	90587.031	35401.050	101.339	25.525	25.621	25.966
Electrolevels	C305-EL010030-S	14125029	04/07/2014	INSTALLED							

Summary Installed Instrumentation - Electrolevels											
Sensor Type	Sensor ID	Sensor Serial Number	Date Installation	Status	Monitoring ID	Location MONR			Commissioning Readings (mm)		
						Eastings X (m)	Northings Y (m)	Elevation Z (mATD)	08/07/2014		
Electrolevels	C305-EL010031-S	14125018	04/07/2014	INSTALLED	C305-EL010031	90590.005	35401.524	101.339	27.748	27.114	27.430
Electrolevels	C305-EL010032-S	14125017	04/07/2014	INSTALLED	C305-EL010032	90593.004	35401.854	101.350	25.496	25.103	25.394
Electrolevels	C305-EL010033-S	14121008	04/07/2014	INSTALLED	C305-EL010033	90596.001	35402.131	101.360	21.179	21.088	21.356
Electrolevels	C305-EL010034-S	14121007	04/07/2014	INSTALLED	C305-EL010034	90598.983	35402.371	101.357	30.666	30.138	30.378
Electrolevels	C305-EL010035-S	14121012	04/07/2014	INSTALLED	C305-EL010035	90601.957	35402.737	101.367	16.742	16.126	16.343
Electrolevels	C305-EL010036-S	14121011	04/07/2014	INSTALLED	C305-EL010036	90604.912	35403.125	101.387	11.549	11.616	11.805
Electrolevels	C305-EL010037-S	14121004	04/07/2014	INSTALLED	C305-EL010037	90607.913	35403.435	101.351	10.458	10.107	10.268
Electrolevels	C305-EL010038-S	14121003	04/07/2014	INSTALLED	C305-EL010038	90610.929	35403.723	101.327	16.987	16.097	16.234
Electrolevels	C305-EL010039-S	14125001	04/07/2014	INSTALLED	C305-EL010039	90613.878	35404.080	101.325	20.897	20.089	20.200
Electrolevels	C305-EL010040-S	14125002	04/07/2014	INSTALLED	C305-EL010040	90616.735	35404.505	101.218	25.779	25.016	25.163
Electrolevels	C305-EL010041-S	14122002	04/07/2014	INSTALLED	C305-EL010041	90619.818	35404.745	101.160	17.450	17.461	17.458
Electrolevels	C305-EL010042-S	14122001	04/07/2014	INSTALLED	C305-EL010042	90622.816	35405.030	101.323	14.001	14.007	13.974
Electrolevels	C305-EL010043-S	14125007	04/07/2014	INSTALLED	C305-EL010043	90625.818	35405.369	101.534	16.145	15.997	16.000
Electrolevels	C305-EL010044-S	14125008	04/07/2014	INSTALLED	C305-EL010044	90628.833	35405.719	101.541	10.279	9.998	9.942
Electrolevels	C305-EL010045-S	14125009	04/07/2014	INSTALLED	C305-EL010045	90631.799	35406.026	101.885	16.637	15.988	16.029

Summary Installed Instrumentation - Electrolevels											
Sensor Type	Sensor ID	Sensor Serial Number	Date Installation	Status	Monitoring ID	Location MONR			Commissioning Readings (mm)		
						Easting X (m)	Northings Y (m)	Elevation Z (mATD)	08/07/2014		
Electrolevels	C305-EL010046-S	14125010	04/07/2014	INSTALLED	C305-EL010046	90634.726	35406.467	101.656	-2.148	-2.019	-1.883
					C305-EL010047	90634.445	35409.588	101.913	-2.249	-1.968	-1.919
Electrolevels	C305-EL010047-S	14121014	04/07/2014	INSTALLED	C305-EL010048	90637.075	35410.148	101.738	-2.498	-1.975	-1.955
					C305-EL010049	90640.213	35410.229	101.538	-1.536	-1.485	-1.435
Electrolevels	C305-EL010048-S	14121013	04/07/2014	INSTALLED	C305-EL010050	90643.100	35410.569	101.520	0.015	0.006	0.033
					C305-EL010051	90646.074	35410.727	101.545	0.000	0.000	0.000

IRS Installation Record Sheets - Levelling Points							
Sensor Type	Monitoring ID	Date Installation	Status	Location MONR	Location MONR	Location MONR	Commissioning Reading
				Eastings X	Northings Y	Elevation Z	
Long Levelling	C305-LP015501	02/06/2014	INSTALLED	90500.860	35389.275	101.325	101.131
Long Levelling	C305-LP015502	02/06/2014	INSTALLED	90503.816	35389.777	101.253	101.141
Long Levelling	C305-LP015503	02/06/2014	INSTALLED	90506.765	35390.191	101.250	101.139
Long Levelling	C305-LP015504	02/06/2014	INSTALLED	90509.717	35390.664	101.280	101.152
Long Levelling	C305-LP015505	30/05/2014	INSTALLED	90512.699	35391.149	101.306	101.182
Long Levelling	C305-LP015506	30/05/2014	INSTALLED	90515.631	35391.619	101.333	101.198
Long Levelling	C305-LP015507	30/05/2014	INSTALLED	90518.578	35392.084	101.363	101.224
Long Levelling	C305-LP015508	30/05/2014	INSTALLED	90521.568	35392.533	101.426	101.248
Long Levelling	C305-LP015509	28/05/2014	INSTALLED	90524.519	35392.986	101.421	101.266
Long Levelling	C305-LP015510	28/05/2014	INSTALLED	90527.500	35393.411	101.442	101.288
Long Levelling	C305-LP015511	28/05/2014	INSTALLED	90530.479	35393.912	101.485	101.293
Long Levelling	C305-LP015512	26/05/2014	INSTALLED	90533.444	35394.380	101.494	101.310
Long Levelling	C305-LP015513	26/05/2014	INSTALLED	90536.397	35394.837	101.479	101.335
Long Levelling	C305-LP015514	26/05/2014	INSTALLED	90539.353	35395.234	101.491	101.336
Long Levelling	C305-LP015515	26/05/2014	INSTALLED	90542.350	35395.714	101.517	101.362
Long Levelling	C305-LP015516	26/05/2014	INSTALLED	90545.300	35396.145	101.514	101.378
Long Levelling	C305-LP015517	22/05/2014	INSTALLED	90548.285	35396.569	101.559	101.398
Long Levelling	C305-LP015518	22/05/2014	INSTALLED	90551.264	35396.940	101.553	101.442
Long Levelling	C305-LP015519	22/05/2014	INSTALLED	90554.217	35397.449	101.571	101.422
Long Levelling	C305-LP015520	22/05/2014	INSTALLED	90557.207	35397.821	101.580	101.422
Long Levelling	C305-LP015521	21/05/2014	INSTALLED	90560.218	35398.232	101.546	101.387
Long Levelling	C305-LP015522	21/05/2014	INSTALLED	90563.187	35398.706	101.493	101.354
Long Levelling	C305-LP015523	21/05/2014	INSTALLED	90566.157	35399.060	101.479	101.338
Long Levelling	C305-LP015524	21/05/2014	INSTALLED	90569.074	35399.338	101.455	101.305
Long Levelling	C305-LP015525	03/06/2014	INSTALLED	90572.060	35399.542	101.313	101.257
Long Levelling	C305-LP015526	03/06/2014	INSTALLED	90575.080	35399.754	101.310	101.265
Long Levelling	C305-LP015527	03/06/2014	INSTALLED	90578.076	35400.070	101.330	101.281
Long Levelling	C305-LP015528	03/06/2014	INSTALLED	90581.059	35400.372	101.334	101.303
Long Levelling	C305-LP015529	04/06/2014	INSTALLED	90584.056	35400.681	101.331	101.290
Long Levelling	C305-LP015530	04/06/2014	INSTALLED	90587.031	35401.050	101.339	101.294
Long Levelling	C305-LP015531	04/06/2014	INSTALLED	90590.005	35401.524	101.339	101.283
Long Levelling	C305-LP015532	06/06/2014	INSTALLED	90593.004	35401.854	101.350	101.288
Long Levelling	C305-LP015533	06/06/2014	INSTALLED	90596.001	35402.131	101.360	101.291
Long Levelling	C305-LP015534	06/06/2014	INSTALLED	90598.983	35402.371	101.357	101.309
Long Levelling	C305-LP015535	06/06/2014	INSTALLED	90601.957	35402.737	101.367	101.321
Long Levelling	C305-LP015536	09/06/2014	INSTALLED	90604.912	35403.125	101.387	101.334
Long Levelling	C305-LP015537	09/06/2014	INSTALLED	90607.913	35403.435	101.351	101.307
Long Levelling	C305-LP015538	09/06/2014	INSTALLED	90610.929	35403.723	101.327	101.293
Long Levelling	C305-LP015539	09/06/2014	INSTALLED	90613.878	35404.080	101.325	101.266
Long Levelling	C305-LP015540	10/06/2014	INSTALLED	90616.735	35404.505	101.218	101.372
Long Levelling	C305-LP015541	10/06/2014	INSTALLED	90619.818	35404.745	101.160	101.280
Long Levelling	C305-LP015542	10/06/2014	INSTALLED	90622.816	35405.030	101.323	101.268
Long Levelling	C305-LP015543	10/06/2014	INSTALLED	90625.818	35405.369	101.534	101.379
Long Levelling	C305-LP015544	10/06/2014	INSTALLED	90628.833	35405.719	101.541	101.390
Long Levelling	C305-LP015545	10/06/2014	INSTALLED	90631.799	35406.026	101.885	101.382
Long Levelling	C305-LP015546	12/06/2014	INSTALLED	90634.726	35406.467	101.656	101.406
Long Levelling	C305-LP015547	12/06/2014	INSTALLED	90634.445	35409.588	101.913	101.363
Long Levelling	C305-LP015548	12/06/2014	INSTALLED	90637.075	35410.148	101.738	101.329
Long Levelling	C305-LP015549	12/06/2014	INSTALLED	90640.213	35410.229	101.538	101.297
Long Levelling	C305-LP015550	12/06/2014	INSTALLED	90643.100	35410.569	101.520	101.284
Long Levelling	C305-LP015551	12/06/2014	INSTALLED	90646.074	35410.727	101.545	101.259

Note: The difference between the elevation Z reading and commissioning readings results from the use of a GPS staff and manual levelling respectively.

- 10 Soft ground pin

C305-LP027101 to C305-LP027105 (SECTION 1)

IRS Installation Record Sheets							
Sensor Type	Monitoring ID	Date Installation	Status	Location MONR	Location MONR	Location MONR	Commissioning Reading
				Eastings X	Northings Y	Elevation Z	
Soft Ground Pin	C305-LP027101	04/08/2014	INSTALLED	90527.379	3581.048	102.471	100.963
Soft Ground Pin	C305-LP027102	04/08/2014	INSTALLED	90527.260	3583.549	102.410	100.938
Soft Ground Pin	C305-LP027103	04/08/2014	INSTALLED	90527.143	35383.549	102.417	100.959
Soft Ground Pin	C305-LP027104	04/08/2014	INSTALLED	90526.933	35386.135	102.242	100.783
Soft Ground Pin	C305-LP027105	04/08/2014	INSTALLED	80526.733	35388.713	102.436	100.944

Note: The difference between the elevation Z reading and commissioning readings results from the use of a GPS staff and manual levelling respectively.

C305-LP027201 to C305-LP027205 (SECTION 2)

IRS Installation Record Sheets							
Sensor Type	Monitoring ID	Date Installation	Status	Location MONR	Location MONR	Location MONR	Commissioning Reading
				Eastings X	Northings Y	Elevation Z	
Soft Ground Pin	C305-LP027201	05/08/2014	INSTALLED	90583.618	35385.758	102.206	100.744
Soft Ground Pin	C305-LP027202	05/08/2014	INSTALLED	90583.476	35388.247	102.251	100.796
Soft Ground Pin	C305-LP027203	05/08/2014	INSTALLED	90583.332	35390.912	102.106	100.643
Soft Ground Pin	C305-LP027204	05/08/2014	INSTALLED	90583.218	35393.406	102.124	100.661
Soft Ground Pin	C305-LP027205	05/08/2014	INSTALLED	90583.150	35395.983	102.341	100.881

Note: The difference between the elevation Z reading and commissioning readings results from the use of a GPS staff and manual levelling respectively.

5. CONSTRUCTION ACTIVITY

TBM Passage

Eastbound Drive-G Rings 430 (CRL ch. 86650)– 518 (CRL ch. 85800) 15/10/2014 to 19/10/2014

Westbound Drive-G Rings 435(CRL ch. 86650) – 523 (CRL ch. 85800) 05/08/2014 to 11/08/2014

Stoppage Period: No stoppage periods observed in either of them.

The periods of TBM passage and stoppage are related to the rings located close to the instrumentation included in this close out report.

Ground Treatment

Micro piling	24/10/2013 to 20/01/2014
Trial grouting	12/12/2013 to 20/01/2014
Vertical TAM drilling	02/12/2013 to 12/02/2014
Vertical TAM grouting	20/01/2014 to 15/07/2014
Soil mixing	17/04/2014 to 14/05/2014
Sub-horizontal TAM drilling	22/04/2014 to 04/07/2014
Sub-horizontal TAM grouting	12/05/2014 to 17/07/2014
EB eye ground treatment	01/10/2014 to 14/10/2014

The information related to the grouting is captured and further explained in the following documents:

- C305-DSJ-N2-CER-CR144_PT003-50024.
- SRG minutes: C305-DSJ-C2-MRC-CR144_PT003-50001 to -50146.
- C305-DSJ-C-RGN-CRG03-50238 Rev 4.0 (Close Out Report for DLR Royal Victoria Station to VDP).

6. SUMMARY OF THE DATA

Note: For the following data plots (including data presented in Appendix B and C) #N/A refers to instances where readings were not taken for that sensor (e.g. damaged sensor, not access, etc.).

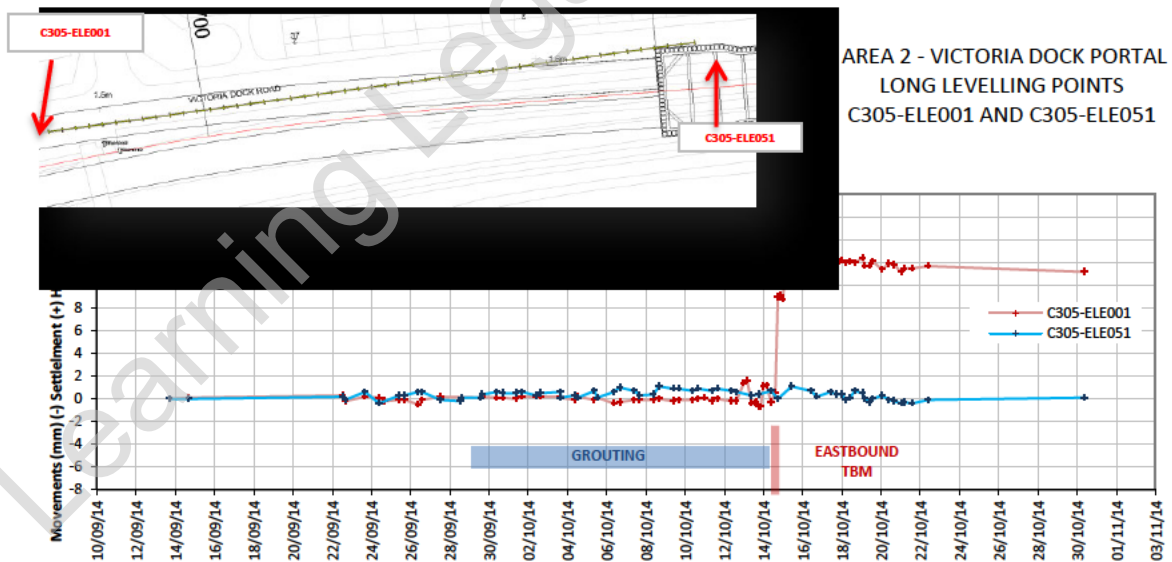
ELECTROLEVELS AND LONG LEVELLING POINTS

- Instrument Type: Electrolevels and long levelling points
- Quantity:
 - 50 Electrolevels: C305-EL010001 to C305-EL010050
 - 51 Long levelling points: C305-LP015501 to C305-LP015551

LONG LEVELLING POINTS C305-ELE001 AND C305-ELE051

The graph below shows readings for two long levelling points associated with the electrolevels. They are located at the beginning and at the end of the electrolevels line, C305-ELE001 and C305-ELE051, corresponding to the long levelling points C305-LP015501 and C305-LP015551, respectively. These levelling points are used to capture and include the potential settlement/heave that the first sensor may have (taking manual readings). When drawing the deformation's graph of the electrolevels' beam, for the first EL in the beam the movement of the edge would be the levelling point's settlement/heave added to the movement of the EL itself.

The electrolevels were installed concurrent to the ground treatment. It was agreed to adopt the profile of the levelling points (LP019002 to LP019550) over the Gas Main as the first profile for the EL, and then take new readings to evaluate the further deformation against this first profile (see SRG minutes C305-DSJ-C2-MRC-CR144_PT003-50125 held on 07/07/2014).

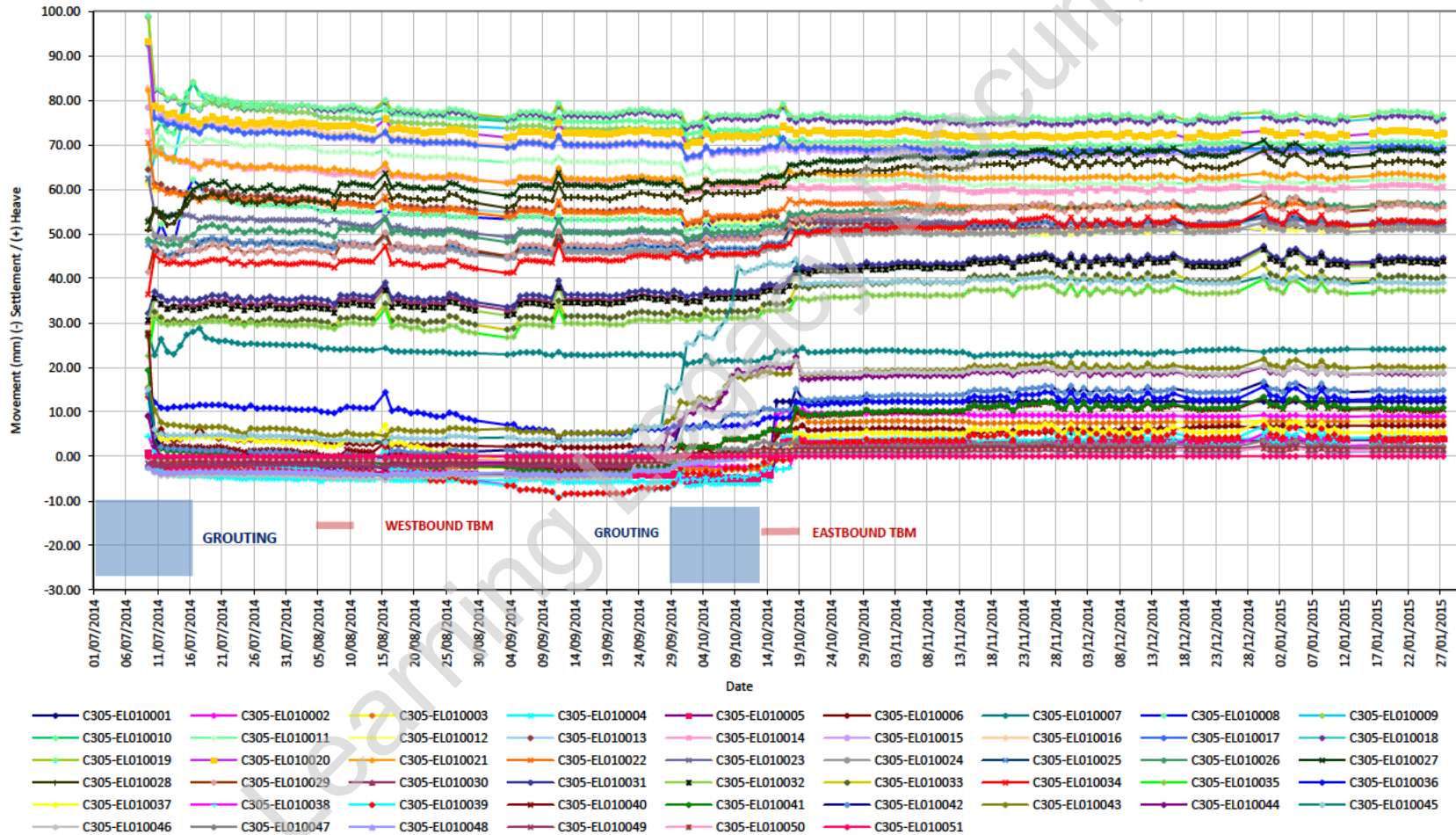


In the settlement data plot shown above a heave can be observed in the long levelling point at the beginning of the electrolevel line (C305-ELE001). This heave of 13 mm was registered between 13/10/14 and 15/10/14 during the Eastbound TBM crossing. No TBM effect is observed at the end of the line (C305-ELE051).

ELECTROLEVELS C305-EL010001 TO C305-EL010051

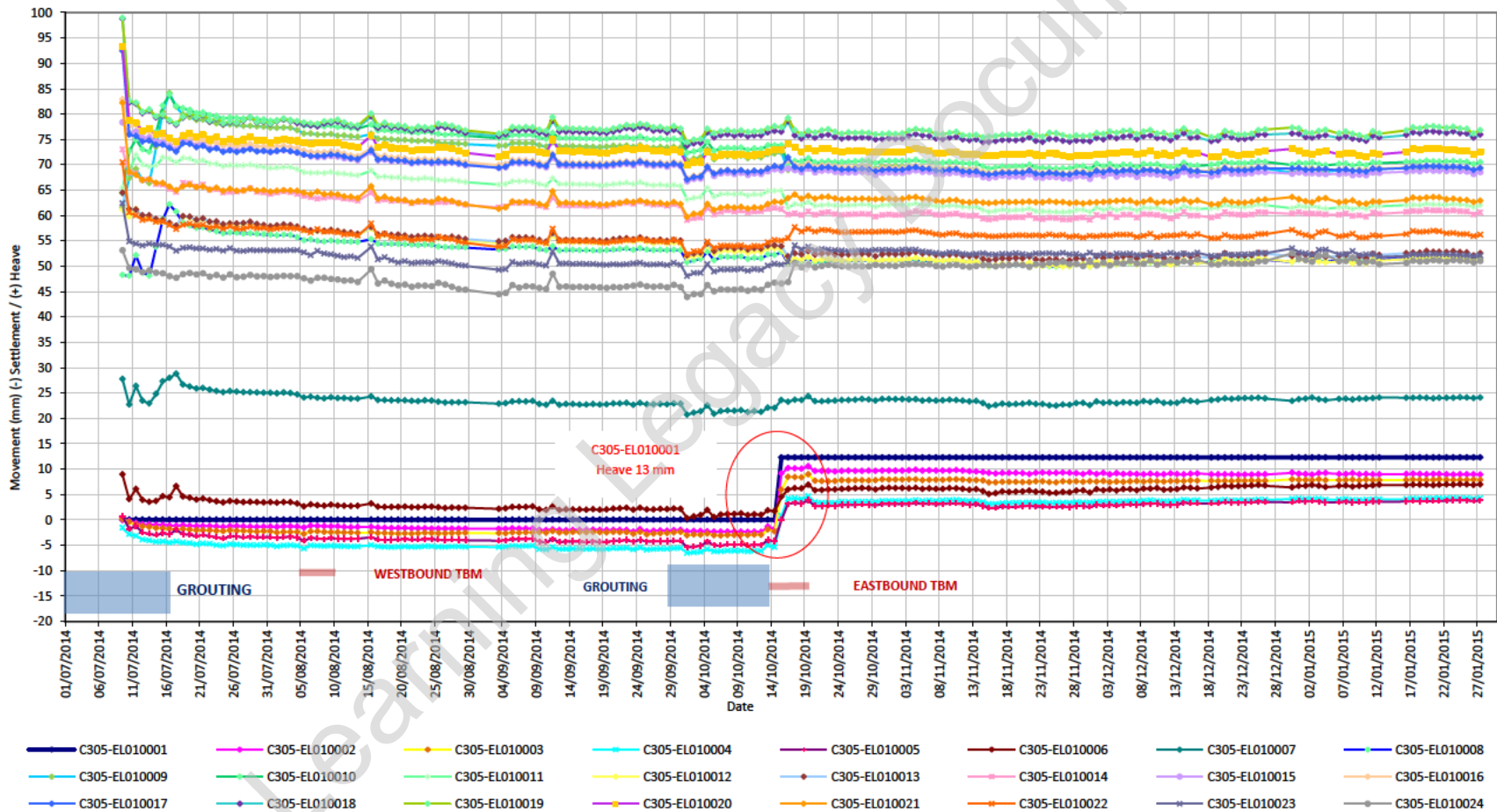
The following graphs show the series of data recorded in the electrolevels for the period between 09/07/2014 and 27/01/2015.

AREA 2. VICTORIA DOCK PORTAL
ELECTROLEVELS C305-EL010001 TO C305-EL010051

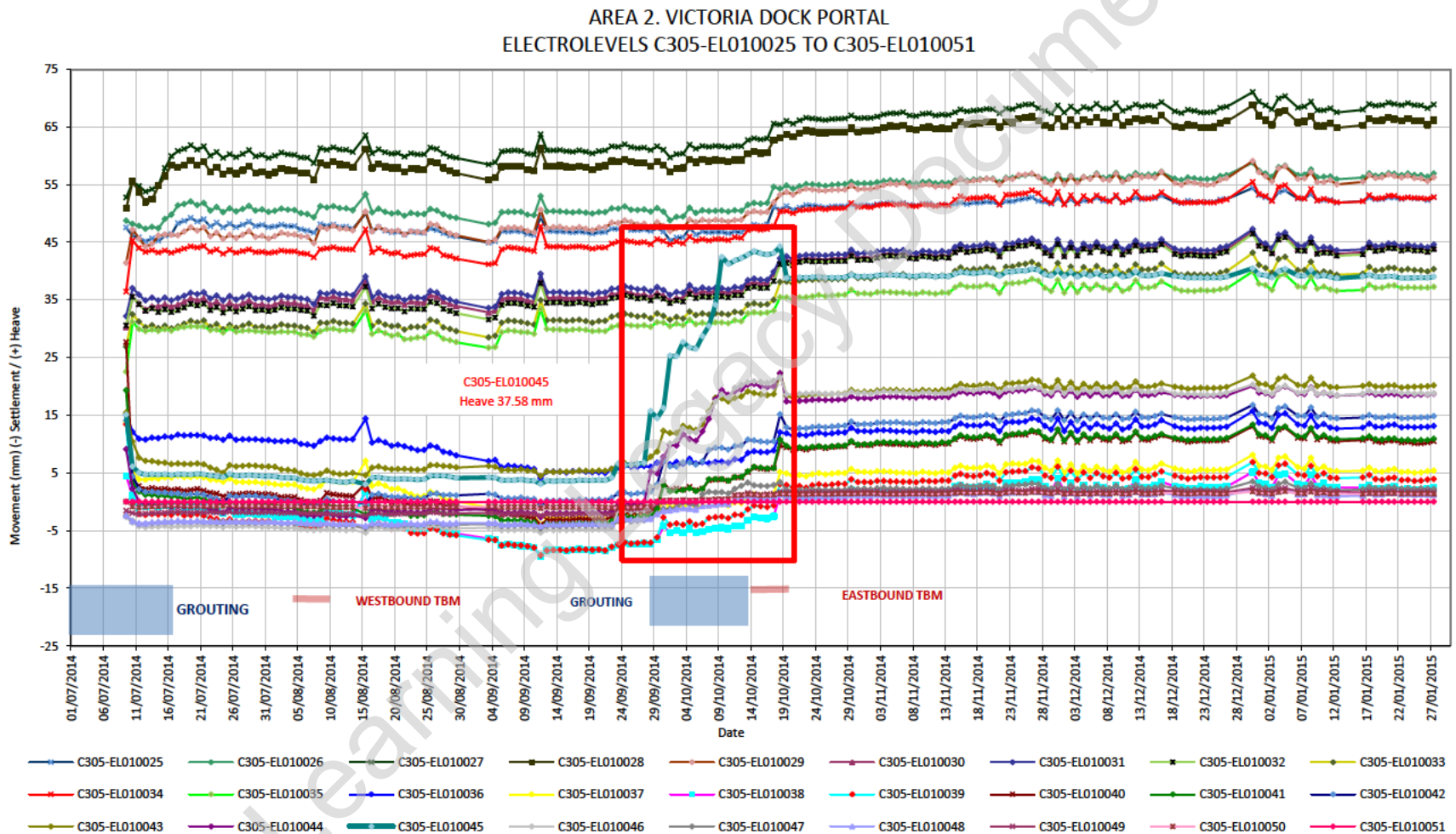


The following settlement data plot, for electrolevels between C305-EL010001 and C305-EL010024, registers a maximum heave of 13 mm in the electrolevel C305-EL010001 during the Eastbound TBM crossing. This effect can be observed in the first sensors, from C305-EL010001 to C305-EL010006.

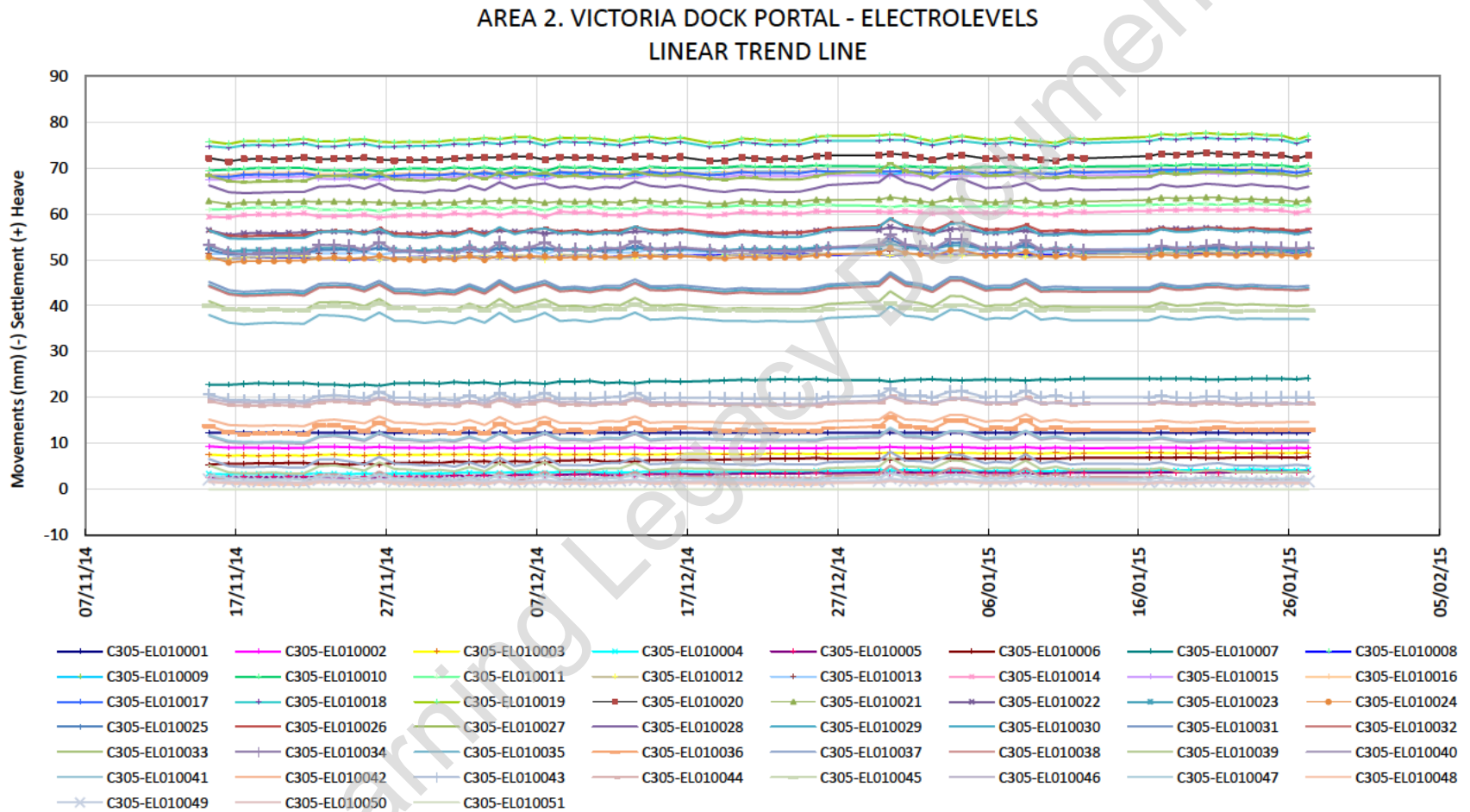
AREA 2. VICTORIA DOCK PORTAL
ELECTROLEVELS C305-EL010001 TO C305-EL010024



The following settlement data plot, for electrolevels between C305-EL010025 and C305-EL010051, registers a maximum heave of 37.58 mm in the electrolevel C305-EL010045 during the grouting activities close to Victoria Dock Portal and the Eastbound TBM crossing. The VDP adjacent electrolevels (C305-EL010042 and C305-EL010047) present the same effect with lower heaves.



The plot below shows the data used to calculate the linear trend line (15/11/2014 to 27/01/2015). See Appendix B: Electrolevels and long levelling point data.



The calculation of the predicted settlement over a one-year period is shown in the table below.

	Slope (Linear trendline) (mm/day)	Rate (mm/year)
C305-EL010001	0.0000	0.0000
C305-EL010002	-0.0015	-0.5399
C305-EL010003	0.0080	2.9227
C305-EL010004	0.0136	4.9659
C305-EL010005	0.0179	6.5268
C305-EL010006	0.0218	7.9646
C305-EL010007	0.0192	7.0118
C305-EL010008	0.0174	6.3434
C305-EL010009	0.0116	4.2270
C305-EL010010	0.0125	4.5737
C305-EL010011	0.0137	4.9938
C305-EL010012	0.0156	5.6952
C305-EL010013	0.0157	5.7149
C305-EL010014	0.0161	5.8785
C305-EL010015	0.0133	4.8650
C305-EL010016	0.0111	4.0470
C305-EL010017	0.0151	5.5050
C305-EL010018	0.0172	6.2651
C305-EL010019	0.0164	5.9697
C305-EL010020	0.0118	4.3145
C305-EL010021	0.0094	3.4131
C305-EL010022	0.0088	3.2105
C305-EL010023	0.0012	0.4483
C305-EL010024	0.0169	6.1563
C305-EL010025	0.0144	5.2397
C305-EL010026	0.0171	6.2347
C305-EL010027	0.0179	6.5329
C305-EL010028	0.0118	4.2991
C305-EL010029	0.0139	5.0694
C305-EL010030	0.0105	3.8441
C305-EL010031	0.0099	3.6200
C305-EL010032	0.0111	4.0655
C305-EL010033	0.0081	2.9389
C305-EL010034	0.0111	4.0537
C305-EL010035	0.0085	3.1196
C305-EL010036	0.0075	2.7493
C305-EL010037	0.0019	0.7027
C305-EL010038	0.0076	2.7803
C305-EL010039	-0.0001	-0.0526
C305-EL010040	-0.0003	-0.0965
C305-EL010041	0.0022	0.8046
C305-EL010042	0.0069	2.5334
C305-EL010043	0.0054	1.9725
C305-EL010044	0.0017	0.6332
C305-EL010045	-0.0056	-2.0463
C305-EL010046	-0.0037	-1.3647
C305-EL010047	-0.0009	-0.3360
C305-EL010048	0.0019	0.6775
C305-EL010049	0.0001	0.0472
C305-EL010050	0.0000	-0.0029
C305-EL010051	0.0000	0.0000

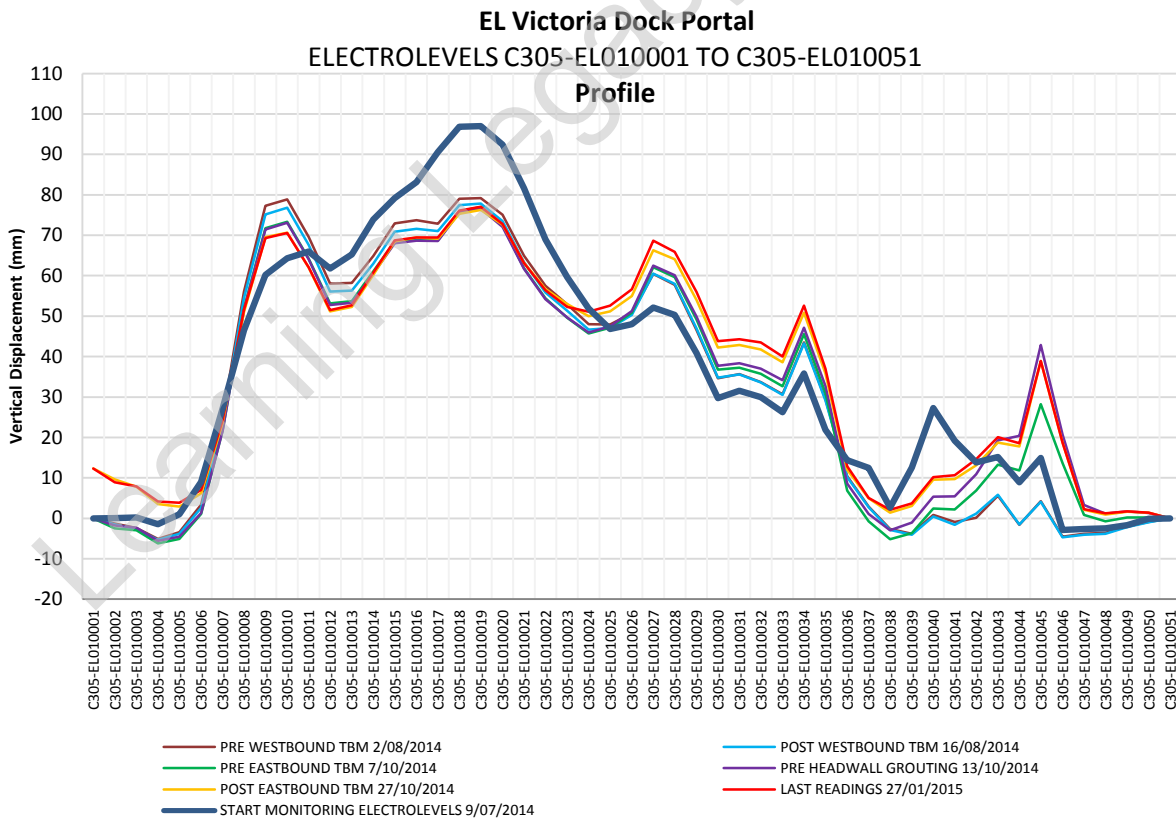
Note: All the movements (except for the slope) are in mm. (-) Settlement / (+) Heave

Using the available data from November 2014 to January 2015 a linear trend line is estimated for every electrolevel. The adjustment has been carried out using Excel. This application uses the method of least squares to find a line that best fits the points.

The table above shows the slope or gradient of the adjusted line for each electrolevel. The annual rate (mm/year) is determined by the slope of this line for 365 days ahead. In this case the rate is an extrapolation of automatic data taken from November 2014 to January 2015, when the ground was still showing some movement. In fact, following agreement with third party asset owners, the electrolevels were removed in February 2015, as per Crossrail instruction C305-PMI-00866, due to the area being handed over to other contractor. Manual monitoring was carried out until July 2015; however this revealed to be not effective because of difficult accessibility and being the area a construction site. For details on manual monitoring see page 20.

Nevertheless, for this area, an acceptably low rate of long term settlement can be demonstrated by the monitoring data of C305-LP010300-C305-LP010420 and C305-LP026184-C305-LP026195, C305-LP015610 to C305-LP015720 and C340-LP00004 to C340-LP0035A, presented in the next pages.

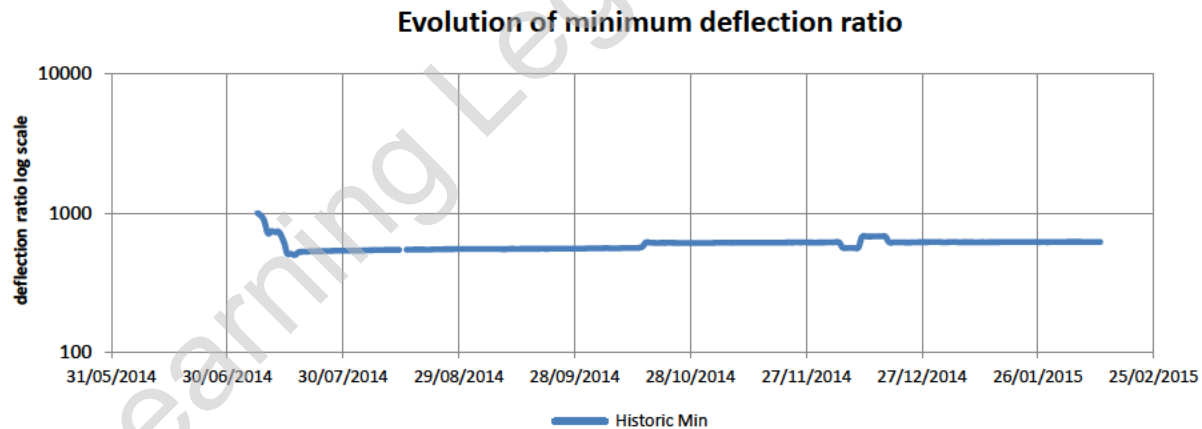
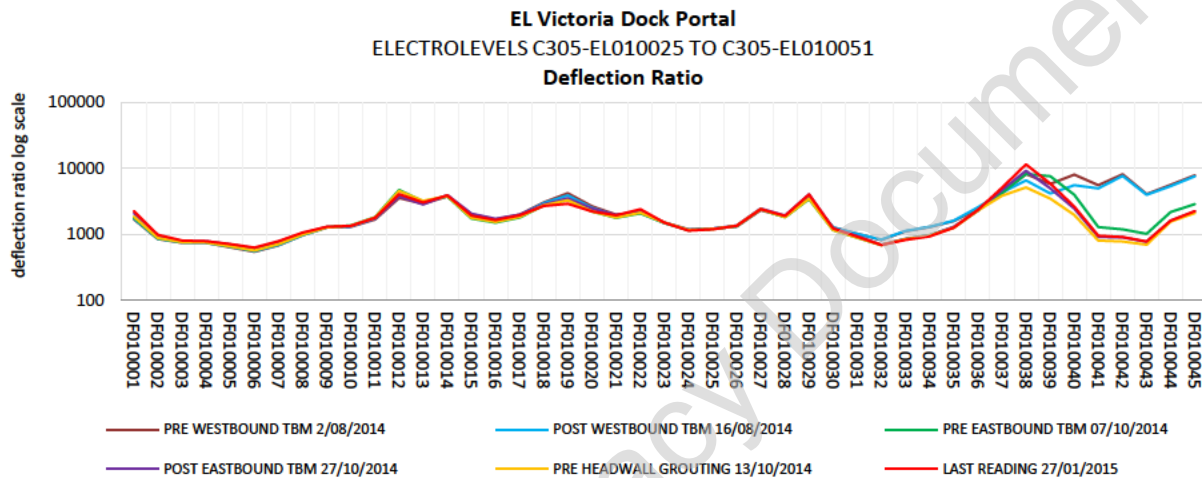
Profiles of the electrolevel line are shown in the graph below. The TBM passage ran parallel to this electrolevel line.



Heave occurred at the portal (right hand side of the graph above) during headwall grouting activities. This was recorded to a maximum value of approximately 40mm. Additionally, heave as high as 10mm was recorded away from the portal (left hand side of the graph above) during Eastbound TBM transit. No significant movement due to EB TBM tunnelling occurred at the portal.

The graph “Start Monitoring Electrolevels 09/07/2014” in the graph above is based on the levelling point line C305-LP019002 to C305-LP019550.

The deflection ratio analysis is shown in the graphs below.



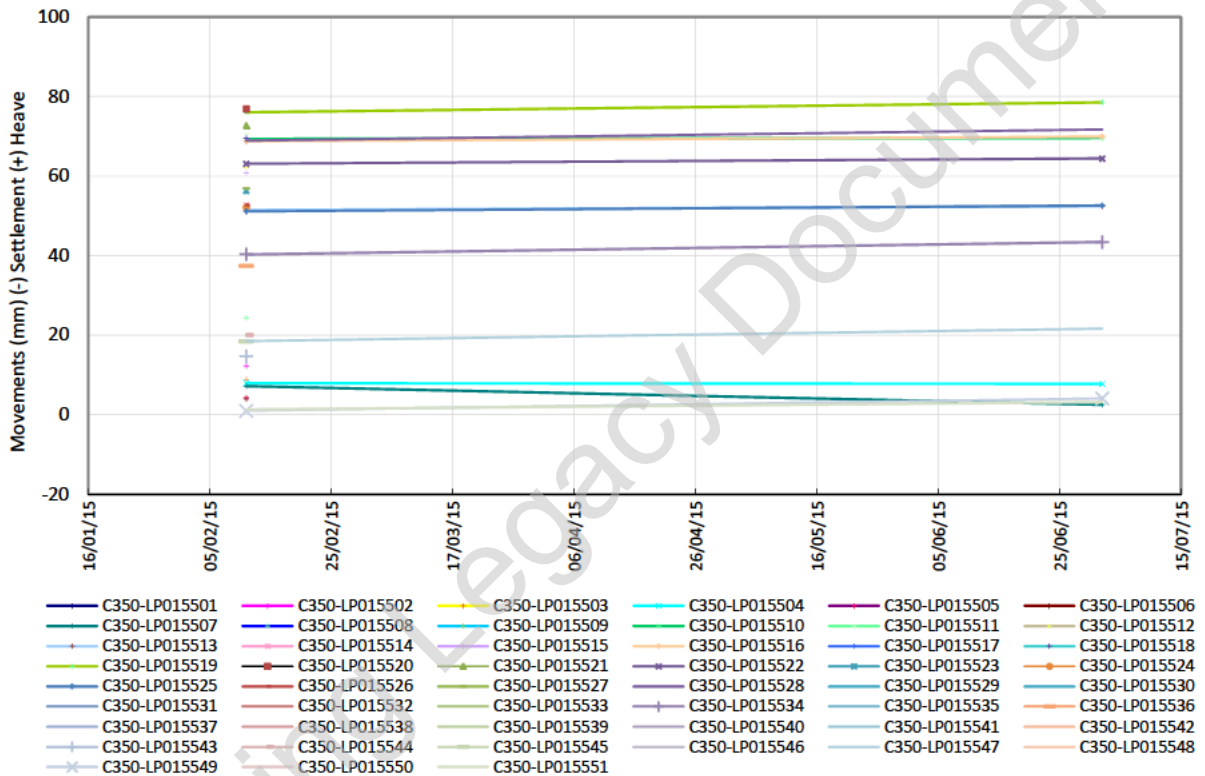
The 1/500 deflection ratio limit never was reached.

LEVELLING POINTS C305-LP015501 TO C305-LP015551

(Manual monitoring of Electrolevel beam pins)

Manual monitoring for post electrolevel decommissioning is presented in the graph below. The readings were taken in February and July 2015, due to difficult accessibility and being the area a construction site. For instance, monitoring was possible on only 13 points; also an anomalous reading is reported for C305-LP015507, which may indicate it being knocked.

AREA 2. VICTORIA DOCK PORTAL -LEVELLING POINTS C305-LP015501-C305-LP1551



The table below lists the annual settlement rate for the levelling points in this array.

	Registered movement (mm)		Rate (mm/year)
	16/02/2015	02/07/2015	
C305-LP015501	#N/A	#N/A	#N/A
C305-LP015502	12.30	#N/A	#N/A
C305-LP015503	8.95	#N/A	#N/A
C305-LP015504	7.97	7.77	-0.537
C305-LP015505	4.33	#N/A	#N/A
C305-LP015506	3.95	#N/A	#N/A
C305-LP015507	7.23	2.53	-12.612
C305-LP015508	24.34	#N/A	#N/A
C305-LP015509	51.65	#N/A	#N/A
C305-LP015510	69.40	69.60	0.537
C305-LP015511	70.59	#N/A	#N/A
C305-LP015512	62.09	#N/A	#N/A
C305-LP015513	51.52	52.42	2.415
C305-LP015514	52.70	#N/A	#N/A
C305-LP015515	60.79	#N/A	#N/A
C305-LP015516	68.73	69.93	3.220
C305-LP015517	69.46	#N/A	#N/A
C305-LP015518	69.45	#N/A	#N/A
C305-LP015519	76.04	78.54	6.709
C305-LP015520	76.97	#N/A	#N/A
C305-LP015521	72.70	#N/A	#N/A
C305-LP015522	63.10	64.40	3.489
C305-LP015523	56.36	#N/A	#N/A
C305-LP015524	52.26	#N/A	#N/A
C305-LP015525	51.12	52.62	4.025
C305-LP015526	52.74	#N/A	#N/A
C305-LP015527	56.89	#N/A	#N/A
C305-LP015528	68.89	71.69	7.514
C305-LP015529	66.07	#N/A	#N/A
C305-LP015530	56.22	#N/A	#N/A
C305-LP015531	43.98	#N/A	#N/A
C305-LP015532	44.59	#N/A	#N/A
C305-LP015533	43.81	#N/A	#N/A
C305-LP015534	40.33	43.43	8.319
C305-LP015535	52.90	#N/A	#N/A
C305-LP015536	37.41	#N/A	#N/A
C305-LP015537	13.23	#N/A	#N/A
C305-LP015538	5.41	#N/A	#N/A
C305-LP015539	2.41	#N/A	#N/A
C305-LP015540	3.89	#N/A	#N/A
C305-LP015541	10.35	#N/A	#N/A
C305-LP015542	10.78	#N/A	#N/A
C305-LP015543	14.68	#N/A	#N/A
C305-LP015544	20.07	#N/A	#N/A
C305-LP015545	18.48	#N/A	#N/A
C305-LP015546	38.75	#N/A	#N/A
C305-LP015547	18.48	21.68	8.587
C305-LP015548	2.02	#N/A	#N/A
C305-LP015549	1.03	4.13	8.319
C305-LP015550	1.65	#N/A	#N/A
C305-LP015551	1.35	3.15	4.830
	Rate less than -2.5 mm/year	Rate less than 2 mm/year	92%
	Rate greater than -3.5 mm/year	Rate less than 3 mm/year	93%

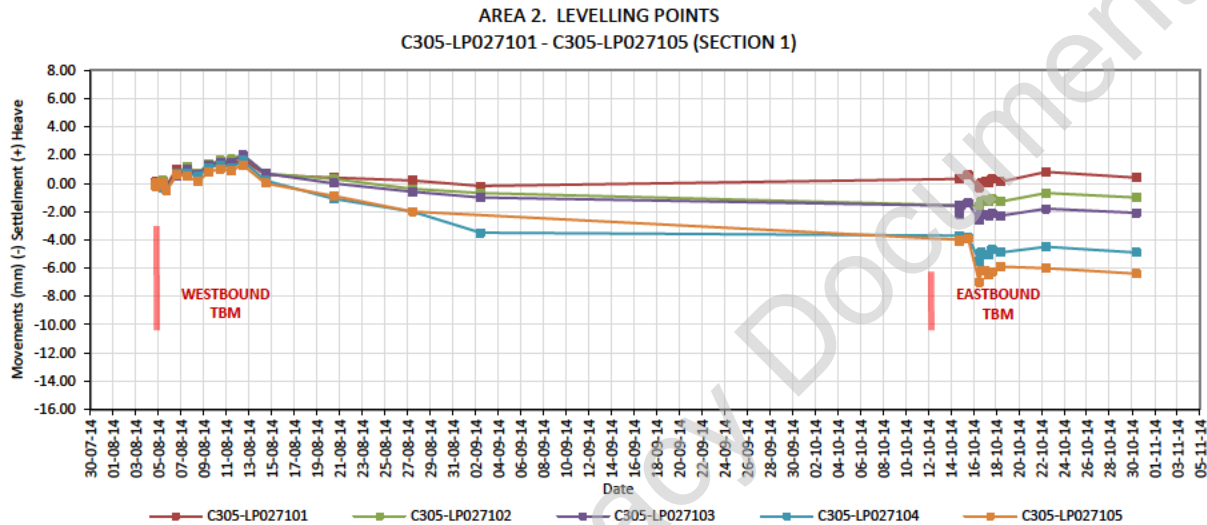
The percentage of the levelling points with a settlement rate less than 2 mm/year is 92%.

SOFT GROUND PINS

- Instrument Type: SOFT GROUND PINS
- Quantity: 10

Refer to Appendix A for instrumentation location and Appendix C for instrumentation data.

C305-LP027101 to C305-LP027105 (SECTION 1)



In the settlement data plot shown above, there is a heave of 2 mm followed by a maximum total settlement of 6 mm after the Westbound TBM crossing. This section is located in the area above the Westbound axis. The Eastbound TBM crossing causes a slighter effect with a maximum settlement of 3 mm in the closest EB levelling point.

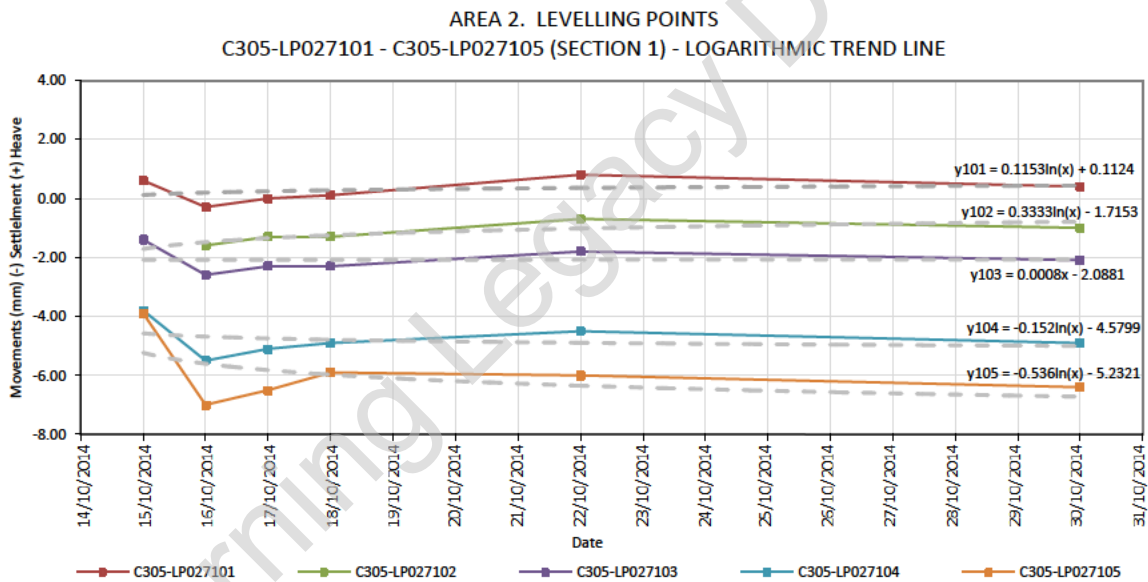
Using the last readings from 15/10/14 to 30/10/14 shown in the next table a logarithmic trend line is estimated. The adjustment has been done using Excel. This best fit curved line has been used due to the trend observed in the graphic. The rate of change in the data decreases quickly and after that remains stable.

The predicted settlement is calculated 365 days after the last reading. The difference between the predicted settlement and the one, corresponding to the last date with available readings, is the rate (mm/year). As can be seen in the next table the average settlement rate is -0.25 mm/year.

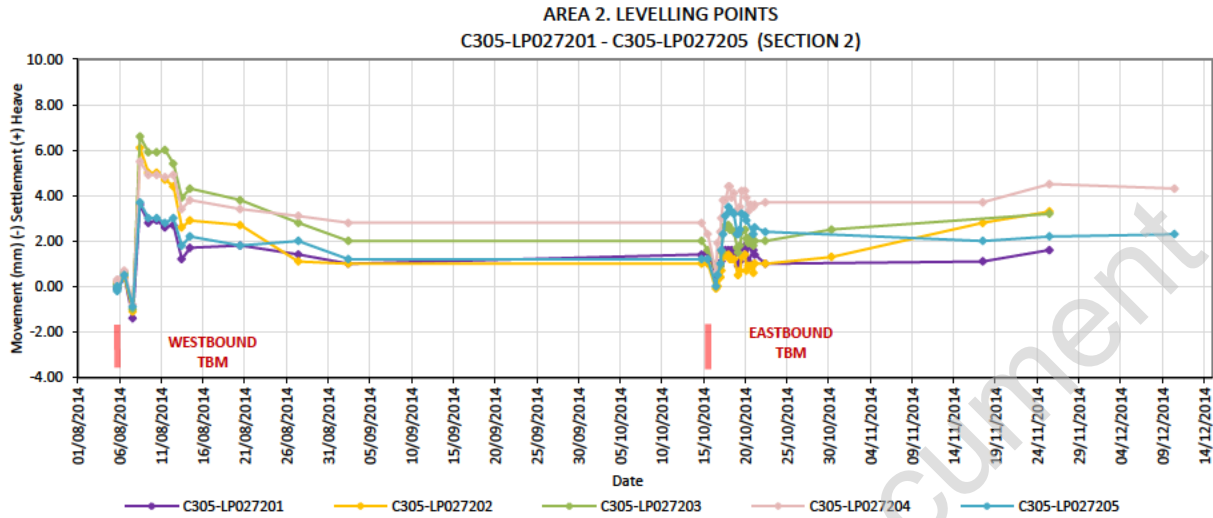
	RECORDED MOVEMENT (mm)						LOGARITHMIC TRENDLINE		Predicted Movement (mm) 31/10/15	Rate mm/Year
	15/10/14	16/10/14	17/10/14	18/10/14	22/10/14	30/10/14	A*LN(X)	B		
C305-LP027101	0.60	-0.30	0.00	0.10	0.80	0.40	0.1153	0.1124	0.798	0.40
C305-LP027102	#N/A	-1.60	-1.30	-1.30	-0.70	-1.00	0.3333	-1.7153	0.265	1.27
C305-LP027103	-1.40	-2.60	-2.30	-2.30	-1.80	-2.10	-0.0730	-1.9862	-2.420	-0.32
C305-LP027104	-3.80	-5.50	-5.10	-4.90	-4.50	-4.90	-0.1520	-4.5799	-5.483	-0.58
C305-LP027105	-3.90	-7.00	-6.50	-5.90	-6.00	-6.40	-0.5360	-5.2321	-8.417	-2.02

Note: All the movements (except for the logarithmic trendline) are in mm. (-) Settlement / (+) Heave
 #N/A: No data

The next plot shows the Excel trend line adjustment for every soft ground pins. In this particular case a logarithmic trend line is used to determine settlement rate because of the short period of time used to do the analysis.



C305-LP027201 to C305-LP027205 (SECTION 2)



As can be seen in the previous graph, there is a maximum heave of 7.6 mm in the levelling point C305-LP027203 followed by a settlement of 4.6 mm after the Westbound TBM crossing. The section 2 is located in the area above the westbound axis as same as the Section 1, and 58 m away from Victoria Dock Portal.

The Eastbound TBM crossing causes a heave of 3.5 mm with a maximum settlement of 1 mm in the closest EB levelling point.

Using the last readings from 21/10/14 to 10/12/14 shown in the next table a logarithmic trend line is estimated. The adjustment has been done using Excel. This best fit curved line has been used due to the trend observed in the graphic. The rate of change in the data decreases quickly and after that remains stable.

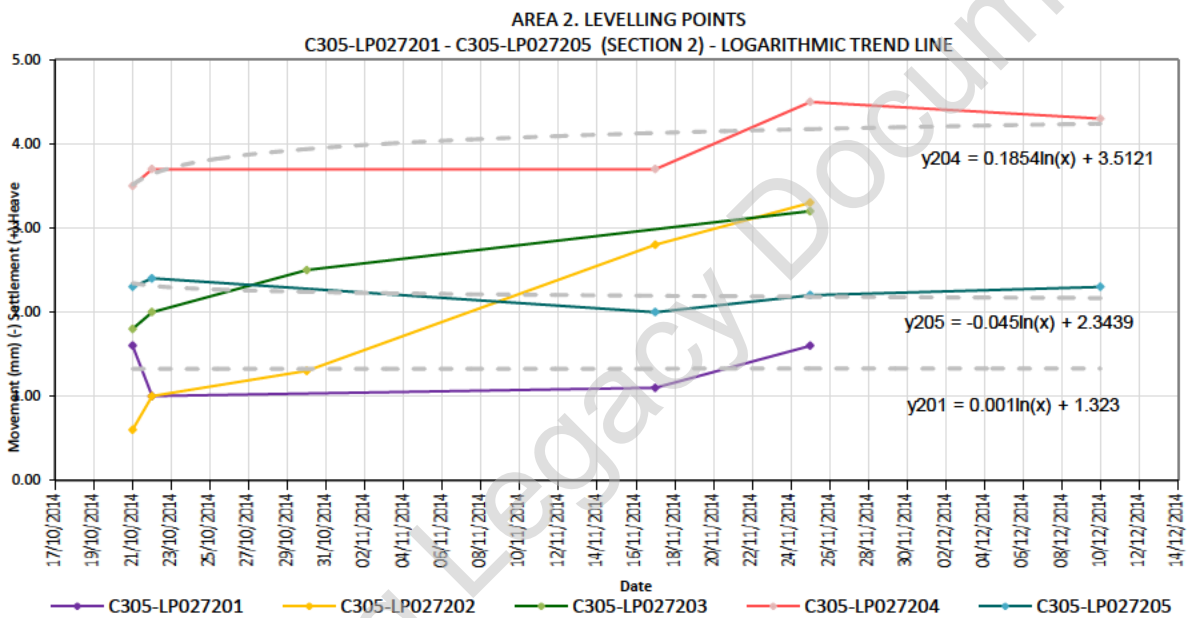
	RECORDED MOVEMENT (mm)						LOGARITHMIC TRENDLINE		Predicted Movement (mm)	Rate mm/Year
	21/10/14	22/10/14	30/10/14	17/11/14	25/11/14	10/12/14	A*LN(X)	B		
C305-LP027201	1.60	1.00	#N/A	1.10	1.60	#N/A	0.0010	1.3230	1.329	0.002
C305-LP027202	0.60	1.00	1.30	2.80	3.30	#N/A	-	-	-	-
C305-LP027203	1.80	2.00	2.50	#N/A	3.20	#N/A	-	-	-	-
C305-LP027204	3.50	3.70	#N/A	3.70	4.50	4.30	0.1854	3.5121	4.630	0.33
C305-LP027205	2.30	2.40	#N/A	2.00	2.20	2.30	-0.0450	2.3439	2.073	-0.23

Note: All the movements (except for the logarithmic trendline) are in mm. (-) Settlement / (+) Heave
 #N/A: No data

The predicted settlement is calculated 365 days after the last reading. The difference between the predicted settlement and the one, corresponding to the last date with available readings, is the rate (mm/year). As can be seen in the next table the average settlement rate is 0.03 mm/year.

The trend line for the levelling points C305-LP027202 and C305-LP027203 have been omitted. These points have been damaged due to TBM site works.

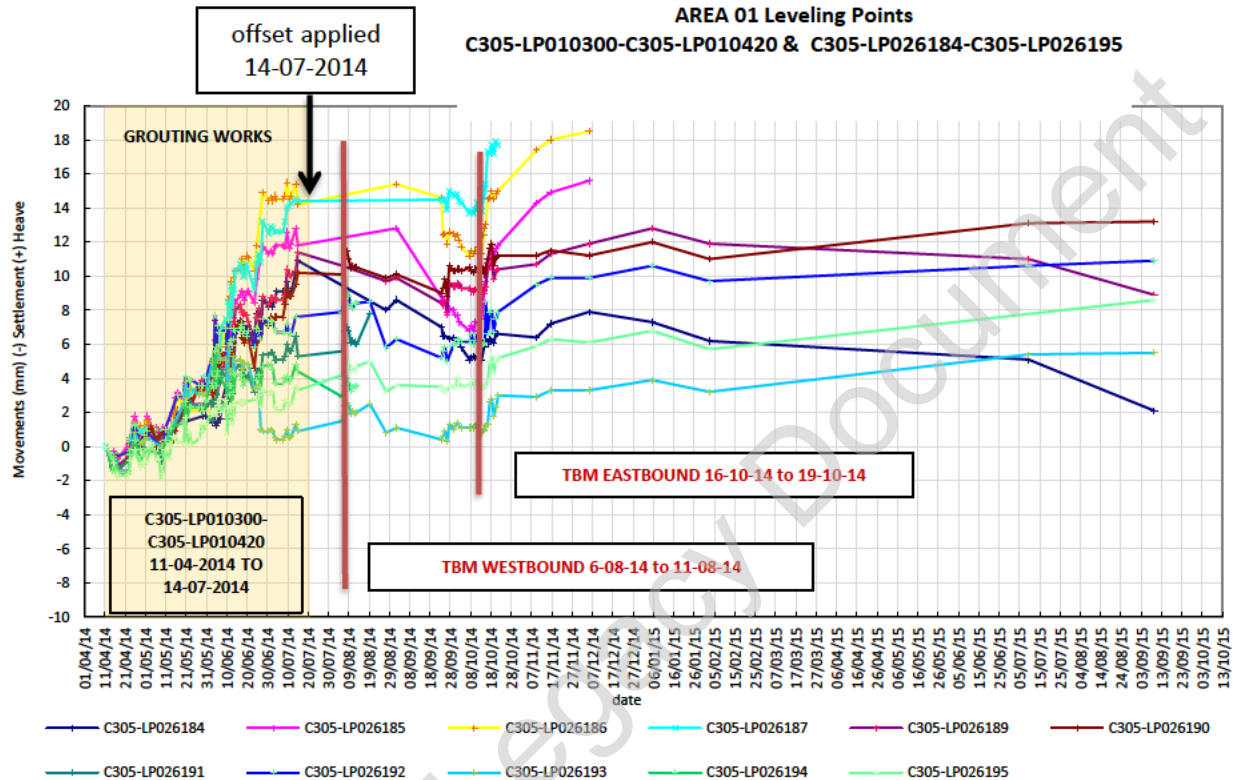
The next plot shows the Excel trend line adjustment for every soft ground pins. In this particular case a logarithmic trend line is used to determine settlement rate because of the short period of time used to do the analysis.



GROUTING AREA LEVELLING POINTS

Refer to Appendix A for instrumentation location and Appendix C for instrumentation data.

C305-LP010300-C305-LP010420 & C305-LP026184-C305-LP026195



The graph above presents the readings for array located to the north of the eastbound tunnel.

Section C305-LP010300-C305-LP010420 was installed to monitor ground treatment works between 11 April 2014 and 14 July 2014 for which historical movement is shown in the graph above. These points were destroyed in September 2014 due to construction works. Second array C305-LP026184-C305-LP026195 was installed 1m distance offset (north) and parallel to C305-LP010300-LP010420 on which survey was carried out on the 14 July 2014. Ground movement readings taken for the 14 July 2014 of instruments (C305-LP010300-C305-LP010420) were applied to the newly installed instruments (C305-LP026184-C305-LP026195). See offset values in the Table below.

	14/07/2014 OFFSET		15/07/2014 FIRST READING + OFFSET
C305-LP010310	10.2	C305-LP026184	10.9
C305-LP010320	12.8	C305-LP026185	11.8
C305-LP010330	15.4	C305-LP026186	14.2
C305-LP010340	14.5	C305-LP026187	14.4
C305-LP010360	10.3	C305-LP026189	11.4
C305-LP010370	9.5	C305-LP026190	10.2
C305-LP010380	6.5	C305-LP026191	5.3
C305-LP010390	7.6	C305-LP026192	7.6
C305-LP010400	1.3	C305-LP026193	0.9
C305-LP010410	4.8	C305-LP026194	4.4
C305-LP010420	3.5	C305-LP026195	3.3

Graph shows a maximum heave of 18.5 mm after the grouting works and TBMs transit.

In order to check whether the rate of change in the data has reached an acceptably small value, the last readings were used to calculate the annual projection.

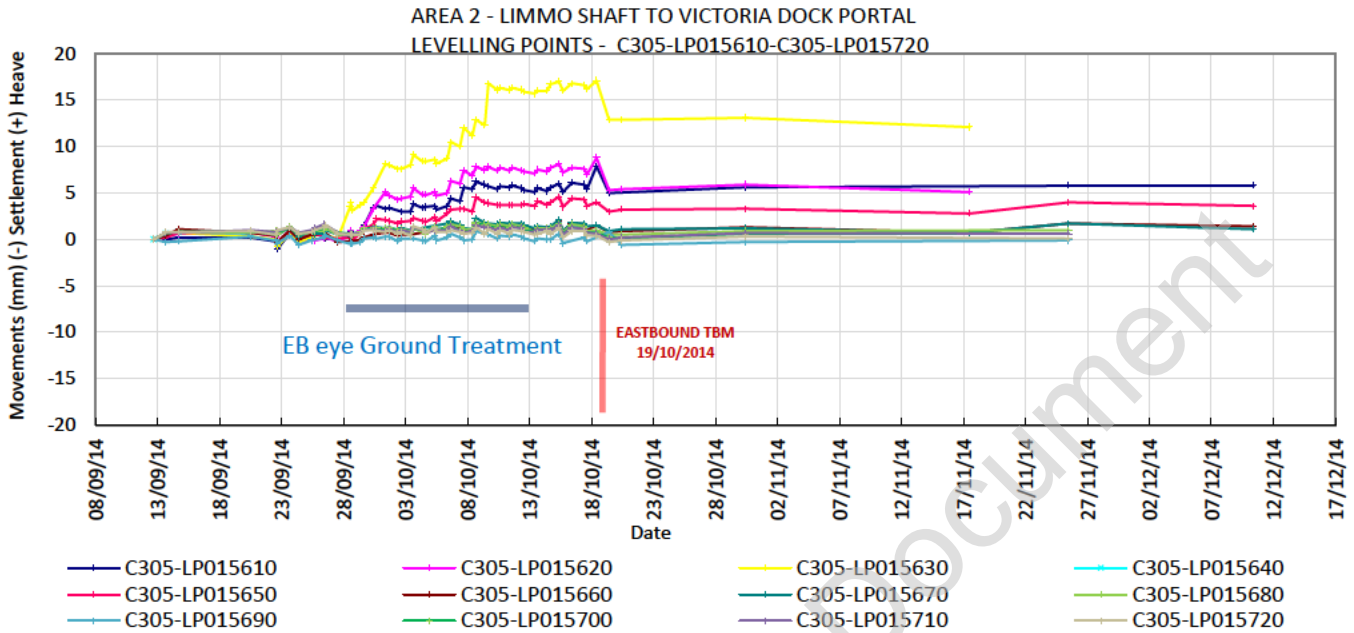
The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)				Rate mm/year
	05/01/2015	02/02/2015	09/07/2015	09/09/2015	
C305-LP026184	7.30	6.20	5.10	#N/A	-3.73
C305-LP026185	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP026186	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP026187	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP026189	12.80	11.90	11.00	#N/A	-3.056
C305-LP026190	12.00	11.00	13.10	13.20	2.728
C305-LP026191	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP026192	10.60	9.70	10.60	10.90	0.997
C305-LP026193	3.90	3.20	5.40	5.50	3.192
C305-LP026194	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP026195	6.80	5.70	#N/A	8.60	3.487
	Rate less than -2.5 mm/year		% less 2 mm/ year		67%
	Rate greater than -3.5 mm/year		% less 3 mm/ year		83%

Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of the levelling points with a settlement rate less than -2 mm/year is 67%; with a settlement rate less than -3 mm/year is 83%.

C305-LP015610 to C305-LP015720



The graph above shows a total maximum settlement of -1 mm recorded after TBMs transit.

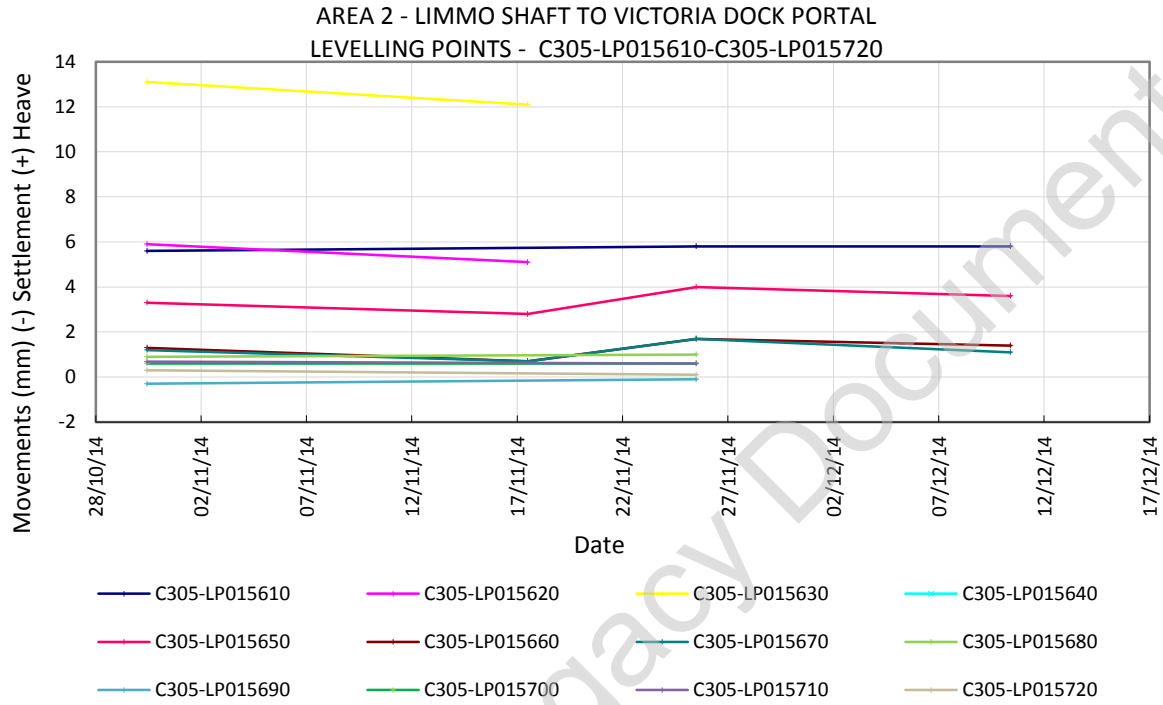
To analyze whether the rate of change in the data has reached an acceptably small rate, the last four readings were used to calculate the annual projection. The table below shows the annual rate for the levelling points in this array.

	Registered movement (mm)				mm/year
	30/10/2014	17/11/2014	25/11/2014	10/12/2014	
C305-LP015610	5.60	#N/A	5.80	5.80	1.896
C305-LP015620	5.90	5.10	#N/A	#N/A	#N/A
C305-LP015630	13.10	12.10	#N/A	#N/A	#N/A
C305-LP015640	#N/A	#N/A	#N/A	#N/A	#N/A
C305-LP015650	3.30	2.80	4.00	3.60	4.538
C305-LP015660	1.30	0.70	1.70	1.40	2.427
C305-LP015670	1.20	0.70	1.70	1.10	0.848
C305-LP015680	0.90	#N/A	1.00	#N/A	1.400
C305-LP015690	-0.30	#N/A	-0.10	#N/A	2.801
C305-LP015700	0.60	#N/A	0.60	#N/A	0.000
C305-LP015710	0.68	#N/A	0.60	#N/A	-1.120
C305-LP015720	0.30	#N/A	0.10	#N/A	-2.801
Rate less than -2.5 mm/year		% less 2 mm/ year			89%
Rate greater than -3.5 mm/year		% less 3 mm/ year			100%

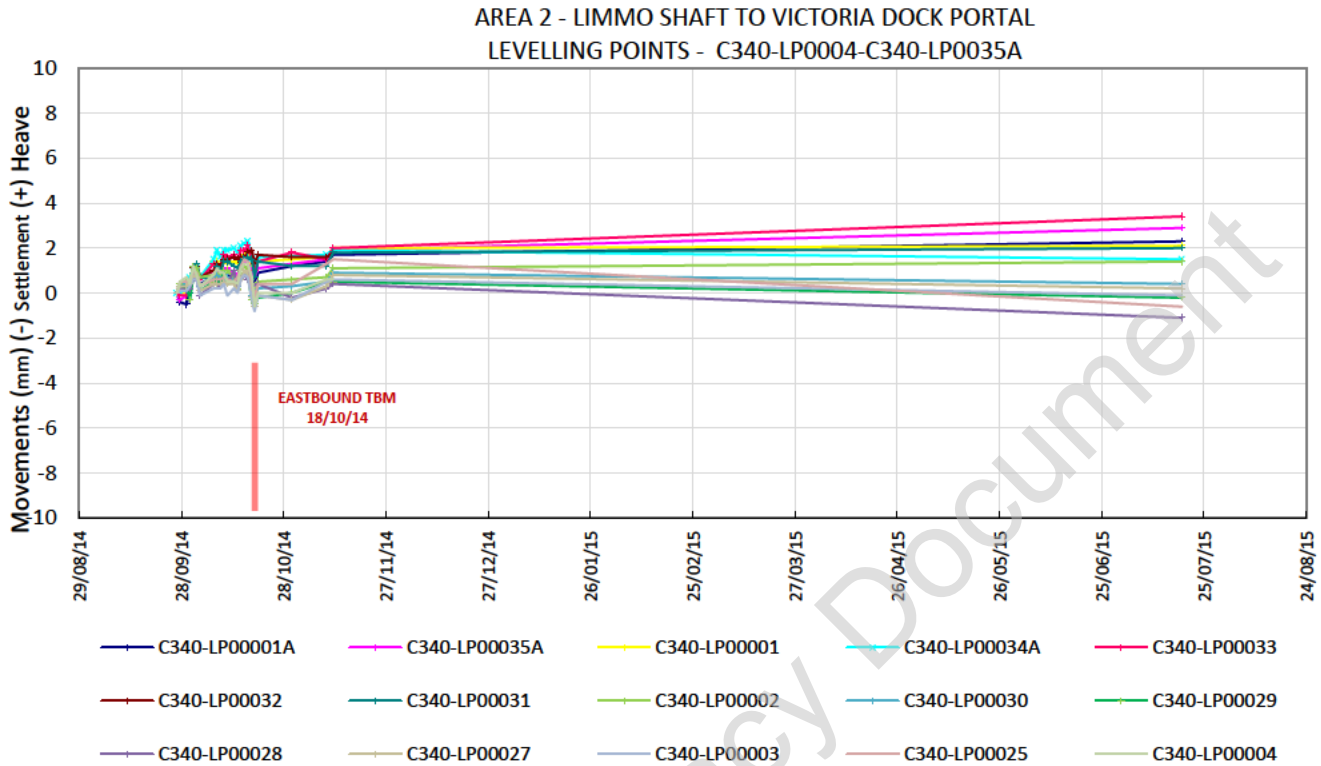
Note: All the movements are in mm. (-) Settlement / (+) Heave

The percentage of levelling points with a settlement rate less than 2 mm/year is 89%, whereas 100% are less than 3 mm/year.

The plot below shows the trend line adjustment for the levelling points in this array.



C340-LP00004 to C340-LP0035A



The graph above shows a total maximum settlement of -1.1 mm recorded after TBMs transit.

To analyse whether the rate of change in the data has reached an acceptably small rate, the last four readings were used to calculate the annual projection.

The table below shows the annual rate for the levelling points in this array.

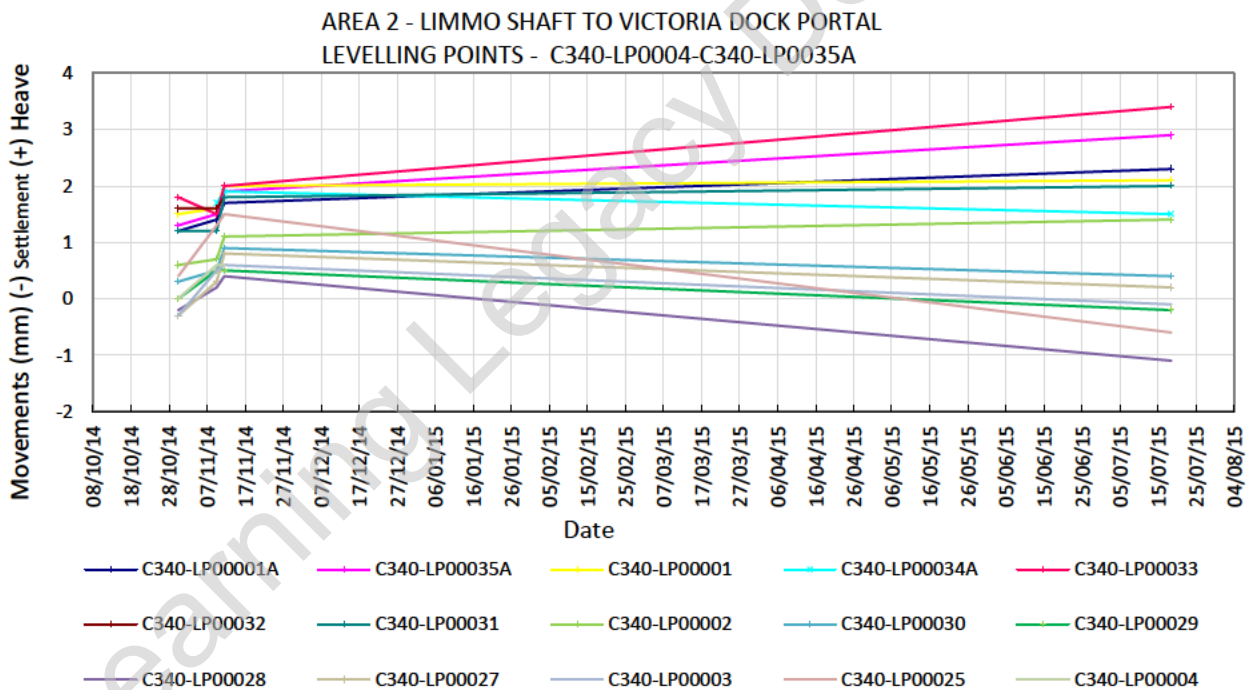
	Registered movement (mm)				mm/year
	30/10/2014	09/11/2014	11/11/2014	18/07/2015	
C340-LP00001A	1.20	1.40	1.70	2.30	1.267
C340-LP00035A	1.30	1.50	1.90	2.90	1.941
C340-LP000001	1.50	1.60	2.00	2.10	0.594
C340-LP00034A	#N/A	1.70	1.90	1.50	#N/A
C340-LP000033	1.80	1.50	2.00	3.40	2.347
C340-LP000032	1.60	1.60	1.80	#N/A	#N/A
C340-LP000031	1.20	1.20	1.80	2.00	0.883
C340-LP000002	0.60	0.70	1.10	1.40	0.882
C340-LP000030	0.30	0.50	0.90	0.40	-0.214
C340-LP000029	0.00	0.50	0.50	-0.20	-0.738

	Registered movement (mm)				mm/year
	30/10/2014	09/11/2014	11/11/2014	18/07/2015	
C340-LP00028	-0.20	0.20	0.40	-1.10	-1.742
C340-LP00027	-0.30	0.30	0.80	0.20	-0.045
C340-LP00003	-0.30	0.50	0.60	-0.10	-0.479
C340-LP00025	0.40	1.30	1.50	-0.60	-2.337
C340-LP00004	0.00	0.60	0.60	#N/A	#N/A
Rate less than -2.5 mm/year		% less 2 mm/ year			100%
Rate greater than -3.5 mm/year		% less 3 mm/ year			100%

Note: All the movements are in mm. (-) Settlement / (+) Heave

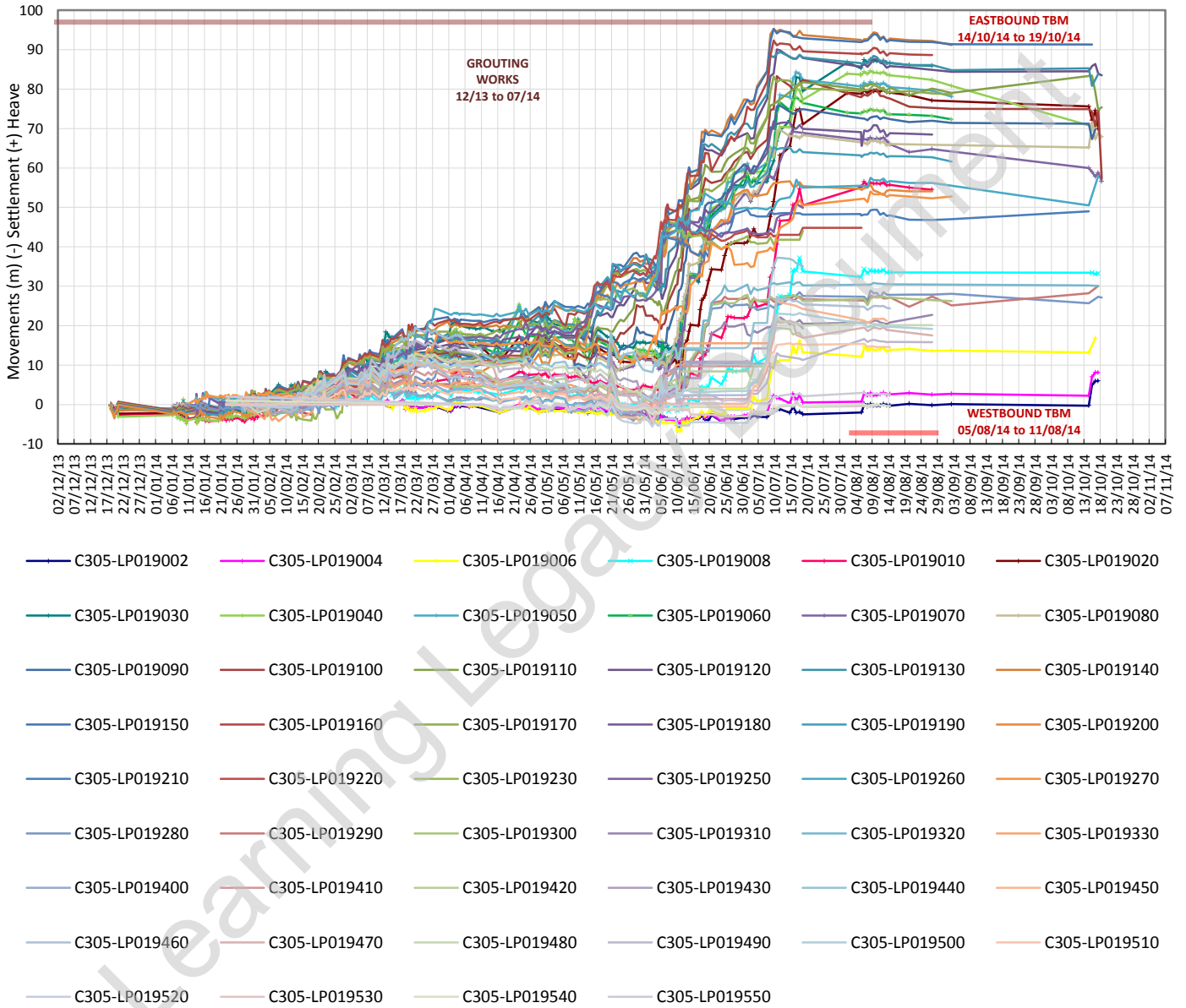
The percentage of levelling points with a settlement rate less than 2 mm/year is 100%, whereas 100% are less than 3 mm/year.

The plot below shows the trend line adjustment for the levelling points in this array.



C305-LP019002 to C305-LP019550

AREA 2 - LIMMO SHAFT TO VICTORIA DOCK PORTAL
 LEVELLING POINTS - C305-LP019002-C305-LP019550

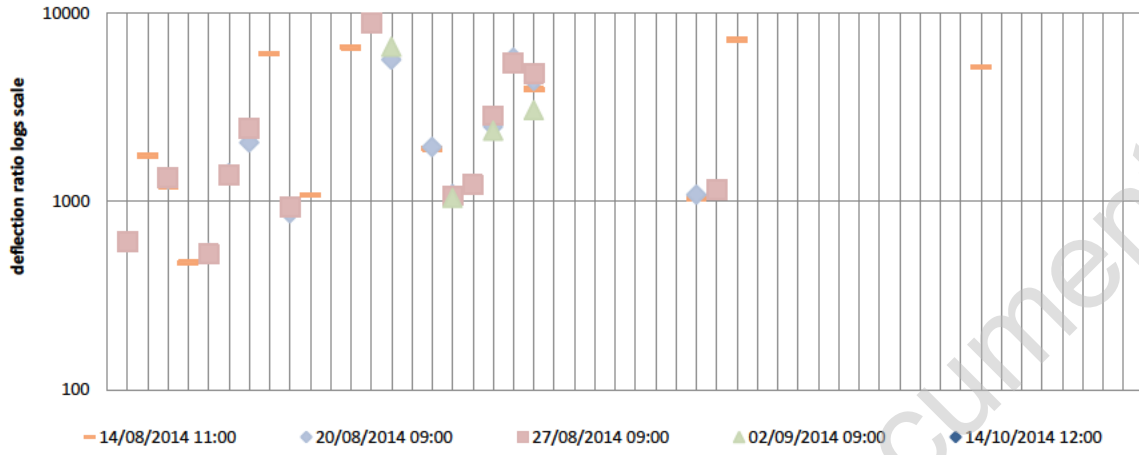


The graph above shows a total maximum heave of 94 mm recorded during grouting works.

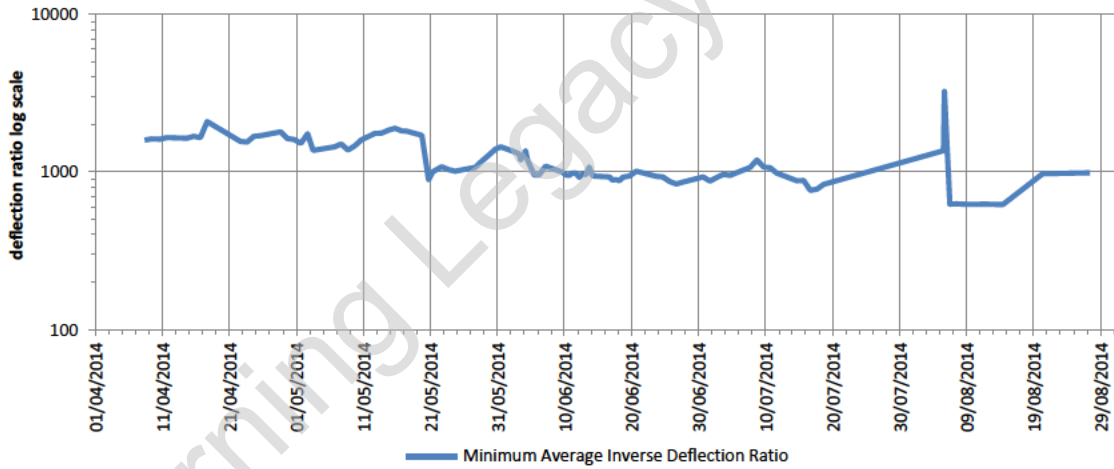
This array was installed to monitor the ground movement due to the ground treatment works in relation to the adjacent NGG and TWUL assets, the electrolevel instruments took over in early July 2014. Long term readings not required, hence the settlement rate has not been calculated for this section.

The deflection ratio analysis is shown in the graphs below.

C305-LP019002 - C305-LP01550 DEFLECTION RATIO

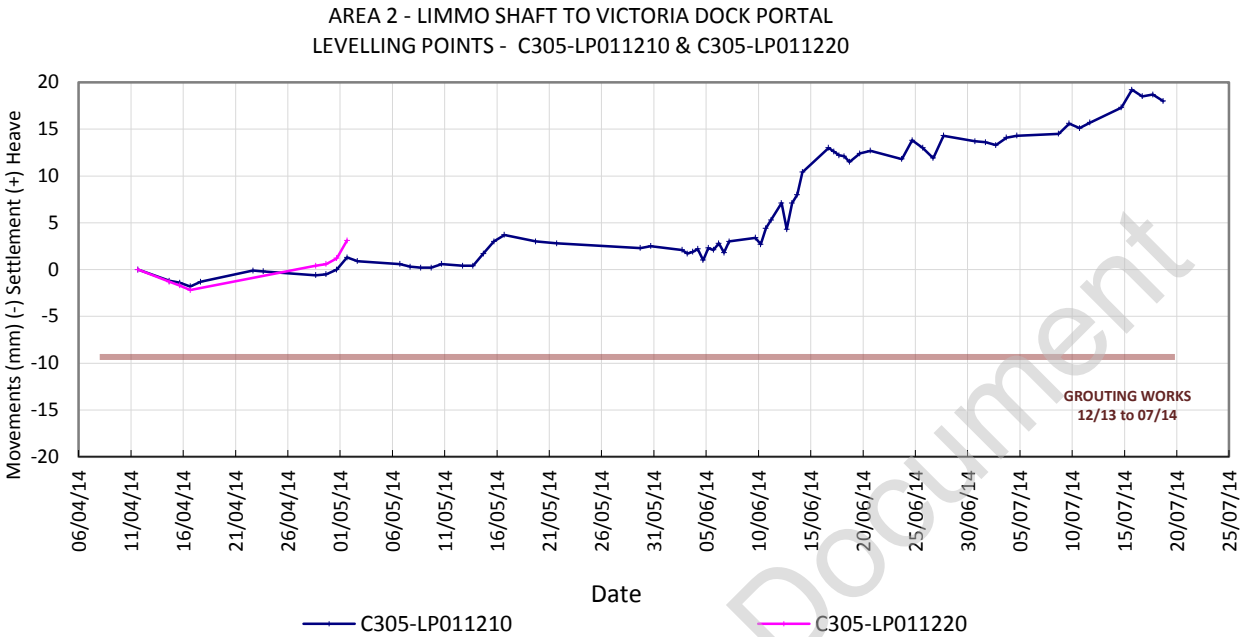


Evolution of minimum deflection ratio



The 1/500 deflection ratio limit never was reached.

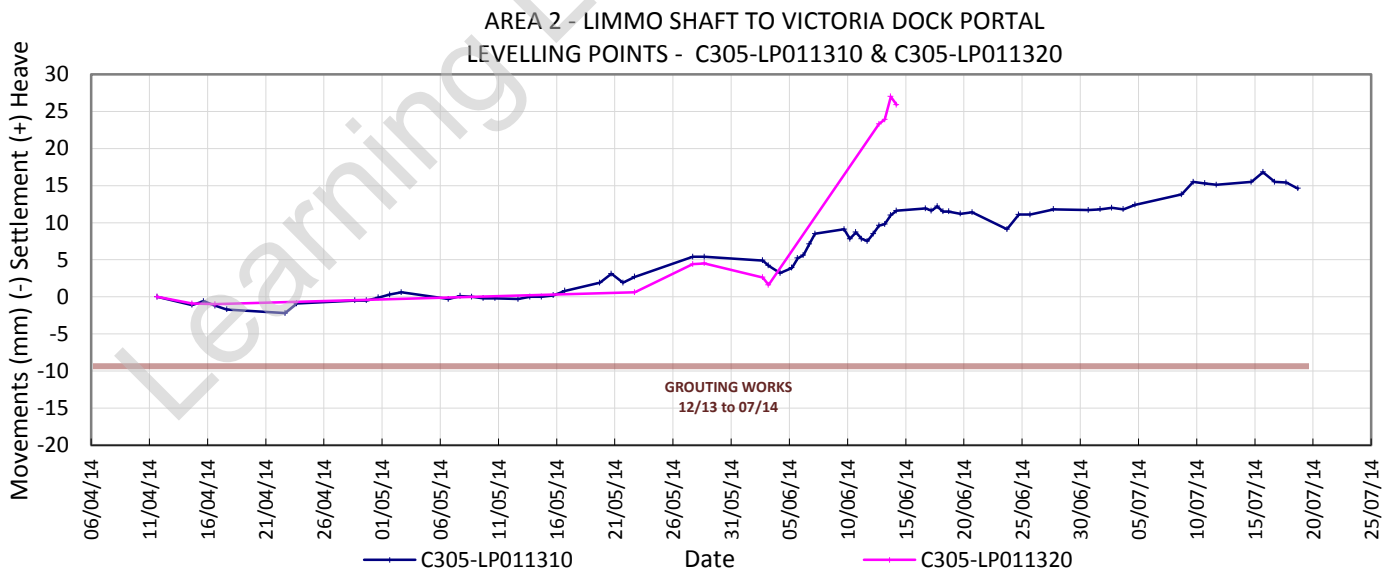
C305-LP011210 to C305-LP011220



The graph above shows a total maximum heave of 17 mm recorded during grouting works.

This array was monitored for the ground treatment works. Long term readings not required, hence the settlement rate has not been calculated for this section.

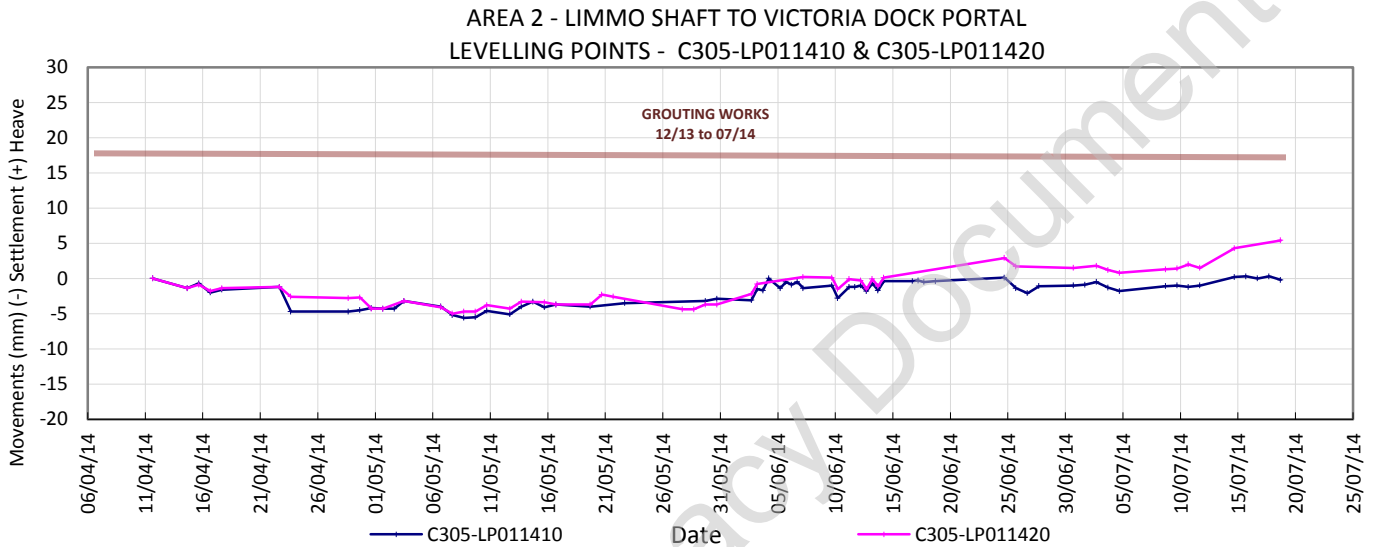
C305-LP011310 to C305-LP011320



The graph above shows a total maximum heave of 27 mm recorded during grouting works.

This array was monitored for the ground treatment works. Long term readings not required, hence the settlement rate has not been calculated for this section.

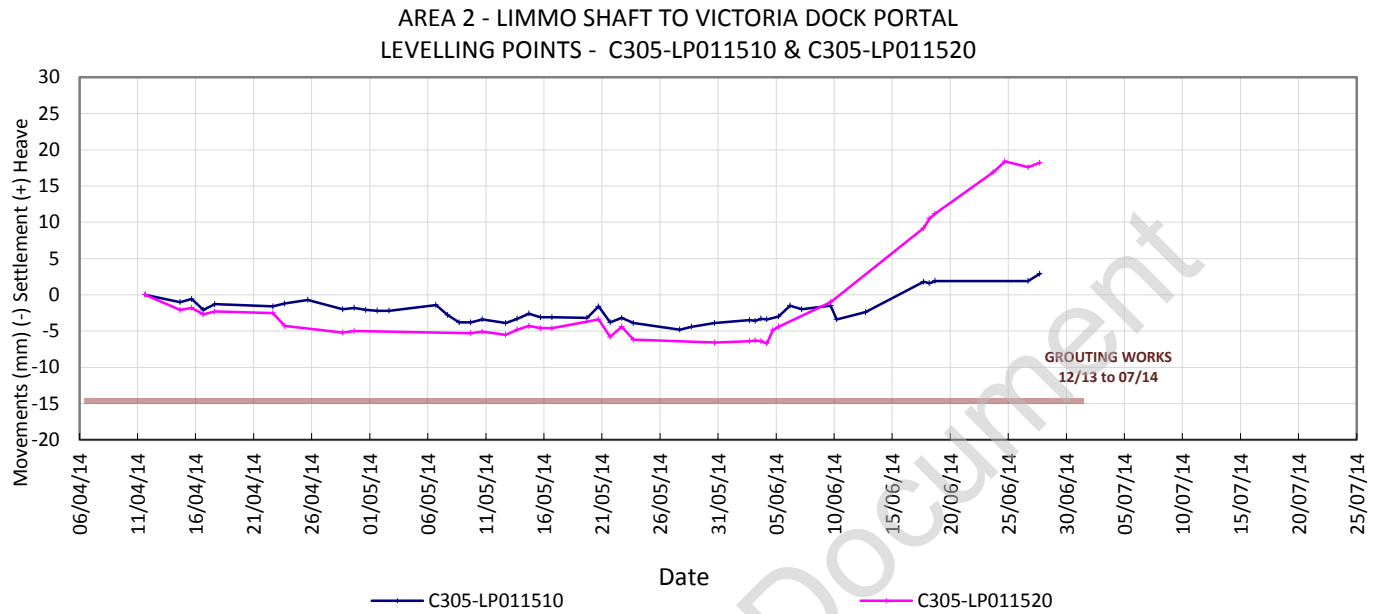
C305-LP011410 to C305-LP011420



The graph above shows a total maximum settlement of -5.6 mm recorded during grouting works.

This array was monitored for the ground treatment works. Long term readings not required, hence the settlement rate has not been calculated for this section.

C305-LP011510 to C305-LP011520

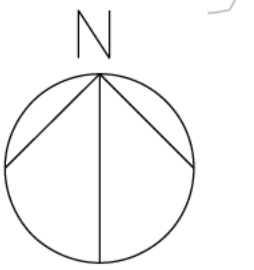


The graph above shows a total maximum heave of 18 mm recorded during grouting works.

This array was monitored for the ground treatment works. Long term readings not required, hence the settlement rate has not been calculated for this section.

APPENDIX A:
ELECTROLEVELS AND SOFT GROUND PINS LOCATION

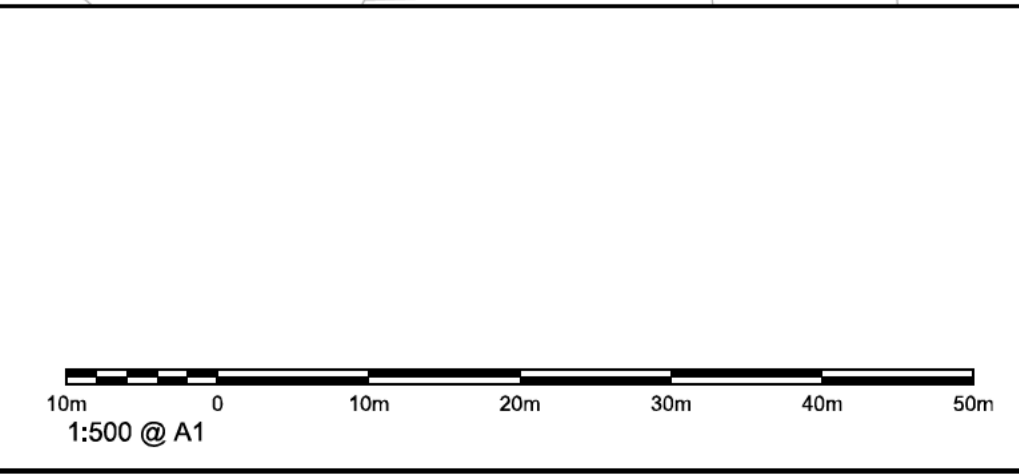
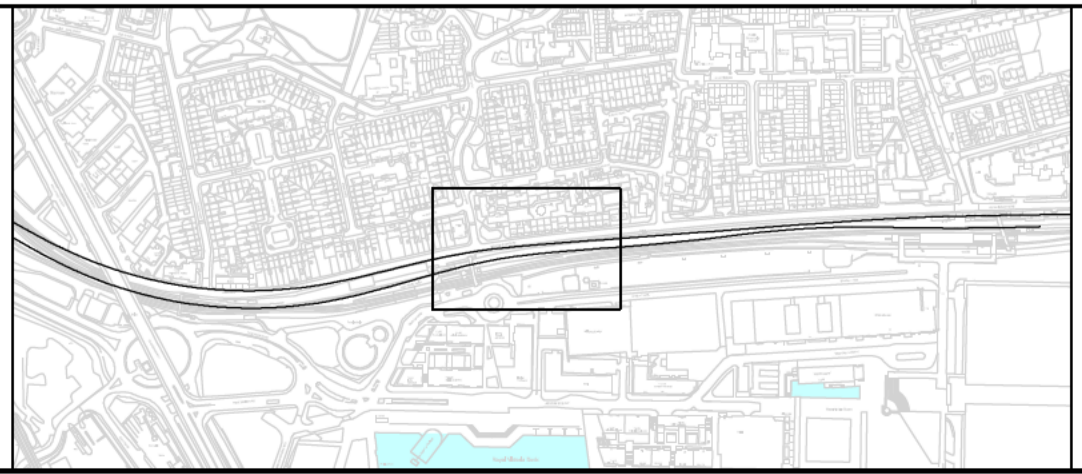
Learning Legacy Document



Rev.	Date	Description	By	Chkd	App	Auth
P01	09/03/2015	First Issue	MD	AH	RC	-
P02	18/03/2015		MD	AH	RC	-
P03	22/07/2015		MD	RC	RC	-
P04	11/04/2016		MD	MD	MD	-
P05	10/05/2016		MD	MD	MD	-

Notes

- Levelling Point
- ◆ Electrolevel (monitoring point)



Crossrail

Crossrail Limited
25 Canada Square
Canary Wharf
London
E14 6LQ

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Contract: Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G
Originator: Dragados Sisk Joint Venture
Location: Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)

Title: Instrumentation & Monitoring
I&M Installation Report for
Victoria Dock Portal Trench Electrolevels
C305-DSJ-C2-RGN-CRG03-50296

By: M.DAVIS
CHK: M.DAVIS
App: M.DAVIS
Auth: -

Scale: 1:500 @ A1
Drawing and CAD No: C305-DSJ-C2-DDA-CRT00_ST006_Z-08105
Rev: P05
Suitability: S4

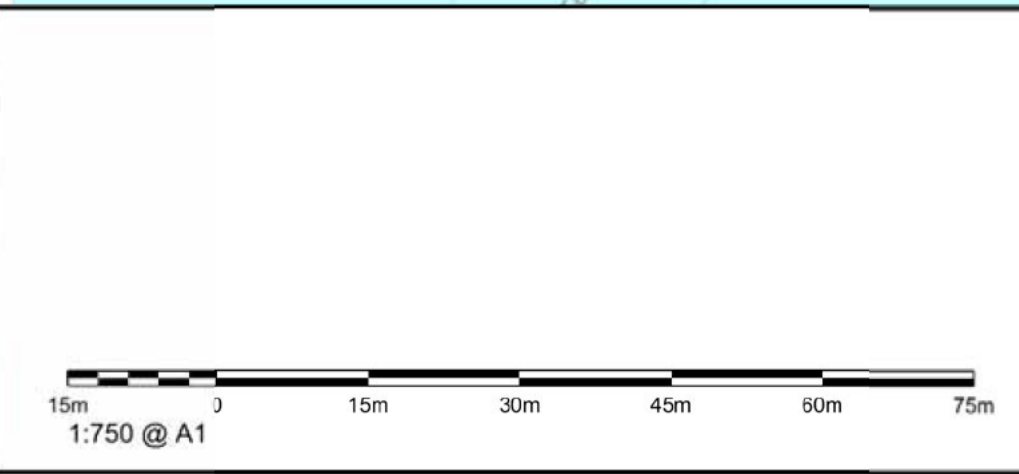
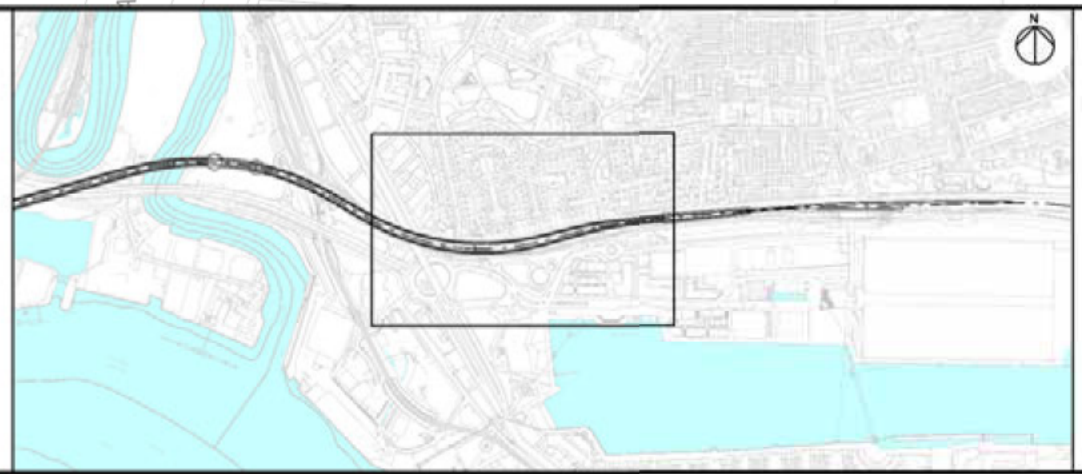
RESTRICTED




Rev.	Date	Description	By	Chkd	App	Auth
P01	06/03/2015	First Issue	MD	AH	RC	-
P02	11/03/2015	---	MD	AH	RC	-
P03	18/03/2015	---	MD	AH	RC	-
P04	01/03/2016	---	MD	MD	MD	-
P05	01/03/2016	---	MD	MD	MD	-

Notes

- Levelling Point




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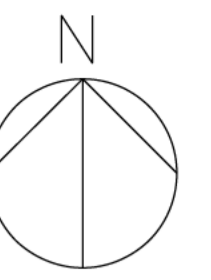
Contract: Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G
Originator: Dragados Sisk Joint Venture
Location: Crossrail Tunnels - Drive Y (Limmo Peninsula to Farringdon Stn)
Title: Instrumentation & Monitoring
 I&M Installation Report for
 Levelling Points along Drive G
C305-DSJ-C2-FGN-CRG03-50295

By: M.DAVIS
CHK: M.DAVIS
APP: M.DAVIS
Auth: ---

Scale: 1:750 @ A1
Drawing and CAD file No.: C305-DSJ-C2-DDA-CRT00_ST006_Z-08'04
Rev: P05
Suitability: S4

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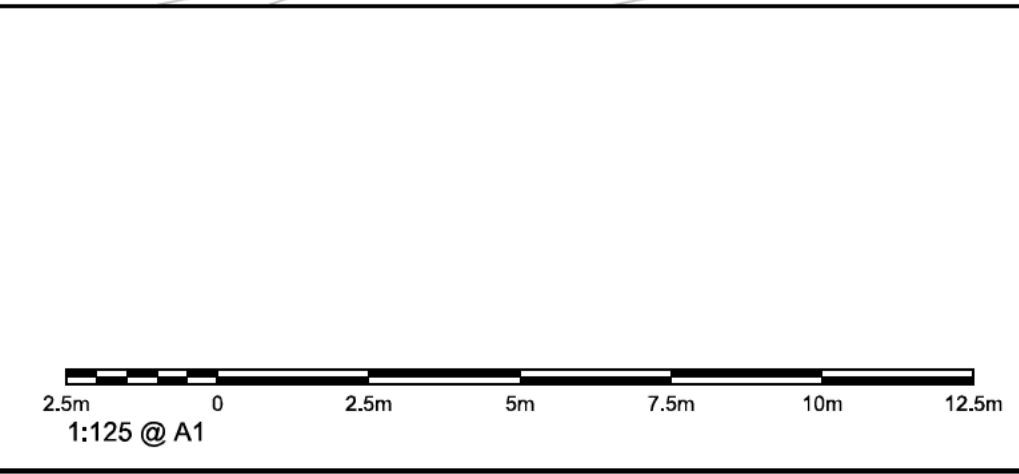
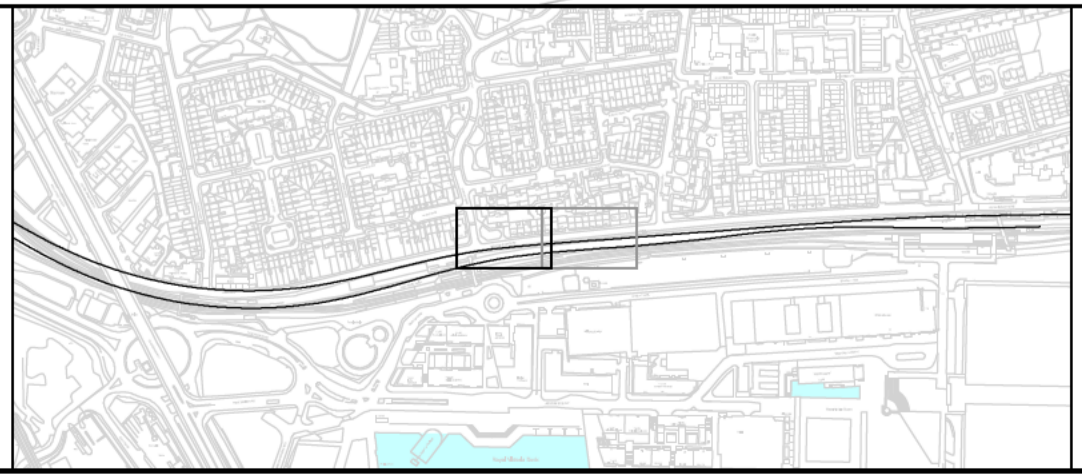
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Rev.	Date	Description	By	Chkd	App	Auth
P01	10/06/2016	First Issue	MD	MD	MD	-

Notes

- Levelling Point
- These points were not installed by Geocisa. They were used to control VDP grouting works.



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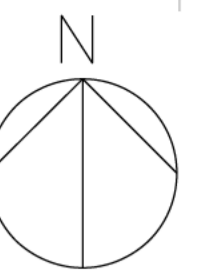
Contract: Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G
 Originator: Dragados Sisk Joint Venture
 Location: Crossrail Tunnels - Drive G (Limmo Peninsula to Victoria Dock)

By: M.DAVIS
 CHK: M.DAVIS
 App: M.DAVIS
 Auth: -

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 Scale: Various @ A1
 Drawing and CAD No: C305-DSJ-C2-DDA-CRT00_ST008_1-08316
 Rev: P01
 Suitability: S4

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 For authorisation



250a 250b

250

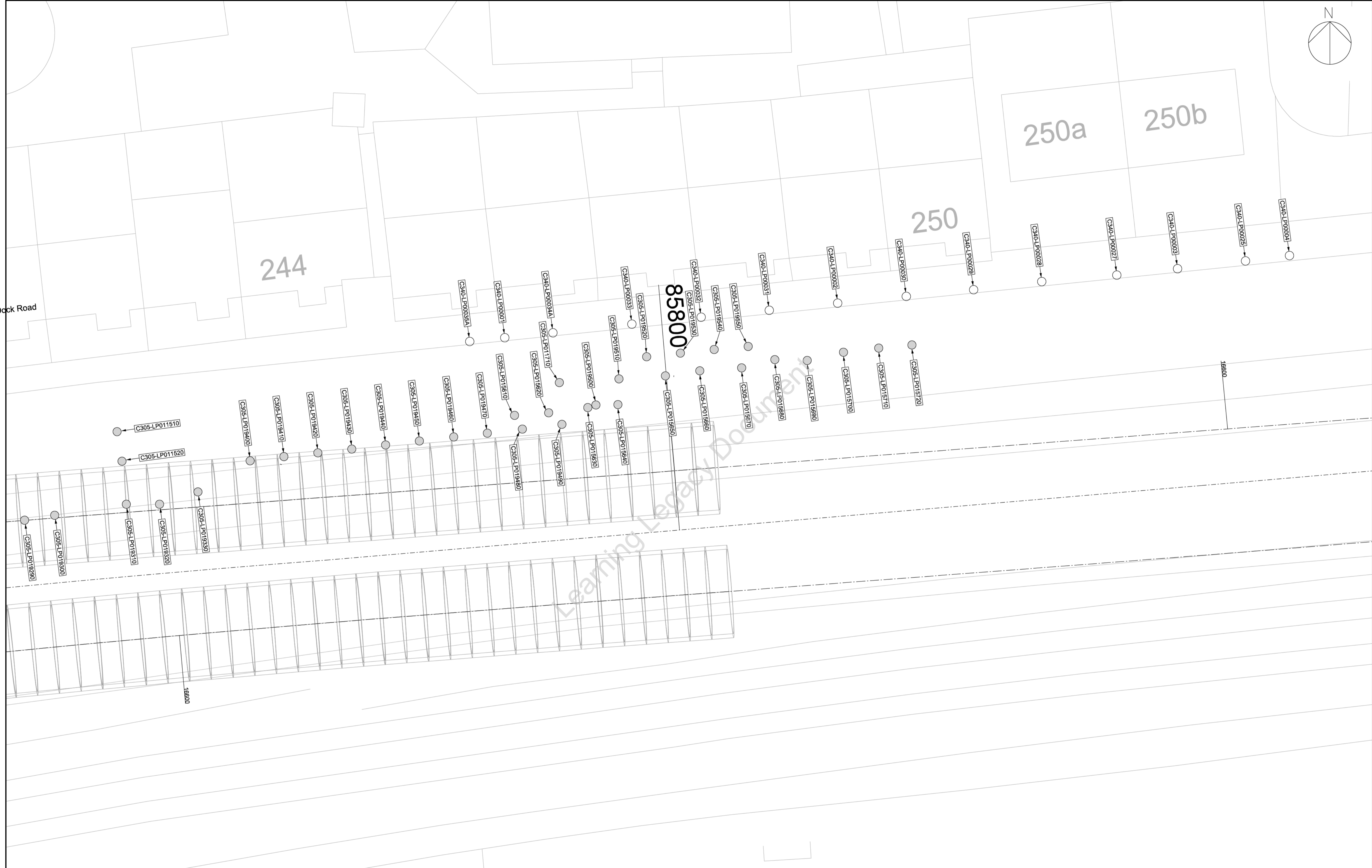
244

Victoria Dock Road

85800

18800

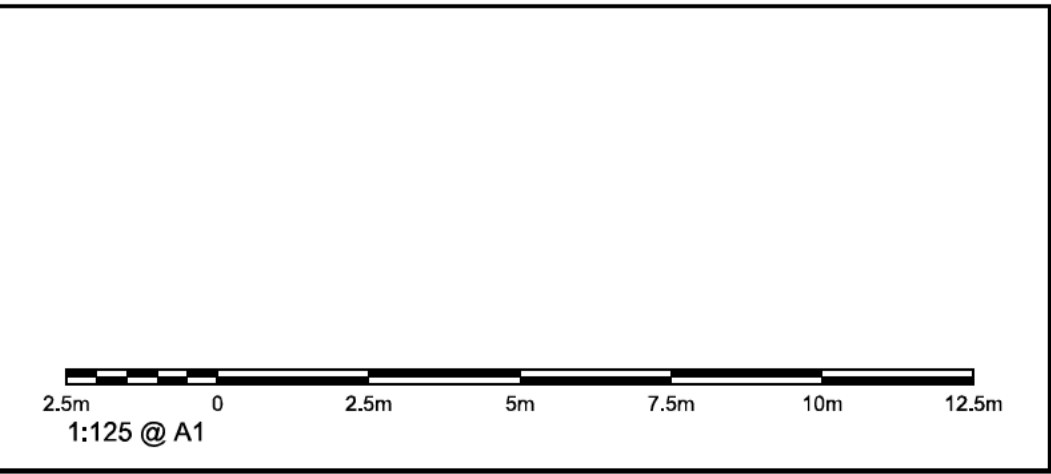
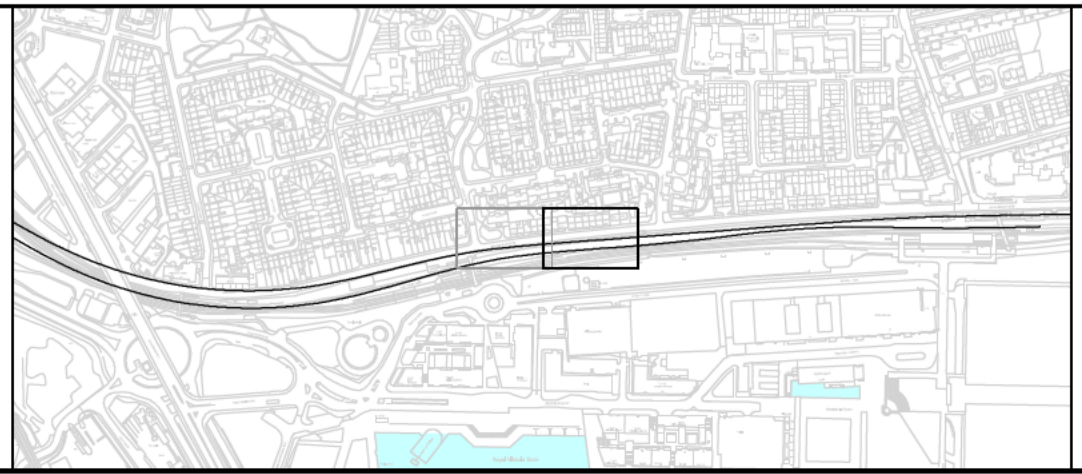
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Rev.	Date	Description	By	Chkd	App	Auth
P01	10/06/2016	First Issue	MD	MD	MD	-

Notes

- Levelling Point
- These points were not installed by Geocisa. They were used to control VDP grouting works



	Contract:	Tunnels East - Drive Y LIM to FAR & Drive Z SGJ to PML & Drive G	By:	M.DAVIS
	Originator:	Dragados Sisk Joint Venture	CHK:	M.DAVIS
Crossrail Limited 25 Canada Square London E14 6LQ	Location:	Crossrail Tunnels - Drive G (Limmo Peninsula to Victoria Dock)	APP:	M.DAVIS
	Title:	Instrumentation & Monitoring Close Out Report for MS I&M VDP Electrolevels & Additional Long LP in Soft Ground	Auth:	-
© Crossrail	Scale:	Various @ A1	Rev:	P01
www.crossrail.co.uk	Drawing and CAD No:	C305-DSJ-C2-DDA-CRT00_ST008_1-08317	Suitability:	S4

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APPENDIX B:
ELECTROLEVELS AND LONG LEVELLING POINTS DATA

Learning Legacy Document

ELECTROLEVELS C305-EL010001 - C305-EL010051

	9/07/14 12.56	10/07/14 12.55	11/07/14 12.55	12/07/14 12.55	13/07/14 12.54	14/07/14 12.56	15/07/14 12.50	16/07/14 12.50	17/07/14 12.50	18/07/14 12.50	19/07/14 12.50	20/07/14 12.50	21/07/14 12.50	22/07/14 12.50	23/07/14 12.50	24/07/14 12.50	25/07/14 12.50	26/07/14 12.50	27/07/14 12.50	28/07/14 12.50
C305-EL010001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C305-EL010002	-0.01	-0.23	-0.66	-0.89	-0.91	-1.02	-1.03	-1.12	-1.21	-1.07	-1.21	-1.26	-1.22	-1.24	-1.31	-1.4	-1.25	-1.27	-1.33	-1.34
C305-EL010003	0.16	-0.44	-0.94	-1.32	-1.41	-1.64	-1.7	-1.82	-1.89	-1.81	-1.96	-2.07	-2.1	-2.06	-2.2	-2.26	-2.08	-2.17	-2.21	-2.26
C305-EL010004	-1.6	-2.87	-3.17	-3.9	-4.08	-4.37	-4.29	-4.5	-4.3	-4.52	-4.62	-4.85	-4.71	-4.75	-5.01	-5.11	-4.85	-4.88	-4.99	-4.99
C305-EL010005	0.76	-1.8	-1.25	-2.5	-2.75	-2.98	-2.65	-2.88	-1.98	-2.82	-2.92	-3.22	-3.02	-3.2	-3.42	-3.66	-3.25	-3.29	-3.48	-3.35
C305-EL010006	8.94	4.06	6.06	3.92	3.51	3.69	4.61	4.42	6.64	4.58	4.33	3.98	4.16	3.84	3.61	3.4	3.71	3.6	3.44	3.52
C305-EL010007	27.75	22.71	26.34	23.47	22.93	24.8	27.29	27.96	28.82	26.64	25.26	25.85	25.96	25.62	25.39	25.14	25.35	25.23	25.12	25.14
C305-EL010008	48.26	48.09	52.13	48.77	48.08	53.81	59.27	62.15	60.72	58.56	58.04	57.5	57.66	57.17	56.86	56.45	56.62	56.55	56.43	56.45
C305-EL010009	61.58	67.32	69.16	66.95	66.37	73.53	80.42	84.12	81.41	79.91	79.38	78.78	78.86	78.42	78.16	77.79	77.92	77.78	77.65	77.66
C305-EL010010	64.41	72.68	74.98	73.03	72.55	76.37	81.62	83.84	81.5	81.11	80.8	80.15	80.33	79.77	79.56	79.11	79.32	79.22	79.11	79.26
C305-EL010011	65.45	68.63	71.95	70.04	69.6	69.86	71.43	71.16	70.37	71.33	71.21	70.62	70.86	70.23	70.14	69.65	69.88	69.85	69.84	70.01
C305-EL010012	61.13	59.79	61.24	59.68	59.41	58.81	58.82	58.4	57.89	59.72	59.59	59	59.29	58.65	58.61	58.09	58.35	58.32	58.33	58.51
C305-EL010013	64.46	61.24	61.1	60.03	59.99	59.27	59.09	58.53	57.98	59.87	59.72	59.15	59.42	58.71	58.79	58.24	58.4	58.42	58.47	58.71
C305-EL010014	72.99	68.39	68.27	66.98	67.05	66.15	66.04	65.2	64.6	66.36	66.29	65.65	65.05	65.06	65.19	64.61	64.67	64.89	65.31	65.31
C305-EL010015	78.38	76.19	76.54	75.29	75.35	74.59	74.41	73.68	73.05	74.75	74.46	73.83	74.08	73.28	73.4	72.75	72.95	72.87	73	73.35
C305-EL010016	82.9	77.61	77.77	76.48	76.52	75.76	75.52	74.84	74.04	75.87	75.45	74.82	74.94	74.24	74.36	73.68	73.9	73.69	73.85	74.09
C305-EL010017	92.42	75.91	75.67	74.54	74.77	73.95	73.92	73.28	72.56	74.2	74.12	73.43	73.68	72.95	73.21	72.48	72.8	72.51	72.79	73.05
C305-EL010018	98.77	82.23	82	80.14	80.67	79.28	79.63	78.58	77.88	79.27	80.09	79.2	79.77	78.5	79.02	77.99	78.34	78.17	78.68	79.28
C305-EL010019	98.92	82.59	82.22	80.39	80.89	79.52	79.86	78.76	78.09	79.41	80.23	79.37	79.89	78.67	79.17	78.19	78.55	78.31	78.78	79.37
C305-EL010020	93.2	78.77	78.21	76.75	77.12	76.03	76.26	75.36	74.66	75.64	76.23	75.54	75.89	74.94	75.43	74.64	75.03	74.66	74.95	75.43
C305-EL010021	82.18	68.6	67.98	66.96	67.11	66.37	66.39	65.68	64.92	65.71	66.03	65.54	65.68	65.04	65.46	64.84	65.25	64.81	64.89	65.3
C305-EL010022	70.45	60.56	60.01	59.09	59.28	58.74	58.77	58.15	57.3	58.15	58.34	57.98	58.1	57.52	57.86	57.34	57.84	57.33	57.37	57.74
C305-EL010023	62.4	54.87	54.4	54.05	54.41	54.21	54.18	53.87	53.04	53.57	53.67	53.45	53.49	53.18	53.37	53.02	53.54	53.02	52.95	53.14
C305-EL010024	53.14	49.65	49.36	48.8	49.14	48.7	48.61	48.02	47.71	48.43	48.66	48.37	48.59	47.95	48.27	47.76	48.36	47.84	47.92	48.25
C305-EL010025	47.56	46.08	45.83	45.15	45.65	45.21	46.11	46.34	48.3	48.66	49.19	48.56	48.96	47.73	48.37	47.56	48.19	47.6	48.02	48.53
C305-EL010026	48.73	48.14	47.81	47.3	47.65	47.41	49.03	49.74	51.35	51.62	52.04	51.41	51.8	50.49	51.07	50.2	50.86	50.34	50.73	51.25
C305-EL010027	52.72	55.44	54.74	53.77	54.17	54.93	57.85	59.9	60.79	61.12	61.79	61.03	61.59	59.96	60.6	59.58	60.26	59.73	60.27	60.93
C305-EL010028	50.83	55.49	53.74	51.99	52.42	54.75	56.46	57.93	58.42	58.39	59.16	58.35	58.96	57.42	57.94	58.35	57.37	58.83	57.47	58.18
C305-EL010029	41.4	47.18	45.62	44.22	44.69	46.11	46.33	46.28	46.19	46.82	47.59	46.97	47.56	45.99	46.66	45.55	46.27	45.72	46.27	46.91
C305-EL010030	30.27	35.49	34.32	33.3	33.87	33.87	34.22	33.83	34.15	34.66	35.28	34.92	35.31	34.12	34.71	33.76	34.51	33.89	34.41	34.87
C305-EL010031	32.14	37.04	35.87	34.89	35.38	34.88	35.36	34.88	35.28	35.69	36.23	36	36.3	35.23	35.69	35.75	35.67	35.05	35.47	35.88
C305-EL010032	30.57	35.49	34.2	33.07	33.54	32.87	33.35	32.85	33.21	33.68	34.26	33.98	34.33	33.19	33.71	32.76	33.49	32.98	33.43	33.87
C305-EL010033	26.86	32.48	31.19	30.22	30.61	30.06	30.48	30.01	30.35	30.81	31.33	31.05	31.39	30.3	30.8	29.9	30.65	30.13	30.49	30.87
C305-EL010034	36.41	45.26	43.97	43.28	43.59	43.18	43.54	43.17	43.52	43.87	44.24	44.04	44.3	43.33	43.7	42.95	43.67	43.14	43.46	43.72
C305-EL010035	22.53	31.15	29.92	29.54	29.82	29.62	29.91	29.66	30.09	30.26	30.41	30.35	30.4	29.75	29.33	30.07	29.85	29.63	29.71	29.71
C305-EL010036	15.13	12.14	10.92	10.75	11.08	11.01	11.3	11.21	11.6	11.46	11.54	11.55	11.46	11.04	11.08	10.71	11.41	10.73	10.83	10.84
C305-EL010037	13.87	5.17	3.89	3.81	4.06	3.99	4.22	4.17	4.51	4.24	4.26	4.34	4.19	3.81	3.78	3.44	4.03	3.41	3.41	3.38
C305-EL010038	4.51	0.98	-0.54	-0.81	-0.63	-0.76	-0.7	-0.78	-0.53	-0.92	-0.91	-0.76	-0.99	-1.43	-1.59	-1.95	-1.51	-2.14	-2.12	-2.08
C305-EL010039	13.41	-0.27	-2.11	-2.3	-2.13	-2.2	-2.14	-2.25	-1.97	-2.42	-2.34	-2.14	-2.44	-2.83	-2.99	-3.39	-3.05	-3.45	-3.37	-3.33
C305-EL010040	27.69	3.91	2.68	2.2	2.35	2.16	2.23	2.03	2.2	1.91	2.02	2.23	1.92	1.56	1.41	0.97	1.33	1.29	1.4	1.46
C305-EL010041	19.3	3.29	1.75	1.19	1.2	1.02	1.03	0.86	0.87	0.53	0.63	0.78	0.46	0.15	-0.14	-0.66	-0.03	-0.08	-0.05	-0.05
C305-EL010042	14.06	4.42	2.15	1.69	1.74	1.58	1.59	1.44	1.23	1.3	1.4	1.24	0.81	0.51	-0.04	0.98	0.86	0.92	0.99	0.99
C305-EL010043	15.44	10.43	7.61	7.08	7.04	6.82	6.77	6.51	6.63	6.54	6.53	6.64	6.47	5.91	5.53	5.02	6.32	6.12	6.21	6.29
C305-EL010044	9.12	2.27	0.01	-0.48	-0.53	-0.66	-0.67	-0.83	-0.74	-0.82	-0.85	-0.72	-0.86	-1.36	-1.61	-1.9	-0.96	-1.17	-1.12	-1.09
C305-EL010045	15.11	6.08	5.02	4.71	4.76	4.76	4.76	4.76	4.76	4.83	4.74	4.85	4.42	4.28	4.28	4.81	4.52	4.55	4.54	4.64
C305-EL010046	-2.65	-3.62	-4.3	-4.43	-4.34	-4.33	-4.21	-4.34	-4.27	-4.22	-4.27	-4.13	-4.18	-4.25	-4.26	-4.43	-4.2	-4.36	-4.3	-4.21
C305-EL010047	-2.41	-3.35	-3.84	-3.82	-3.74	-3.6	-3.54	-3.51	-3.42	-3.47	-3.55	-3.4	-3.52	-3.55	-3.63	-3.7	-3.45	-3.63	-3.58	-3.61
C305-EL010048	-2.36	-3.32	-3.7	-3.7	-3.53	-3.5	-3.44	-3.43	-3.31	-3.37	-3.39	-3.3	-3.38	-3.41	-3.44	-3.48	-3.38	-3.45	-3.42	-3.4
C305-EL010049	-1.57	-1.95	-2.17	-2.08	-1.98	-1.88	-1.88	-1.87	-1.7	-1.81	-1.7	-1.8	-1.89	-1.82	-1.86	-1.87	-1.8	-1.89	-1.83	-1.9
C305-EL010050	0	-0.86	-0.97	-0.9	-0.82	-0.77	-0.71	-0.69	-0.65	-0.71	-0.81	-0.7	-0.8	-0.74	-0.78	-0.71	-0.67	-0.77	-0.75	-0.81
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	29/07/14 12 50	30/07/14 12 50	31/07/14 12 50	1/08/14 12 50	2/08/14 12 50	3/08/14 12 50	4/08/14 12 56	5/08/14 12 55	6/08/14 12 51	7/08/14 12 53	8/08/14 12 53	9/08/14 12 53	10/08/14 12 53	11/08/14 12 53	12/08/14 12 55	13/08/14 12 55	15/08/14 12 50	16/08/14 12 58	17/08/14 12 58	18/08/14 12 58
C305-EL010001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C305-EL010002	-1.39	-1.34	-1.36	-1.39	-1.28	-1.29	-1.36	-1.52	-1.18	-1.24	-1.27	-1.28	-1.29	-1.42	-1.45	-1.44	-1.39	-1.55	-1.57	-1.62
C305-EL010003	-2.33	-2.26	-2.31	-2.55	-2.4	-2.41	-2.43	-2.8	-2.3	-2.42	-2.46	-2.48	-2.55	-2.54	-2.58	-2.48	-2.62	-2.66	-2.66	-2.7
C305-EL010004	-5.04	-4.98	-5	-5.26	-5.07	-5.02	-5.12	-5.66	-5.06	-5.11	-5.21	-5.13	-5.19	-5.24	-5.31	-5.27	-5	-5.32	-5.37	-5.4
C305-EL010005	-3.45	-3.4	-3.39	-3.63	-3.39	-3.35	-3.51	-4.14	-3.57	-3.68	-3.81	-3.63	-3.72	-3.75	-3.79	-3.73	-3.41	-3.9	-3.98	-3.94
C305-EL010006	3.44	3.4	3.45	3.37	3.47	3.44	3.21	2.66	3.01	2.84	2.74	2.96	2.8	2.76	2.7	2.77	3.2	2.56	2.51	2.5
C305-EL010007	25.08	25.02	25.04	24.93	25.07	24.97	24.67	24.09	24.28	24.05	23.92	24.13	23.97	23.98	23.89	23.86	24.32	23.59	23.58	23.51
C305-EL010008	56.35	56.27	56.19	56.06	56.18	56.14	55.7	55.08	55.24	54.95	54.85	55.04	54.87	54.88	54.82	54.75	55.31	54.41	54.37	54.33
C305-EL010009	77.54	77.48	77.32	77.26	77.32	77.27	76.83	76.15	76.16	75.95	75.93	76.05	75.72	75.73	75.59	75.47	76.07	75.07	75.07	74.97
C305-EL010010	79.01	78.91	78.66	78.74	78.85	78.8	78.34	77.69	77.67	77.54	77.54	77.7	77.41	77.42	77.21	77.1	77.93	76.75	76.81	76.66
C305-EL010011	69.72	69.52	69.31	69.42	69.53	69.53	69.12	68.51	68.39	68.4	68.35	68.57	68.25	68.21	68.03	67.88	68.87	67.59	67.69	67.5
C305-EL010012	58.2	57.91	57.73	57.87	57.98	57.95	57.61	57.08	56.86	56.89	56.8	57	56.73	56.62	56.42	56.24	57.45	56.01	56.14	55.91
C305-EL010013	58.3	58.05	57.86	58.02	58.17	58.08	57.8	57.36	57.04	57.02	56.94	57.13	56.9	56.67	56.57	56.34	57.73	56.25	56.35	56.13
C305-EL010014	64.63	64.49	64.2	64.48	64.73	64.56	64.24	63.86	63.58	63.31	63.45	63.68	63.56	63.26	63.16	62.89	64.53	62.92	63.1	62.85
C305-EL010015	72.77	72.74	72.55	72.73	72.89	72.66	72.4	71.97	71.66	71.47	71.56	71.71	71.62	71.27	71.14	70.89	72.51	70.86	71.01	70.72
C305-EL010016	73.59	73.61	73.45	73.6	73.7	73.51	73.23	72.77	72.5	72.38	72.44	72.57	72.46	72.18	71.84	71.67	73.27	71.57	71.77	71.42
C305-EL010017	72.62	72.7	72.51	72.69	72.85	72.65	72.36	71.99	71.69	71.7	71.74	71.99	71.88	71.58	71.28	70.98	71.22	70.88	71.22	70.88
C305-EL010018	78.32	78.47	78	78.53	78.94	78.54	78.18	77.9	77.77	77.59	78.1	78.26	78.46	77.91	77.59	77.37	79.52	77.24	77.78	77.32
C305-EL010019	78.44	78.59	78.1	78.66	79.06	78.65	78.56	78.31	78.15	78.05	78.51	78.6	78.84	78.3	77.88	77.75	80.06	77.67	78.26	77.69
C305-EL010020	74.74	74.81	74.41	74.83	75.1	74.75	74.7	74.38	74.13	74.37	74.29	74.37	74.44	73.94	73.67	73.45	75.81	73.36	73.88	73.33
C305-EL010021	64.9	64.96	64.66	64.84	64.97	64.87	64.82	64.45	64.17	64.68	64.16	64.22	64.14	63.71	63.68	63.42	65.74	63.26	63.69	63.15
C305-EL010022	57.47	57.52	57.26	57.41	57.54	57.47	57.42	57.07	56.64	57.29	56.79	56.77	56.67	56.25	56.31	56.01	58.38	55.85	56.33	55.73
C305-EL010023	53.1	53.13	53.1	53.09	53.07	53.13	53.13	52.68	52.15	53.01	52.46	52.3	52.04	51.76	51.93	51.59	53.85	51.3	51.74	51.16
C305-EL010024	47.98	48.05	47.87	47.96	48.1	48.04	48.02	47.6	47.17	47.66	47.7	47.51	47.46	47.02	47.15	46.9	49.4	46.61	47.17	46.54
C305-EL010025	47.8	47.99	47.6	47.72	48.01	47.77	47.77	47.19	46.99	46.63	48.12	47.84	48.02	47.62	47.68	47.32	49.97	46.96	47.54	46.98
C305-EL010026	50.47	50.64	50.23	50.44	50.78	50.59	50.58	49.99	49.87	49.27	51.23	51	51.23	50.89	50.86	50.52	53.28	50.16	50.8	50.25
C305-EL010027	59.86	60.08	59.58	59.94	60.52	60.2	60.12	59.67	59.65	58.69	61.28	60.98	61.44	61.04	60.99	60.6	63.53	60.37	61.11	60.57
C305-EL010028	56.97	57.22	56.7	57.08	57.77	57.35	56.99	56.99	56.99	55.76	58.72	58.4	58.91	58.45	58.37	57.99	61.16	57.82	58.61	58.08
C305-EL010029	45.88	46.09	45.6	46.02	46.63	46.35	46.32	45.98	45.96	44.8	47.57	47.32	47.84	47.34	47.31	47.01	50.28	46.84	47.67	47.09
C305-EL010030	34.11	34.25	33.92	34.17	34.7	34.42	34.5	34.13	34.02	33.13	35.47	35.2	35.62	35.14	35.15	34.93	38.17	34.69	35.43	34.87
C305-EL010031	35.21	35.33	35.04	35.25	35.7	35.47	35.49	35.21	35.07	34.25	36.23	36.01	36.39	35.99	35.98	35.78	39.06	35.48	36.26	35.65
C305-EL010032	33.14	33.25	32.99	33.23	33.67	33.44	33.45	33.19	33.09	32.22	34.1	33.98	34.4	34.01	33.97	33.79	37.24	33.49	34.31	33.71
C305-EL010033	30.24	30.38	30.09	30.3	30.73	30.49	30.49	30.26	30.13	29.33	31.04	30.97	31.32	30.99	30.98	30.83	34.31	30.47	31.2	30.67
C305-EL010034	43.25	43.31	43.11	43.23	43.53	43.4	43.39	43.07	42.97	42.37	43.78	43.89	44.09	43.83	43.79	43.72	47.19	43.18	43.89	43.36
C305-EL010035	29.54	29.5	29.4	29.35	29.5	29.48	29.48	29.06	28.99	28.6	29.58	29.92	29.98	29.72	29.73	33.11	29.07	29.69	29.24	29.24
C305-EL010036	10.82	10.69	10.69	10.48	10.49	10.49	10.52	10.01	9.91	9.7	10.48	11.11	10.97	10.83	10.81	10.83	14.39	10.25	10.66	10.29
C305-EL010037	3.4	3.23	3.2	3.02	2.95	3	2.97	2.49	2.29	2.15	2.77	3.76	3.55	3.41	3.37	3.41	7.07	2.74	3.15	2.79
C305-EL010038	-2.19	-2.28	-2.28	-2.54	-2.63	-2.59	-2.62	-3.03	-3.36	-3.55	-3.03	-1.83	-2	-2.14	-2.21	-2.31	1.79	-2.96	-2.57	-2.87
C305-EL010039	-3.36	-3.41	-3.38	-3.67	-3.77	-3.74	-3.78	-4.15	-4.51	-4.58	-4.22	-2.9	-3.14	-3.28	-3.38	-3.47	2.16	-4.04	-3.73	-3.95
C305-EL010040	1.39	1.32	1.32	1.12	0.83	0.85	0.8	0.33	0.01	-0.06	0.22	1.51	1.28	1.12	1.06	0.93	3.24	0.55	0.79	0.64
C305-EL010041	-0.08	-0.31	-0.34	-0.45	-0.94	-0.92	-1.04	-1.48	-1.83	-1.89	-1.65	-0.49	-0.8	-0.96	-0.92	-1.11	-2.2	-1.52	-1.3	-1.55
C305-EL010042	0.99	0.8	0.8	0.67	0.22	0.23	0.11	-0.31	-0.63	-0.48	0.13	-0.01	0.07	0.1	-0.35	1.2	1.4	1.04	1.04	1.04
C305-EL010043	6.25	6.11	6.09	6.04	5.59	5.53	5.39	4.94	4.65	4.57	4.82	5.4	4.96	4.77	4.82	5	4.59	5.92	6.09	5.81
C305-EL010044	-1.08	-1.2	-1.25	-1.27	-1.62	-1.67	-1.74	-2.18	-2.37	-2.44	-2.29	-1.97	-2.33	-2.52	-2.54	-2.29	-2.83	-1.48	-1.35	-1.6
C305-EL010045	4.56	4.48	4.47	4.41	4.17	4.17	4.16	3.81	3.66	3.4	3.69	3.75	3.56	3.44	3.4	3.6	4.22	4.27	4.03	4.03
C305-EL010046	-4.3	-4.36	-4.4	-4.42	-4.55	-4.56	-4.51	-4.77	-4.83	-4.94	-4.83	-4.78	-4.8	-4.87	-4.93	-4.82	-5.36	-4.6	-4.51	-4.66
C305-EL010047	-3.61	-3.63	-3.58	-3.63	-3.77	-3.79	-3.75	-3.92	-4	-3.98	-4.03	-3.94	-4.08	-4.16	-4.13	-4.12	-4.62	-4.03	-3.96	-4.1
C305-EL010048	-3.47	-3.47	-3.44	-3.47	-3.56	-3.59	-3.5	-3.64	-3.69	-3.72	-3.75	-3.67	-3.78	-3.85	-3.78	-3.82	-4.21	-3.73	-3.67	-3.86
C305-EL010049	-1.9	-1.86	-1.81	-1.86	-1.97	-1.94	-1.91	-1.97	-2.04	-2.01	-2.08	-2.07	-2.13	-2.15	-2.13	-2.13	-2.04	-1.99	-2.18	-2.18
C305-EL010050	-0.78	-0.76	-0.73	-0.76	-0.82	-0.8	-0.78	-0.82	-0.85	-0.81	-0.87	-0.92	-0.96	-0.97	-0.94	-0.95	-1.12	-0.91	-0.88	-1.01
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	19/08/14 12 58	20/08/14 12 58	21/08/14 12 58	22/08/14 12 58	23/08/14 12 58	24/08/14 12 58	25/08/14 12 58	26/08/14 12 58	27/08/14 12 58	28/08/14 12 58	29/08/14 12 58	3/09/14 12 53	4/09/14 12 53	5/09/14 12 53	6/09/14 12 53	7/09/14 12 53	8/09/14 12 53	9/09/14 12 53	10/09/14 12 53	11/09/14 12 53
C305-EL010001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C305-EL010002	-1.63	-1.65	-1.69	-1.67	-1.68	-1.73	-1.74	-1.76	-1.74	-1.76	-1.72	-1.78	-1.79	-1.71	-1.77	-1.74	-1.75	-2.03	-2.07	-1.94
C305-EL010003	-2.72	-2.7	-2.72	-2.67	-2.59	-2.61	-2.7	-2.69	-2.63	-2.61	-2.6	-2.65	-2.68	-2.52	-2.57	-2.51	-2.52	-2.48	-2.57	-2.26
C305-EL010004	-5.36	-5.3	-5.36	-5.35	-5.22	-5.23	-5.34	-5.36	-5.27	-5.32	-5.33	-5.38	-5.37	-5.18	-5.23	-5.21	-5.14	-5.79	-5.87	-5.43
C305-EL010005	-3.89	-3.81	-3.89	-3.92	-3.81	-3.8	-3.92	-4.04	-3.92	-3.99	-4.03	-4.12	-4.07	-3.86	-3.85	-3.84	-3.72	-4.3	-4.43	-3.8
C305-EL010006	2.54	2.6	2.48	2.48	2.56	2.59	2.44	2.29	2.39	2.37	2.37	2.16	2.26	2.54	2.55	2.54	2.66	2.04	1.91	2.62
C305-EL010007	23.55	23.52	23.42	23.38	23.51	23.49	23.27	23.09	23.15	23.12	23.16	22.89	22.97	23.33	23.35	23.33	23.42	22.84	22.65	23.42
C305-EL010008	54.35	54.31	54.23	54.15	54.26	54.19	53.88	53.74	53.77	53.73	53.67	53.28	53.41	53.85	53.81	53.77	53.86	53.34	53.11	53.89
C305-EL010009	74.87	74.87	74.74	74.63	74.78	74.67	74.33	74.15	74.28	74.16	74.08	73.72	73.76	74.28	74.24	74.23	74.27	73.82	73.54	74.38
C305-EL010010	76.6	76.52	76.36	76.33	76.46	76.37	76.07	75.87	76.03	75.89	75.72	75.25	75.33	75.88	75.83	75.86	75.85	75.36	75.08	76.23
C305-EL010011	67.49	67.4	67.19	67.19	67.36	67.23	66.96	66.86	67	66.77	66.58	66.06	66.18	66.74	66.7	66.72	66.63	66.17	65.89	67.31
C305-EL010012	55.95	55.83	55.59	55.67	55.76	55.65	55.49	55.35	55.53	55.28	55.07	54.56	54.66	55.3	55.26	55.27	55.17	54.72	54.39	56.06
C305-EL010013	56.16	56.03	55.75	55.86	55.99	55.84	55.71	55.6	55.82	55.56	55.32	54.88	54.96	55.66	55.65	55.63	55.54	55.11	54.79	56.52
C305-EL010014	62.95	62.76	62.42	62.64	62.7	62.52	62.62	62.56	62.7	62.39	62.06	61.58	61.75	62.47	62.46	62.46	62.38	61.92	61.6	63.53
C305-EL010015	70.74	70.6	70.28	70.46	70.5	70.29	70.4	70.31	70.44	70.17	69.88	69.36	69.5	70.31	70.29	70.27	70.2	69.75	69.5	71.43
C305-EL010016	71.39	71.28	70.92	71.06	71.08	70.89	71	70.87	70.96	70.74	70.49	69.91	70.1	70.92	70.91	70.87	70.79	70.37	70.12	72.13
C305-EL010017	70.85	70.77	70.37	70.55	70.55	70.43	70.6	70.5	70.49	70.26	69.98	69.4	69.58	70.49	70.49	70.43	70.39	69.95	69.7	71.9
C305-EL010018	77.35	77.12	76.62	77.01	76.87	76.77	77.42	77.29	77.07	76.69	76.26	75.62	75.98	76.9	76.77	76.88	76.78	76.29	76.05	78.64
C305-EL010019	77.77	77.58	77.04	77.46	77.35	77.27	78.03	77.88	77.62	77.23	76.77	76.09	76.48	77.42	77.3	77.44	77.34	76.88	76.64	79.35
C305-EL010020	73.28	73.19	72.66	72.99	72.98	72.86	73.51	73.38	73.14	72.73	72.36	71.64	71.95	73.02	72.91	72.95	72.87	72.43	72.25	74.92
C305-EL010021	63.04	62.98	62.49	62.77	62.81	62.64	63.26	63.1	62.83	62.41	62.15	61.3	61.59	62.75	62.57	62.69	62.64	62.21	61.98	64.72
C305-EL010022	55.49	55.59	55.06	55.31	55.33	55.18	55.78	55.52	55.28	54.85	54.63	53.79	53.99	55.31	55	55.21	55.17	54.76	54.54	57.34
C305-EL010023	50.71	50.99	50.56	50.7	50.76	50.64	51	50.77	50.52	50.2	50.08	49.26	49.37	50.83	50.4	50.61	50.62	50.29	50.08	52.88
C305-EL010024	46.21	46.4	45.93	46.13	46.13	46.04	46.7	46.37	45.95	45.51	45.37	44.48	44.7	46.25	45.75	46.05	46.01	45.69	45.49	48.49
C305-EL010025	46.69	46.81	46.31	46.77	46.68	46.61	47.36	47.06	46.57	46.14	45.97	44.92	45.13	46.94	46.79	46.92	46.85	46.4	46.23	49.4
C305-EL010026	49.94	50.11	49.55	50.05	49.88	49.85	50.75	50.47	49.83	49.39	49.21	48.1	48.35	50.17	50.22	50.24	50.25	49.76	49.66	52.96
C305-EL010027	60.32	60.41	59.81	60.39	60.2	60.19	61.38	61.13	60.34	59.83	59.62	58.46	58.82	60.71	60.83	60.88	60.83	60.29	60.15	63.7
C305-EL010028	57.83	57.89	57.58	57.19	57.8	57.65	57.6	58.96	58.74	57.86	57.33	56.98	55.77	58.22	58.08	58.22	58.12	57.6	57.4	61.19
C305-EL010029	46.89	47	46.32	46.89	46.78	46.69	48.14	47.95	47.05	46.5	46.19	45	45.42	47.37	47.49	47.54	47.4	46.95	46.7	50.61
C305-EL010030	34.6	34.75	34.17	34.7	34.57	34.5	35.78	35.56	34.7	34.27	33.93	32.82	33.15	35.19	35.37	35.36	35.26	34.87	34.65	38.5
C305-EL010031	35.37	35.5	34.94	35.44	35.35	35.29	36.5	36.25	35.36	35.03	34.67	33.57	33.82	36	36.25	36.23	36.12	35.76	35.53	39.51
C305-EL010032	33.49	33.54	32.94	33.46	33.41	33.38	34.68	34.4	33.42	33.07	32.69	31.6	31.9	34.09	34.41	34.42	34.26	33.97	33.75	37.86
C305-EL010033	30.39	30.48	29.84	30.26	30.32	30.3	31.53	31.28	30.21	29.96	29.56	28.48	28.75	31.03	31.41	31.32	31.18	30.91	30.7	34.93
C305-EL010034	43.02	43.15	42.48	42.75	42.89	42.9	43.98	43.77	42.74	42.53	42.16	41.16	41.34	43.76	44.09	43.98	43.84	43.69	43.44	47.74
C305-EL010035	28.77	29	28.16	28.26	28.45	28.48	29.4	29.15	28.23	28.01	27.67	26.69	26.84	29.35	29.68	29.61	29.41	29.35	29.1	33.39
C305-EL010036	9.68	9.89	9.58	9.27	8.92	8.96	9.75	9.47	8.64	8.47	8.04	7.06	7.21	5.96	6.24	6.15	6.01	5.92	5.66	4.09
C305-EL010037	2.17	2.28	1.82	1.28	0.92	0.98	1.73	1.43	0.57	0.32	0.07	-0.97	-0.91	-2.09	-1.86	-1.96	-2.12	-2.12	-2.37	-3.94
C305-EL010038	-3.6	-3.57	-3.9	-4.65	-4.91	-4.89	-4.09	-4.36	-5.19	-5.46	-5.51	-6.41	-6.5	-7.6	-7.36	-7.48	-7.64	-7.68	-7.93	-9.37
C305-EL010039	-4.69	-4.51	-4.68	-5.41	-5.5	-5.46	-4.61	-4.85	-5.53	-5.69	-5.82	-6.6	-6.64	-7.6	-7.41	-7.55	-7.61	-7.74	-7.98	-9.29
C305-EL010040	-0.11	0.1	-0.04	-0.68	-0.67	-0.56	0.17	0.03	-0.58	-0.75	-0.78	-1.5	-1.49	-2.32	-2.18	-2.29	-2.29	-2.63	-2.81	-3.98
C305-EL010041	-2.01	-1.94	-1.99	-2.43	-2.44	-2.36	-1.62	-1.67	-2.1	-2.17	-2.23	-2.44	-2.52	-3.27	-3.18	-3.27	-3.18	-3.46	-3.57	-4.68
C305-EL010042	0.87	0.81	0.84	0.61	0.57	0.62	1.38	1.42	1.16	1.19	1.1	1.4	1.23	0.56	0.6	0.54	0.72	0.49	0.46	-0.59
C305-EL010043	5.63	5.67	5.66	5.58	5.53	5.6	6.33	6.34	6.18	6.13	5.95	6.21	6.07	5.49	5.52	5.45	5.63	5.4	5.38	4.46
C305-EL010044	-1.74	-1.72	-1.7	-1.8	-1.83	-1.79	-1.14	-1.12	-1.17	-1.25	-1.45	-1.24	-1.38	-1.88	-1.86	-1.9	-1.71	-1.92	-1.93	-2.71
C305-EL010045	3.95	3.94	3.99	3.91	3.86	3.92	4.54	4.53	4.52	4.36	4.14	4.24	4.19	3.72	3.74	3.88	3.68	3.67	3.08	
C305-EL010046	-4.75	-4.71	-4.64	-4.64	-4.71	-4.69	-4.1	-4.2	-4.56	-4.72	-4.6	-4.48	-4.49	-4.94	-4.92	-4.88	-4.79	-4.87	-4.92	-5.38
C305-EL010047	-4.2	-4.18	-4.08	-4.05	-4.14	-4.11	-3.66	-3.73	-4.06	-4.11	-3.95	-3.82	-3.84	-4.22	-4.19	-4.13	-4.03	-4.15	-4.19	-4.65
C305-EL010048	-3.9	-3.91	-3.73	-3.74	-3.85	-3.8	-3.42	-3.46	-3.76	-3.76	-3.69	-3.67	-3.66	-3.95	-3.92	-3.86	-3.79	-3.89	-3.92	-4.24
C305-EL010049	-2.17	-2.13	-2.05	-2.04	-2.11	-2.04	-1.84	-1.9	-2.07	-2.09	-1.98	-1.95	-1.96	-2.18	-2.13	-2.07	-2.03	-2.11	-2.13	-2.39
C305-EL010050	-1	-0.98	-0.94	-0.91	-0.95	-0.91	-0.84	-0.87	-0.95	-0.94	-0.85	-0.86	-0.84	-0.97	-0.93	-0.94	-0.9	-0.92	-0.93	-1.11
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	12/09/14 12 53	13/09/14 12 53	14/09/14 12 53	15/09/14 12 53	16/09/14 12 53	17/09/14 12 52	18/09/14 12 52	19/09/14 12 52	20/09/14 12 52	21/09/14 12 52	22/09/14 12 52	23/09/14 12 53	24/09/14 12 53	25/09/14 12 53	26/09/14 12 53	27/09/14 12 53	28/09/14 12 53	29/09/14 12 53	30/09/14 12 59	1/10/14 12 54
C305-EL010001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C305-EL010002	-2.04	-2.06	-2	-2	-2.03	-1.96	-2.02	-2.05	-2.01	-2.01	-2.04	-2.34	-1.87	-2.3	-2.2	-2.15	-2.17	-2.09	-2.02	-2.3
C305-EL010003	-2.51	-2.5	-2.43	-2.42	-2.48	-2.41	-2.47	-2.53	-2.39	-2.45	-2.45	-2.79	-2.41	-2.91	-2.72	-2.67	-2.64	-2.55	-2.41	-3.09
C305-EL010004	-5.82	-5.81	-5.72	-5.76	-5.8	-5.73	-5.83	-5.81	-5.63	-5.63	-5.57	-5.86	-5.49	-5.88	-5.78	-5.72	-5.72	-5.61	-5.55	-6.55
C305-EL010005	-4.39	-4.3	-4.26	-4.3	-4.36	-4.29	-4.38	-4.34	-4.18	-4.12	-4.02	-4.31	-3.96	-4.3	-4.27	-4.22	-4.25	-4.12	-4.12	-5.44
C305-EL010006	1.93	2	2.04	2.01	1.97	2.06	1.96	2.02	2.17	2.23	2.36	1.95	2.33	2	2	2.11	2.06	2.2	2.16	0.32
C305-EL010007	22.65	22.8	22.79	22.7	22.69	22.79	22.69	22.78	22.91	22.9	23.02	22.67	23.02	22.75	22.73	22.83	22.76	22.92	22.85	20.73
C305-EL010008	53.07	53.19	53.19	53.11	53.13	53.1	53.08	53.13	53.24	53.35	53.47	53.18	53.51	53.23	53.11	53.21	53.11	53.22	53.13	50.78
C305-EL010009	73.61	73.62	73.63	73.56	73.55	73.51	73.44	73.52	73.69	73.66	73.74	73.46	73.81	73.4	73.34	73.49	73.39	73.49	73.37	70.81
C305-EL010010	75.24	75.28	75.24	75.19	75.14	75.16	75.04	75.09	75.29	75.32	75.44	75.17	75.59	75.07	74.99	75.13	74.96	75.07	74.94	72.32
C305-EL010011	66.15	66.17	66.19	66.09	66.13	66.09	65.91	65.99	66.16	66.26	66.43	66.15	66.55	66.09	65.92	66.06	65.87	65.98	65.8	63.12
C305-EL010012	54.76	54.74	54.77	54.69	54.75	54.7	54.54	54.58	54.79	54.95	55.05	54.83	55.2	54.8	54.54	54.73	54.47	54.65	54.48	51.71
C305-EL010013	55.15	55.13	55.11	55.05	55.06	55.09	54.99	55	55.25	55.41	55.49	55.26	55.66	55.27	55.04	55.17	54.96	55.14	55	52.13
C305-EL010014	62	61.97	61.98	61.95	61.86	61.98	61.8	61.84	62.07	62.36	62.53	62.26	62.74	62.35	62.04	62.11	61.87	62.19	61.92	59.05
C305-EL010015	69.82	69.75	69.77	69.75	69.69	69.74	69.64	69.71	69.84	70.07	70.16	69.88	70.34	69.94	69.79	69.87	69.61	70	69.7	66.71
C305-EL010016	70.42	70.36	70.35	70.34	70.29	70.3	70.25	70.29	70.46	70.57	70.65	70.42	70.87	70.52	70.34	70.42	70.19	70.54	70.25	67.31
C305-EL010017	70.09	70.02	70	69.99	69.98	69.94	69.89	69.94	70.11	70.21	70.39	70.16	70.6	70.24	70.04	70.11	69.86	70.23	69.9	67.05
C305-EL010018	76.55	76.56	76.5	76.49	76.38	76.47	76.3	76.25	76.53	76.83	77.19	77.01	77.41	77.19	76.7	76.77	76.37	76.89	76.48	73.72
C305-EL010019	77.12	77.2	77.1	77.1	77.02	77.05	76.88	76.8	77.12	77.41	77.82	77.64	78.02	77.85	77.34	77.41	77.05	77.58	77.09	74.43
C305-EL010020	72.65	72.75	72.61	72.63	72.56	72.54	72.38	72.68	72.86	73.14	73.01	73.31	73.09	72.78	72.79	72.52	73.01	72.57	69.89	
C305-EL010021	62.42	62.48	62.35	62.38	62.34	62.26	62.11	62.13	62.34	62.46	62.71	62.59	62.92	62.63	62.43	62.44	62.22	62.64	62.22	59.7
C305-EL010022	54.97	55.05	54.92	54.96	54.89	54.88	54.73	54.65	54.84	54.89	55.12	55.12	55.37	55.07	54.91	54.92	54.74	55.18	54.69	52.32
C305-EL010023	50.5	50.53	50.41	50.47	50.43	50.4	50.33	50.28	50.37	50.29	50.39	50.51	50.66	50.29	50.3	50.37	50.18	50.62	50.28	48.06
C305-EL010024	45.94	46	45.9	45.91	45.89	45.93	45.8	45.71	45.85	45.83	45.97	46.15	46.4	46.03	45.95	46.02	45.81	46.34	45.88	43.94
C305-EL010025	46.94	46.87	46.82	46.81	46.71	46.79	46.68	46.49	46.7	46.72	47.31	47.28	47.65	47.05	47.09	47.17	46.91	47.41	46.84	45.24
C305-EL010026	50.35	50.36	50.32	50.25	50.13	50.28	50.11	49.93	50.2	50.21	50.85	50.82	51.18	50.62	50.58	50.65	50.29	50.89	50.29	48.78
C305-EL010027	60.88	60.9	60.94	60.77	60.66	60.88	60.66	60.38	60.75	60.83	61.62	61.53	61.94	61.49	61.3	61.37	60.93	61.61	60.99	59.68
C305-EL010028	58.17	58.21	58.27	58.04	57.96	58.19	57.97	57.61	58.07	58.25	59.04	58.89	59.33	58.99	58.66	58.73	58.21	58.97	58.36	57.21
C305-EL010029	47.46	47.57	47.63	47.37	47.37	47.59	47.33	47.05	47.49	47.6	48.39	48.29	48.76	48.48	48.07	48.2	47.67	48.42	47.83	46.88
C305-EL010030	35.4	35.4	35.47	35.29	35.3	35.4	35.28	35.03	35.37	35.36	36.06	36.03	36.47	36.18	35.87	35.95	35.46	36.22	35.71	34.85
C305-EL010031	36.32	36.29	36.36	36.13	36.18	36.27	36.22	35.93	36.25	36.24	36.92	36.96	37.36	37.07	36.81	36.87	36.44	37.2	36.7	35.86
C305-EL010032	34.47	34.52	34.54	34.33	34.39	34.55	34.38	34.18	34.48	34.53	35.27	35.41	35.78	35.56	35.21	35.33	34.88	35.65	35.16	34.41
C305-EL010033	31.45	31.46	31.5	31.3	31.44	31.54	31.32	31.03	31.31	31.35	32.08	32.28	32.56	32.34	32.09	32.21	31.8	32.64	32.18	31.54
C305-EL010034	44.23	44.2	44.24	44.07	44.17	44.26	44.12	43.86	44.04	44.03	44.75	45.06	45.25	45.09	44.88	45	44.64	45.53	45.18	44.62
C305-EL010035	29.92	29.86	29.85	29.69	29.82	29.91	29.78	29.55	29.64	29.56	30.26	30.57	30.73	30.56	30.46	30.58	30.33	31.1	31.04	30.43
C305-EL010036	5.25	5.21	5.21	5.07	5.28	5.32	5.19	5.11	5.12	4.98	5.66	5.97	6.28	6.05	6.05	6.17	6.03	6.75	7.18	6.47
C305-EL010037	-2.93	-2.83	-2.81	-3.02	-2.82	-2.79	-2.86	-2.97	-2.92	-3.12	-2.46	-2.16	-1.93	-2.09	-2.19	-1.99	-2.04	-1.36	-0.01	-0.99
C305-EL010038	-8.45	-8.33	-8.35	-8.48	-8.33	-8.24	-8.35	-8.44	-8.35	-8.55	-7.86	-7.5	-7.13	-7.4	-7.27	-7.33	-6.53	-4.23	-5.41	
C305-EL010039	-8.49	-8.38	-8.39	-8.46	-8.34	-8.23	-8.29	-8.36	-8.28	-8.43	-7.82	-7.38	-7.03	-7.25	-7.16	-7.08	-7.12	-6.16	-2.75	-4.01
C305-EL010040	-3.11	-3.13	-3.08	-3.16	-3.06	-2.94	-2.99	-3.04	-2.97	-3.13	-2.55	-2.05	-1.77	-2	-1.92	-1.8	-1.8	-0.69	3.27	2.06
C305-EL010041	-3.82	-3.89	-3.83	-3.87	-3.83	-3.66	-3.75	-3.77	-3.68	-3.83	-3.32	-2.7	-2.47	-2.75	-2.63	-2.51	-2.39	-1.24	2.93	1.81
C305-EL010042	0.26	0.15	0.21	0.2	0.2	0.41	0.27	0.29	0.41	0.26	0.69	1.44	1.62	1.29	1.45	1.57	1.8	3	7.07	6.15
C305-EL010043	5.24	5.14	5.22	5.22	5.18	5.39	5.32	5.31	5.4	5.32	5.66	6.53	6.68	6.35	6.54	6.67	7.82	8.71	12.28	11.89
C305-EL010044	-2.03	-2.09	-2.02	-2.01	-2.09	-1.87	-1.93	-1.92	-1.84	-1.95	-1.55	-0.16	-0.18	-0.44	-0.28	-0.09	5.21	4.93	7.73	9.84
C305-EL010045	3.68	3.57	3.66	3.63	3.62	3.78	3.73	3.71	3.77	3.72	4.17	6.62	6.39	6.44	6.58	6.7	15.75	14.47	16.27	25.31
C305-EL010046	-4.87	-4.97	-4.92	-4.93	-4.92	-4.76	-4.86	-4.85	-4.82	-4.86	-4.62	-1.36	-1.49	-1.7	-1.59	-1.46	2.55	2.61	3.71	10.09
C305-EL010047	-4.17	-4.24	-4.24	-4.18	-4.21	-4.04	-4.13	-4.11	-4.15	-4.2	-4.23	-3.32	-3.21	-3.44	-3.28	-3.22	-2.97	-2.14	-1.22	-1.23
C305-EL010048	-3.86	-3.91	-3.89	-3.88	-3.88	-3.77	-3.8	-3.81	-3.87	-3.92	-3.93	-3	-2.93	-3.09	-3.02	-3.01	-2.96	-2.12	-1.6	-1.51
C305-EL010049	-2.1	-2.18	-2.16	-2.13	-2.12	-2.06	-2.08	-2.07	-2.09	-2.14	-2.17	-1.24	-1.19	-1.29	-1.24	-1.24	-1.21	-0.3	-0.07	0
C305-EL010050	-0.91	-0.98	-0.94	-0.95	-0.92	-0.92	-0.93	-0.89	-0.93	-0.99	-1.03	-0.98	-0.96	-1.01	-0.93	-0.92	-0.91	0.01	0.19	0.25
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	2/10/14	3/10/14	4/10/14	5/10/14	6/10/14	7/10/14	8/10/14	9/10/14	10/10/14	11/10/14	12/10/14	13/10/14	14/10/14	15/10/14	16/10/14	17/10/14	18/10/14	19/10/14	20/10/14	21/10/14
	12 54	12 56	12 56	12 56	12 56	12 59	12 55	12 59	12 52	12 52	12 50	12 59	12 49	12 49	12 50	12 53	12 56	12 58	12 58	12 57
C305-EL010001	0	0	0	0	0	0	0	0	0	0	0	0	0	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	-2.25	-2.24	-2.31	-2.37	-2.35	-2.37	-2.35	-2.33	-2.4	-2.37	-2.4	-1.38	-1.85	9.14	10.15	10.14	10.07	10.55	9.61	9.63
C305-EL010003	-2.92	-2.95	-2.74	-3.1	-3.13	-3.04	-3.01	-2.95	-3.04	-2.93	-2.99	-1.92	-2.31	5.89	8.44	8.42	8.35	8.93	7.67	7.65
C305-EL010004	-6.45	-6.33	-5.82	-6.23	-6.25	-6.11	-6.14	-6.1	-6.21	-6.13	-6.16	-4.99	-5.41	0.78	4.2	4.22	4.09	4.64	3.44	3.37
C305-EL010005	-5.31	-5.12	-4.31	-5.03	-5.1	-4.85	-4.92	-4.85	-5.05	-4.93	-5	-3.99	-4.25	0.01	3.14	3.33	3.2	3.85	2.7	2.71
C305-EL010006	0.64	0.9	1.9	0.52	1.01	1.11	1.11	1.22	0.93	1.07	0.97	1.85	1.7	4.51	5.98	6.22	6.16	6.91	5.81	5.85
C305-EL010007	21.1	21.37	22.54	20.86	21.42	21.51	21.46	21.6	21.3	21.4	21.26	22.11	22.04	23.59	23.26	23.67	23.61	24.35	23.35	23.35
C305-EL010008	51.12	51.44	52.83	51.15	51.8	51.81	51.76	51.94	51.42	51.62	51.52	52.29	52.2	52.8	50.59	51.04	50.92	51.64	50.75	50.78
C305-EL010009	71.16	71.45	73	71.05	71.71	71.67	71.62	71.79	71.24	71.53	71.41	72.11	72.23	72.42	68.96	69.54	69.48	70.23	69.27	69.31
C305-EL010010	72.6	72.9	74.5	72.68	73.28	73.29	73.25	73.35	72.89	73.2	73.11	73.8	73.82	73.82	70.03	70.72	70.6	71.27	70.42	70.53
C305-EL010011	63.43	63.63	65.4	63.66	64.2	64.27	64.17	64.31	63.9	64.17	64.11	64.8	64.86	64.05	61.49	62.23	62.04	62.69	61.89	62.03
C305-EL010012	52	52.21	54.03	52.42	52.98	53.1	52.88	53.05	52.62	52.93	52.83	53.49	53.52	53.42	50.73	51.45	51.2	51.82	51.08	51.29
C305-EL010013	52.46	52.63	54.49	52.96	53.51	53.7	53.48	53.64	53.23	53.51	53.44	54.04	54.1	53.92	51.9	52.54	52.29	52.95	52.25	52.49
C305-EL010014	59.44	59.57	61.47	60.19	60.7	61.02	60.75	60.95	60.57	60.75	60.78	61.26	61.43	61.21	60.17	60.42	60.06	60.73	60.1	60.47
C305-EL010015	67.21	67.29	69.24	67.77	68.29	68.41	68.15	68.38	67.98	68.26	68.18	68.72	69.12	68.89	69.2	68.91	68.55	69.2	68.49	68.81
C305-EL010016	67.84	67.88	69.81	68.34	68.82	68.99	68.68	68.95	68.53	68.83	68.72	69.33	69.76	69.58	70.9	69.98	69.62	70.25	69.52	69.8
C305-EL010017	67.56	67.61	69.55	68.21	68.65	68.86	68.57	68.88	68.5	68.76	68.62	69.21	69.69	69.49	71.45	69.55	69.12	69.79	69.13	69.44
C305-EL010018	74.21	74.34	76.34	75.39	75.79	75.99	75.7	75.93	75.58	75.75	75.77	76.36	76.67	76.46	78.51	75.76	75.14	75.78	75.31	75.75
C305-EL010019	74.91	75.05	77.08	76.21	76.61	76.8	76.52	76.73	76.42	76.56	76.6	77.12	77.58	77.36	79.2	76.79	75.99	76.67	76.3	76.77
C305-EL010020	70.52	70.57	72.53	71.5	71.91	72.09	71.93	72.12	71.79	71.95	71.97	72.57	73.04	72.86	74.11	73.36	72.56	73.17	72.73	73.11
C305-EL010021	60.3	60.35	62.24	61.08	61.5	61.68	61.52	61.69	61.33	61.58	61.5	62.25	62.7	62.58	63.39	64.1	63.3	63.82	63.3	63.63
C305-EL010022	52.9	52.97	54.78	53.56	54	54.03	53.95	54.09	53.71	53.99	53.94	54.67	55.15	55.01	55.53	57.68	56.81	57.31	56.78	57.13
C305-EL010023	48.64	48.65	50.37	48.9	49.34	49.31	49.3	49.41	49.08	49.38	49.23	50.09	50.47	50.32	50.74	54.06	53.32	53.8	53.12	53.36
C305-EL010024	44.5	44.47	46.24	45.02	45.41	45.38	45.37	45.47	45.18	45.49	45.33	46.33	46.74	46.57	46.9	50.64	49.83	50.29	49.73	50.05
C305-EL010025	45.78	45.82	47.42	46.31	46.83	46.68	46.76	46.75	46.55	46.8	46.7	47.69	48.02	47.83	48.08	51.08	50.67	51.21	50.62	50.98
C305-EL010026	49.37	49.43	50.96	50.04	50.51	50.36	50.44	50.48	50.26	50.52	50.4	51.46	51.77	51.64	51.79	54.58	54.23	54.8	54.26	54.65
C305-EL010027	60.26	60.33	61.91	61.18	61.67	61.51	61.66	61.61	61.43	61.67	61.63	62.69	62.98	62.77	62.95	65.53	65.37	65.98	65.55	66.09
C305-EL010028	57.77	57.82	59.37	58.83	59.32	59.03	59.24	59.17	58.97	59.23	59.23	60.3	60.66	60.44	60.59	62.69	63.11	63.69	63.26	63.88
C305-EL010029	47.39	47.44	48.9	48.44	48.86	48.65	48.86	48.76	48.54	48.83	48.85	50.03	50.37	50.12	50.24	51.9	53.19	53.69	53.23	53.87
C305-EL010030	35.34	35.3	36.66	36.07	36.5	36.28	36.56	36.44	36.25	36.58	36.5	37.8	38.1	37.85	38	39.44	41.51	41.93	41.46	41.98
C305-EL010031	36.35	36.2	37.54	36.7	37.09	36.86	37.08	37.01	36.8	37.21	37.1	38.4	38.68	38.47	38.41	39.83	42.22	42.55	42.06	42.61
C305-EL010032	34.89	34.69	36	35.28	35.57	35.46	35.62	35.59	35.42	35.8	35.78	37.01	37.26	37.04	37.06	38.23	41.16	41.35	40.97	41.54
C305-EL010033	32	31.75	32.98	32.34	32.62	32.45	32.62	32.57	32.43	32.89	32.79	34.14	34.36	34.12	34.23	34.97	38.08	38.13	37.8	38.32
C305-EL010034	45.07	44.77	45.92	45.24	45.53	45.28	45.51	45.5	45.34	45.84	45.7	47.06	47.3	47.11	47.25	47.74	50.35	50.38	49.98	50.51
C305-EL010035	30.88	30.58	31.53	30.79	31.01	30.83	31.06	31.09	30.91	31.44	31.26	32.61	32.81	32.67	32.78	33.12	35.48	35.42	35	35.43
C305-EL010036	6.9	6.55	7.41	6.61	6.86	6.66	6.91	6.97	6.77	7.39	7.24	8.44	8.75	8.59	8.6	8.86	12.04	11.84	11.41	11.6
C305-EL010037	-0.55	-0.93	-0.21	-0.89	-0.69	-0.76	-0.51	-0.46	-0.69	-0.1	-0.21	0.93	1.28	1.04	1	1.31	5.14	4.91	4.47	4.62
C305-EL010038	-5.03	-5.34	-4.7	-5.31	-5.16	-4.77	-4.58	-4.5	-4.73	-4.13	-4.21	-3.13	-2.64	-2.89	-2.91	-2.55	1.45	1.32	0.86	1.03
C305-EL010039	-3.77	-4.01	-3.44	-3.99	-3.81	-2.82	-2.68	-2.61	-2.88	-2.25	-2.3	-1.31	-0.66	-0.8	-0.92	-0.64	3.05	2.9	2.49	2.68
C305-EL010040	2.26	2.09	2.55	1.99	2.26	3.71	3.82	3.86	3.63	4.23	4.2	5.15	5.89	5.73	5.64	5.84	9.77	9.42	9	9.22
C305-EL010041	1.89	2.03	2.33	1.86	2.23	3.88	3.91	3.94	3.63	4.26	4.32	5.27	6.04	5.93	5.75	5.82	10.84	9.67	9.23	9.41
C305-EL010042	6.11	6.81	6.83	6.45	6.99	8.96	9.36	9.36	9.03	9.78	10.75	10.63	10.44	10.35	10.47	15.18	12.88	12.55	12.75	12.75
C305-EL010043	11.89	13.15	12.79	12.42	13.4	15.67	18.04	17.9	17.36	17.99	18.23	19.14	18.85	18.59	18.47	18.64	22.24	18.32	18.09	18.37
C305-EL010044	9.71	11.69	10.88	10.55	12.18	14.38	17.14	19.34	18.5	19.15	19.48	20.3	20.42	20.01	19.86	20	22.31	17.39	17.24	17.48
C305-EL010045	25.21	27.65	26.76	26.5	28.71	30.46	34.14	42.45	41.2	41.83	42.25	42.87	43.46	43.04	43.04	43.09	44.28	38.78	38.68	38.89
C305-EL010046	10.63	12.66	12.1	12	14.25	15.38	17.32	18.62	18.06	19.74	20.25	20.69	20.86	20.75	20.59	20.96	21.57	18.61	18.56	18.72
C305-EL010047	-1	-0.12	-0.44	-0.71	1.28	1.71	1.63	1.64	1.44	2.21	2.75	3.33	2.83	2.77	2.72	2.88	3.42	2.02	1.95	2
C305-EL010048	-1.29	-1.11	-1.21	-1.36	-0.73	-0.66	-0.5	-0.39	-0.43	0.36	0.57	0.99	0.69	0.62	0.59	0.74	1.22	0.87	0.85	0.86
C305-EL010049	-0.03	0.1	-0.01	0.2	0.26	0.37	0.41	0.45	0.45	1.15	1.21	1.5	1.35	1.26	1.32	1.4	1.7	1.62	1.59	1.56
C305-EL010050	0.21	0.31	0.22	0.26	0.32	0.27	0.38	0.4	0.42	1.1	1.13	1.3	1.22	1.11	1.2	1.21	1.39	1.35	1.31	1.29
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	22/10/14 12 56	23/10/14 12 50	24/10/14 12 50	25/10/14 12 50	26/10/14 12 50	27/10/14 12 53	28/10/14 12 54	29/10/14 12 54	30/10/14 12 55	31/10/14 12 55	1/11/14 12 55	2/11/14 12 55	3/11/14 12 45	4/11/14 12 55	5/11/14 12 50	6/11/14 12 50	7/11/14 12 58	8/11/14 12 48	9/11/14 12 58	10/11/14 12 59
C305-EL010001	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	9.63	9.53	9.6	9.68	9.63	9.64	9.65	9.63	9.68	9.7	9.68	9.66	9.74	9.83	9.7	9.75	9.67	9.68	9.68	9.76
C305-EL010003	7.58	7.63	7.79	7.75	7.77	7.78	7.75	7.78	7.94	7.91	7.92	7.9	7.93	7.95	7.8	7.87	7.85	7.87	7.93	7.97
C305-EL010004	3.36	3.37	3.55	3.52	3.55	3.59	3.57	3.5	3.71	3.71	3.71	3.71	3.7	3.85	3.66	3.81	3.68	3.77	3.84	3.89
C305-EL010005	2.81	2.74	2.93	2.92	2.96	3.01	2.99	2.85	3.11	3.13	3.11	3.09	3.08	3.3	3.13	3.23	3.07	3.1	3.23	3.24
C305-EL010006	5.94	5.96	6.05	6.11	6.16	6.23	6.2	5.98	6.24	6.28	6.24	6.25	6.2	6.29	6.09	6.19	6.05	6.09	6.22	6.2
C305-EL010007	23.42	23.48	23.59	23.59	23.66	23.79	23.72	23.48	23.79	23.81	23.78	23.79	23.68	23.75	23.48	23.59	23.47	23.52	23.65	23.58
C305-EL010008	50.97	50.93	50.99	51.01	51.08	51.19	51.16	50.83	51.2	51.2	51.18	51.11	51.15	51.29	50.99	51.13	50.94	50.99	51.13	51.08
C305-EL010009	69.38	69.37	69.5	69.47	69.55	69.68	69.59	69.23	69.66	69.7	69.7	69.61	69.54	69.63	69.27	69.32	69.2	69.24	69.39	69.24
C305-EL010010	70.64	70.49	70.53	70.57	70.65	70.78	70.71	70.34	70.7	70.7	70.73	70.69	70.69	70.92	70.56	70.62	70.34	70.4	70.53	70.47
C305-EL010011	62.12	61.94	61.93	61.99	62.07	62.15	62.1	61.7	62.06	62.09	62.08	62.08	62.09	62.38	62.06	62.07	61.82	61.81	61.94	61.9
C305-EL010012	51.39	51.16	51.11	51.18	51.27	51.3	51.27	50.84	51.19	51.25	51.22	51.25	51.34	51.67	51.34	51.36	51.05	51.06	51.13	51.17
C305-EL010013	52.58	52.32	52.23	52.3	52.4	52.43	52.37	51.9	52.31	52.41	52.29	52.35	52.51	52.81	52.49	52.51	52.17	52.18	52.25	52.31
C305-EL010014	60.61	60.23	60.07	60.18	60.23	60.28	60.23	59.76	60.07	60.19	60.05	60.13	60.45	60.81	60.52	60.55	60.12	60.08	60.22	60.36
C305-EL010015	68.87	68.59	68.46	68.5	68.51	68.6	68.47	68.02	68.4	68.49	68.38	68.37	68.64	68.86	68.6	68.58	68.24	68.14	68.35	68.44
C305-EL010016	69.8	69.61	69.43	69.48	69.44	69.58	69.42	69.02	69.33	69.44	69.35	69.34	69.62	69.8	69.49	69.47	69.15	69.06	69.33	69.38
C305-EL010017	69.5	69.26	69.03	69.1	69.08	69.23	69.07	68.71	68.94	69.08	68.96	69	69.31	69.51	69.21	69.16	68.83	68.75	69.02	69.1
C305-EL010018	75.94	75.47	75.14	75.34	75.27	75.38	75.3	74.97	75.06	75.22	75.08	75.15	75.68	76.03	75.74	75.64	75.12	75.06	75.33	75.49
C305-EL010019	76.99	76.45	76.07	76.34	76.27	76.32	76.27	75.99	76.01	76.14	76.01	76.14	76.68	77.05	76.77	76.68	76.05	76	76.28	76.45
C305-EL010020	73.2	72.79	72.5	72.66	72.65	72.66	72.62	72.45	72.5	72.59	72.44	72.56	72.94	73.18	72.88	72.75	72.31	72.21	72.48	72.56
C305-EL010021	63.66	63.34	63.13	63.24	63.24	63.25	63.25	63.17	63.22	63.28	63.15	63.27	63.52	63.64	63.29	63.17	62.88	62.72	63	63.03
C305-EL010022	57.08	56.8	56.67	56.66	56.74	56.73	56.72	56.73	56.77	56.8	56.64	56.78	57	57.09	56.74	56.58	56.29	56.15	56.42	56.48
C305-EL010023	53.23	53.12	53.08	52.94	53.03	53.06	53.04	53.22	53.19	53.2	53.06	53.23	53.27	53.23	52.91	52.76	52.56	52.43	52.7	52.72
C305-EL010024	50.28	50.13	49.99	49.92	50.02	50	50	50.28	50.11	50.14	50.03	50.25	50.37	50.43	50.29	50.34	50.03	49.91	50.18	50.28
C305-EL010025	51.4	51.32	51.2	50.99	51.19	51.23	51.22	51.51	51.31	51.37	51.34	51.54	51.71	51.82	51.61	51.8	51.43	51.32	51.62	51.67
C305-EL010026	55.07	55.02	54.92	54.73	54.93	55.01	55.05	55.44	55.17	55.19	55.19	55.38	55.56	55.7	55.5	55.61	55.22	55.12	55.41	55.49
C305-EL010027	66.56	66.41	66.27	66.15	66.31	66.37	66.44	66.94	66.47	66.53	66.54	66.77	67.11	67.33	67.32	67.5	66.94	66.85	67.21	67.3
C305-EL010028	64.34	64.16	63.98	63.92	64.08	64.09	64.13	64.73	64.13	64.22	64.2	64.47	64.88	65.16	65.06	65.31	64.59	64.51	64.86	64.97
C305-EL010029	54.25	54.11	53.95	53.9	54.08	54.05	54.1	54.79	54.13	54.23	54.19	54.49	54.86	55.15	55.01	55.27	54.62	54.55	54.9	54.97
C305-EL010030	42.23	42.18	42.11	42	42.19	42.19	42.19	42.97	42.3	42.43	42.36	42.7	42.95	43.08	42.87	43.1	42.58	42.46	42.87	42.84
C305-EL010031	42.79	42.76	42.77	42.67	42.81	42.86	42.84	43.66	42.97	43.13	43.04	43.36	43.56	43.62	43.44	43.64	43.18	43.07	43.48	43.41
C305-EL010032	41.77	41.65	41.69	41.59	41.74	41.73	41.73	42.59	41.9	41.97	41.9	42.26	42.54	42.62	42.51	42.67	42.21	42.12	42.53	42.41
C305-EL010033	38.49	38.46	38.51	38.42	38.58	38.58	38.59	39.44	38.74	38.82	38.72	39.08	39.3	39.41	39.3	39.42	38.97	38.94	39.3	39.19
C305-EL010034	50.61	50.67	50.81	50.67	50.83	50.85	50.88	51.76	51.1	51.12	51.02	51.36	51.53	51.57	51.5	51.58	51.26	51.24	51.53	51.45
C305-EL010035	35.45	35.61	35.83	35.64	35.75	35.85	35.87	36.73	36.08	36.12	36	36.3	36.37	36.22	36.28	36.09	36.02	36.3	36.18	
C305-EL010036	11.5	11.74	11.98	11.73	11.85	12.02	12.01	12.78	12.24	12.25	12.15	12.37	12.4	12.32	12.21	12.23	12.11	12.05	12.33	12.17
C305-EL010037	4.4	4.78	4.97	4.73	4.86	5	4.97	5.67	5.18	5.16	5.08	5.29	5.27	5.2	5.05	5.04	4.97	4.93	5.2	4.99
C305-EL010038	0.8	1.15	1.42	1.19	1.33	1.48	1.44	2.15	1.7	1.7	1.65	1.85	1.84	1.69	1.65	1.62	1.59	1.56	1.83	1.64
C305-EL010039	2.44	2.82	3.05	2.83	2.99	3.14	3.1	3.87	3.4	3.41	3.35	3.6	3.61	3.52	3.5	3.47	3.47	3.38	3.66	3.55
C305-EL010040	9.01	9.3	9.49	9.28	9.45	9.56	9.57	10.28	9.79	9.83	9.79	10.04	10.07	9.96	9.98	9.9	9.86	9.78	10.06	9.97
C305-EL010041	9.31	9.52	9.61	9.46	9.58	9.7	9.73	10.47	9.92	9.99	9.97	10.26	10.3	10.27	10.3	10.16	10.09	10.02	10.29	10.16
C305-EL010042	12.72	12.94	13.05	12.91	13.03	13.12	13.16	13.87	13.38	13.47	13.42	13.69	13.74	13.71	13.77	13.64	13.59	13.53	13.8	13.69
C305-EL010043	18.39	18.58	18.65	18.59	18.65	18.7	18.74	19.38	19	19.06	19.03	19.28	19.35	19.31	19.34	19.22	19.19	19.14	19.35	19.25
C305-EL010044	17.5	17.64	17.69	17.62	17.62	17.7	17.75	18.23	17.94	17.98	17.95	18.18	18.2	18.21	18.22	18.14	18.08	18.06	18.26	18.12
C305-EL010045	38.88	38.94	39	38.88	38.84	38.87	38.91	39.33	39.02	39.08	39.03	39.24	39.34	39.29	39.32	39.02	39.21	39.08	39.28	39.16
C305-EL010046	18.77	18.8	18.75	18.71	18.68	18.64	18.66	19.09	18.79	18.82	18.72	18.97	19.15	18.99	19.03	18.97	18.82	18.77	18.96	18.93
C305-EL010047	1.99	2.1	2.08	2.04	2.02	2.04	2.03	2.37	2.19	2.26	2.13	2.34	2.4	2.26	2.31	2.24	2.14	2.16	2.29	2.28
C305-EL010048	0.83	0.92	0.92	0.89	0.87	0.89	0.86	1.12	0.99	1.09	0.97	1.17	1.13	1.04	1.13	1.06	1.04	1.07	1.14	1.09
C305-EL010049	1.57	1.64	1.65	1.63	1.63	1.67	1.68	1.77	1.68	1.75	1.7	1.78	1.64	1.66	1.72	1.65	1.72	1.67	1.76	1.73
C305-EL010050	1.29	1.33	1.37	1.3	1.35	1.39	1.38	1.4	1.41	1.44	1.42	1.44	1.31	1.32	1.34	1.32	1.37	1.36	1.42	1.35
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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C305-EL010001	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	9.66	9.56	9.53	9.38	9.24	9.13	9.21	9.22	9.23	9.2	9.03	9.25	9.26	9.24	9.23	9.29	9.22	9.15	9.03	9.29
C305-EL010003	7.89	7.81	7.81	7.71	7.36	7.32	7.43	7.43	7.47	7.42	7.56	7.58	7.58	7.38	7.36	7.54	7.5	7.57	7.48	7.58
C305-EL010004	3.77	3.71	3.68	3.48	3.14	3.14	3.27	3.31	3.33	3.34	3.41	3.4	3.41	3.29	3.33	3.38	3.37	3.45	3.42	3.39
C305-EL010005	3.08	2.98	3.05	2.7	2.32	2.36	2.61	2.56	2.57	2.67	2.76	2.61	2.62	2.5	2.53	2.62	2.49	2.75	2.7	2.52
C305-EL010006	6.05	5.91	6.02	5.64	5.1	5.22	5.58	5.46	5.54	5.59	5.72	5.51	5.54	5.31	5.3	5.44	5.41	5.72	5.78	5.36
C305-EL010007	23.46	23.33	23.41	23	22.39	22.58	22.87	22.74	22.81	22.86	23.05	22.79	22.84	22.55	22.46	22.71	22.64	23	23.05	22.57
C305-EL010008	50.92	50.81	50.87	50.35	49.9	50.04	50.31	50.19	50.24	50.26	50.56	50.19	50.16	49.95	49.91	50.07	49.98	50.39	50.42	49.93
C305-EL010009	69.17	69.08	69.1	68.55	68.07	68.25	68.41	68.35	68.42	68.36	68.72	68.3	68.29	68	67.87	68.03	68.1	68.51	68.57	67.99
C305-EL010010	70.3	70.23	70.22	69.67	69.22	69.45	69.64	69.56	69.66	69.67	69.98	69.46	69.38	69.3	69.2	69.29	69.27	69.68	69.7	69.17
C305-EL010011	61.69	61.64	61.67	61.08	60.68	60.92	61.14	60.96	61.05	61.1	61.35	60.87	60.77	60.76	60.65	60.66	60.72	61.09	61.14	60.65
C305-EL010012	50.92	50.83	50.9	50.28	49.98	50.2	50.41	50.3	50.42	50.44	50.7	50.18	50.06	50.15	50.07	49.94	50	50.34	50.41	49.91
C305-EL010013	52.02	51.95	51.99	51.41	51.14	51.32	51.53	51.46	51.58	51.51	51.89	51.33	51.22	51.33	51.29	51.08	51.12	51.45	51.55	51.08
C305-EL010014	60	59.92	59.96	59.37	59.2	59.35	59.62	59.55	59.64	59.61	60.03	59.41	59.21	59.54	59.48	59.19	59.2	59.48	59.58	59.12
C305-EL010015	68.11	68.05	68.06	67.56	67.36	67.57	67.82	67.69	67.73	67.62	68.09	67.52	67.44	67.62	67.57	67.33	67.29	67.71	67.72	67.24
C305-EL010016	69.01	68.97	69.02	68.56	68.34	68.52	68.77	68.71	68.72	68.6	69.09	68.5	68.41	68.62	68.49	68.35	68.32	68.68	68.67	68.33
C305-EL010017	68.68	68.59	68.68	68.17	68.07	68.2	68.4	68.41	68.45	68.36	68.8	68.23	68.13	68.43	68.29	68.13	68.04	68.39	68.36	68.06
C305-EL010018	74.97	74.84	74.97	74.41	74.49	74.62	74.85	74.87	74.8	74.94	75.36	74.69	74.48	75.1	75.02	74.72	74.51	74.76	74.71	74.58
C305-EL010019	75.83	75.72	75.88	75.37	75.55	75.63	75.89	75.85	75.86	76.01	76.35	75.76	75.54	76.24	76.21	75.82	75.5	75.73	75.62	75.69
C305-EL010020	72.07	71.98	72.12	71.78	71.77	71.86	71.99	72	71.97	72.02	72.28	71.93	71.77	72.22	72.18	71.87	71.65	71.82	71.69	71.8
C305-EL010021	62.63	62.56	62.67	62.49	62.39	62.49	62.6	62.59	62.59	62.61	62.71	62.58	62.54	62.79	62.6	62.63	62.39	62.51	62.32	62.49
C305-EL010022	56.1	55.99	56.13	56.05	55.86	55.85	55.95	55.99	56.07	56.06	56.01	56.08	55.98	56.23	56.01	56.11	55.8	55.91	55.63	55.99
C305-EL010023	52.42	52.33	52.44	52.53	52.31	52.24	52.39	52.35	52.52	52.34	52.21	52.49	52.49	52.53	52.34	52.61	52.3	52.36	52.03	52.64
C305-EL010024	49.95	49.88	50.02	50.2	50.19	49.97	50.17	50.21	50.38	50.21	49.87	50.36	50.28	50.62	50.58	50.85	50.38	50.4	50.06	50.85
C305-EL010025	51.33	51.48	51.43	51.65	51.86	51.62	51.82	51.85	51.96	51.94	51.48	52.06	52.07	52.38	52.54	52.75	52.11	51.97	51.66	52.6
C305-EL010026	55.18	55.29	55.26	55.64	55.97	55.67	55.84	55.88	56	55.97	55.36	56.13	56.13	56.45	56.59	56.82	56.29	55.9	55.53	56.69
C305-EL010027	66.95	67.08	67.03	67.51	67.97	67.65	67.79	67.89	68.07	68.04	67.3	68.12	68.05	68.59	68.81	68.88	68.21	67.76	67.31	68.71
C305-EL010028	64.58	64.74	64.65	65.25	65.77	65.43	65.53	65.65	65.86	65.79	64.98	65.87	65.73	66.48	66.58	66.69	66.06	65.31	64.89	66.42
C305-EL010029	54.61	54.77	54.67	55.36	55.89	55.47	55.66	55.76	56	55.92	54.98	56	55.92	56.65	56.72	56.91	56.29	55.42	54.99	56.63
C305-EL010030	42.55	42.74	42.61	43.46	43.93	43.49	43.7	43.74	44.14	43.91	42.84	44.21	44.12	44.61	44.66	44.96	44.45	43.45	43.07	44.75
C305-EL010031	43.14	43.42	43.25	44.15	44.62	44.16	44.34	44.38	44.77	44.48	43.35	44.76	44.75	45.17	45.19	45.59	45.06	44	43.61	45.4
C305-EL010032	42.17	42.4	42.27	43.21	43.74	43.26	43.46	43.51	43.82	43.56	42.48	43.86	43.92	44.35	44.4	44.72	44.23	43.11	42.64	44.61
C305-EL010033	38.98	39.17	39.07	39.99	40.59	40.15	40.32	40.31	40.64	40.36	39.26	40.7	40.76	41.08	41.22	41.57	41.01	39.95	39.4	41.36
C305-EL010034	51.26	51.47	51.39	52.37	52.91	52.52	52.65	52.63	52.87	52.63	51.53	53.19	53.19	53.33	53.45	53.96	53.5	52.38	51.81	53.71
C305-EL010035	36.01	36.24	36.2	37.15	37.63	37.23	37.31	37.29	37.61	37.29	36.19	37.83	37.89	37.97	38.12	38.6	38.27	37.08	36.5	38.41
C305-EL010036	12.09	12.27	12.21	13.06	13.54	13.2	13.23	13.17	13.55	13.22	12.18	13.74	13.85	13.81	13.94	14.46	14.24	13.11	12.52	14.41
C305-EL010037	4.94	5.15	5.05	5.87	6.24	5.88	5.88	5.88	6.27	6	4.9	6.48	6.6	6.51	6.56	7.16	6.99	5.87	5.29	7.14
C305-EL010038	1.61	1.84	1.71	2.59	2.9	2.51	2.48	2.55	2.97	2.66	1.61	3.17	3.3	3.28	3.35	3.93	3.75	2.63	1.94	4
C305-EL010039	3.48	3.67	3.64	4.49	4.81	4.47	4.4	4.54	4.98	4.65	3.65	5.1	5.2	5.31	5.3	5.95	5.77	4.52	4.12	6.06
C305-EL010040	9.85	10.07	10.07	10.84	11.3	10.98	10.88	11.03	11.37	11.09	10.14	11.38	11.56	11.61	11.64	12.15	11.99	10.86	10.57	12.33
C305-EL010041	10.07	10.31	10.27	10.97	11.54	11.23	11.14	11.23	11.58	11.34	10.42	11.56	11.7	11.9	11.9	12.34	12.17	11.16	10.79	12.51
C305-EL010042	13.62	13.81	13.82	14.43	14.94	14.64	14.6	14.77	15.01	14.81	13.96	15.06	15.11	15.35	15.33	15.83	15.68	14.67	14.28	15.83
C305-EL010043	19.21	19.36	19.34	19.93	20.38	20.06	20.05	20.16	20.41	20.19	19.42	20.48	20.5	20.65	20.67	21.16	20.98	20.04	19.69	21.05
C305-EL010044	18.09	18.2	18.15	18.67	19.07	18.86	18.8	18.92	19.13	18.89	18.26	19.1	19.19	19.27	19.26	19.67	19.53	18.71	18.42	19.52
C305-EL010045	39.02	39.16	39.07	39.51	39.85	39.69	39.6	39.73	39.88	39.7	39.13	39.86	39.87	40.07	40.02	40.36	40.18	39.42	39.18	40.19
C305-EL010046	18.75	18.84	18.86	19.2	19.6	19.42	19.29	19.49	19.6	19.52	18.97	19.53	19.5	19.85	19.79	19.99	19.79	19.09	18.9	19.8
C305-EL010047	2.13	2.23	2.22	2.54	2.94	2.68	2.63	2.78	2.83	2.73	2.2	2.78	2.78	2.92	2.96	3.19	3.05	2.44	2.28	3.07
C305-EL010048	1.02	1.14	1.1	1.41	1.63	1.41	1.33	1.5	1.56	1.42	1.02	1.51	1.55	1.58	1.62	1.8	1.65	1.21	1.06	1.73
C305-EL010049	1.68	1.76	1.76	2	2.05	1.92	1.87	1.98	2	1.89	1.55	2.06	2.03	1.94	1.95	2.19	2.19	1.86	1.73	2.18
C305-EL010050	1.32	1.42	1.39	1.52	1.57	1.53	1.51	1.57	1.6	1.51	1.33	1.59	1.64	1.58	1.5	1.67	1.64	1.53	1.44	1.66
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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C305-EL010001	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	8.99	9.24	8.94	9.17	9	9.07	9.03	8.93	9.04	8.95	8.94	9.14	9	8.94	9.04	9.14	8.82	8.97	8.94	8.96
C305-EL010003	7.52	7.6	7.4	7.53	7.47	7.56	7.6	7.5	7.62	7.58	7.49	7.63	7.6	7.65	7.73	7.69	6.56	7.68	7.65	7.7
C305-EL010004	3.54	3.55	3.56	3.56	3.61	3.71	3.65	3.72	3.83	3.7	3.61	3.63	3.73	3.93	3.8	3.83	1.9	3.75	3.79	3.9
C305-EL010005	2.93	2.81	2.96	2.82	2.97	3.03	2.94	3.12	3.14	3.19	2.91	2.95	2.97	3.37	3.24	3.23	-0.25	3.22	3.26	3.5
C305-EL010006	6	5.78	5.96	5.74	5.99	6.01	5.82	6.15	6.11	6.25	5.92	5.98	5.99	6.36	6.27	6.18	0.04	6.35	6.46	6.67
C305-EL010007	23.32	23.01	23.17	22.9	23.17	23.11	23.01	23.37	23.2	23.44	23.03	23.05	23.01	23.52	23.42	23.24	14.58	23.6	23.71	23.92
C305-EL010008	50.78	50.44	50.7	50.35	50.62	50.61	50.43	50.85	50.72	50.87	50.42	50.4	50.44	51.05	50.8	50.65	39.37	50.92	51.01	51.31
C305-EL010009	68.91	68.43	68.76	68.33	68.66	68.5	68.29	68.76	68.56	68.81	68.34	68.35	68.25	68.9	68.63	68.46	55.64	68.93	69.06	69.32
C305-EL010010	70.14	69.64	70.1	69.6	69.97	69.91	69.5	70.08	69.98	70.08	69.67	69.48	69.63	70.37	69.83	69.81	56.72	69.99	70.14	70.6
C305-EL010011	61.55	61.09	61.5	60.99	61.42	61.36	60.96	61.57	61.4	61.51	61.07	60.91	61.1	61.82	61.41	61.3	48.85	61.38	61.53	62.1
C305-EL010012	50.85	50.36	50.92	50.35	50.84	50.76	50.32	50.93	50.82	50.87	50.46	50.24	50.49	51.23	50.73	50.69	38.86	50.6	50.8	51.45
C305-EL010013	51.94	51.55	52.08	51.51	51.93	51.89	51.48	52.08	51.92	52.01	51.59	51.25	51.61	52.37	51.85	51.81	40.8	51.68	51.9	52.55
C305-EL010014	60.06	59.73	60.25	59.64	60.12	60.12	59.59	60.26	60.17	60.08	59.8	59.34	59.83	60.66	59.96	59.96	49.94	59.59	59.86	60.64
C305-EL010015	68.11	67.76	68.26	67.67	68.09	68.09	67.63	68.23	68.14	68.07	67.81	67.42	67.83	68.61	67.98	67.96	58.76	67.73	67.99	68.68
C305-EL010016	69.02	68.74	69.19	68.65	69.01	69.03	68.6	69.13	69.06	68.99	68.75	68.43	68.78	69.52	68.92	68.9	60.33	68.67	68.88	69.53
C305-EL010017	68.78	68.47	68.94	68.54	68.83	68.91	68.47	68.96	68.85	68.77	68.61	68.34	68.69	69.38	68.75	68.74	60.08	68.45	68.6	69.28
C305-EL010018	75.26	75	75.55	75.21	75.55	75.69	75.02	75.61	75.76	75.25	75.28	74.79	75.46	76.18	75.31	75.45	66	74.62	74.8	75.75
C305-EL010019	76.19	76.03	76.56	76.26	76.62	76.72	76.01	76.55	76.82	76.12	76.28	75.76	76.49	77.16	76.24	76.46	67.25	75.42	75.59	76.67
C305-EL010020	72.11	72.01	72.38	72.24	72.43	72.46	71.97	72.31	72.64	71.95	72.15	71.84	72.39	72.8	72.15	72.4	64.46	71.5	71.64	72.51
C305-EL010021	62.54	62.62	62.73	62.84	62.89	62.87	62.43	62.7	63	62.44	62.66	62.57	62.86	63.1	62.63	62.95	56.19	62.18	62.2	62.98
C305-EL010022	55.83	56.03	55.98	56.21	56.17	56.2	55.74	55.94	56.35	55.67	55.95	56.02	56.06	56.32	55.9	56.32	51.02	55.48	55.44	56.15
C305-EL010023	52.09	52.48	52.07	52.47	52.41	52.46	52.17	52.15	52.59	51.97	52.27	52.58	52.29	52.5	52.26	52.64	48.63	52.01	52	52.42
C305-EL010024	50.12	50.7	50.12	50.7	50.55	51.03	50.53	50.49	51.13	50.33	51.09	50.72	50.97	50.77	51.29	48.86	50.39	50.3	50.72	
C305-EL010025	51.74	52.4	51.68	52.22	52.16	52.69	52.17	52.18	52.87	51.91	52.3	52.71	52.42	52.63	52.58	53.05	50.54	51.97	51.76	52.18
C305-EL010026	55.6	56.45	55.63	56.29	56.09	56.88	56.13	56.23	56.99	55.94	56.32	56.93	56.52	56.69	56.68	57.2	55	55.98	55.74	56.19
C305-EL010027	67.44	68.48	67.62	68.4	68.12	68.98	68.12	68.13	69.08	67.75	68.25	68.81	68.52	68.7	68.56	69.26	67.88	67.66	67.38	67.92
C305-EL010028	65.02	66.19	65.22	66.18	65.82	66.68	65.73	65.69	66.71	65.29	65.86	66.38	66.13	66.32	66.71	66.93	65.81	65.05	64.77	65.33
C305-EL010029	55.05	56.35	55.26	56.28	55.96	56.77	55.85	55.77	56.85	55.41	55.94	56.63	56.25	56.39	56.2	57.17	56.67	55.22	54.93	55.46
C305-EL010030	42.94	44.35	43.04	44.18	43.72	44.52	43.63	43.52	44.59	43.2	43.72	44.61	43.91	44.05	43.99	44.95	44.95	43.25	42.99	43.28
C305-EL010031	43.47	44.89	43.53	44.73	44.19	44.94	44.14	43.92	45	43.71	44.21	45.25	44.36	44.51	44.51	45.45	45.8	43.86	43.55	43.74
C305-EL010032	42.51	43.98	42.65	43.83	43.22	44.16	43.38	43.06	44.2	42.83	43.33	44.38	43.49	43.61	43.64	44.6	45.71	42.92	42.58	42.78
C305-EL010033	39.22	40.75	39.36	40.67	39.91	40.86	40.1	39.8	40.89	39.49	39.97	41.12	40.21	40.24	40.38	41.25	42.24	39.66	39.29	39.41
C305-EL010034	51.52	53.11	51.72	52.97	52.19	53.08	52.48	52.07	53.11	51.87	52.34	53.68	52.59	52.52	52.77	53.62	54.27	52.19	51.84	51.82
C305-EL010035	36.22	37.79	36.31	37.61	36.82	37.64	37.07	36.69	37.65	36.48	36.93	38.33	37.12	37.06	37.37	38.2	38.37	36.96	36.61	36.54
C305-EL010036	12.25	13.8	12.28	13.51	12.77	13.48	12.99	12.66	13.54	12.5	12.9	14.28	13.05	13.02	13.37	14.12	14.63	13.07	12.77	12.66
C305-EL010037	5.01	6.48	4.93	6.14	5.33	6.04	5.51	5.21	6.02	5.06	5.42	6.89	5.58	5.45	5.96	6.64	7.74	5.75	5.47	5.27
C305-EL010038	1.81	3.28	1.73	2.95	2.05	2.89	2.38	2.1	2.92	2.01	2.28	3.75	2.46	2.35	2.91	3.46	5.6	2.68	2.45	2.23
C305-EL010039	3.95	5.36	3.83	5.04	4.13	4.97	4.42	4.18	4.99	4	4.19	5.61	4.32	4.24	4.71	5.24	7.74	4.49	4.22	3.99
C305-EL010040	10.41	11.75	10.3	11.45	10.58	11.38	10.77	10.64	11.38	10.44	10.66	11.91	10.75	10.69	11.08	11.49	14.11	10.83	10.66	10.37
C305-EL010041	10.64	11.97	10.58	11.68	10.91	11.64	11.08	11.02	11.7	10.8	10.99	12.12	11.04	11.08	11.39	11.73	14.7	11.06	10.91	10.68
C305-EL010042	14.14	15.4	14.09	15.12	14.39	15.13	14.53	14.49	15.17	14.31	14.51	15.6	14.62	14.56	14.85	15.24	16.56	14.62	14.47	14.21
C305-EL010043	19.56	20.69	19.48	20.41	19.73	20.42	19.78	19.82	20.44	19.61	19.81	20.81	19.87	19.84	20.12	20.48	19.19	19.94	19.8	19.54
C305-EL010044	18.36	19.22	18.2	18.96	18.39	19.01	18.41	18.48	19.03	18.31	18.44	19.34	18.52	18.45	18.63	18.97	15.66	18.53	18.45	18.21
C305-EL010045	39.07	39.92	38.98	39.61	39.16	39.66	39.07	39.13	39.73	39.01	39.17	39.9	39.23	39.18	39.17	39.12	34.92	39.1	39.04	38.83
C305-EL010046	18.77	19.57	18.83	19.4	19	19.5	18.9	18.99	19.56	18.81	18.98	19.51	19.07	19.08	19.01	19.41	16.75	18.72	18.68	18.65
C305-EL010047	2.16	2.81	2.16	2.72	2.3	2.73	2.37	2.31	2.79	2.22	2.38	2.91	2.4	2.38	2.48	2.79	1.07	2.33	2.2	2.12
C305-EL010048	0.96	1.48	0.96	1.46	1.13	1.52	1.24	1.17	1.61	1.11	1.24	1.72	1.27	1.27	1.35	1.59	1.17	1.22	1.06	1.04
C305-EL010049	1.6	1.93	1.53	1.86	1.63	1.79	1.74	1.65	1.87	1.65	1.68	2.13	1.69	1.69	1.81	1.93	1.81	1.89	1.75	1.66
C305-EL010050	1.32	1.48	1.31	1.42	1.34	1.46	1.41	1.39	1.51	1.36	1.36	1.64	1.41	1.39	1.45	1.52	1.42	1.51	1.43	1.39
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	21/12/14 12 00	22/12/14 12 00	23/12/14 12 00	24/12/14 12 00	25/12/14 12 00	26/12/14 12 00	30/12/14 12 00	31/12/14 12 00	1/01/15 12 00	2/01/15 12 00	3/01/15 12 00	4/01/15 12 00	6/01/15 12 00	7/01/15 12 00	8/01/15 12 00	9/01/15 12 00	10/01/15 12 00	11/01/15 12 00	12/01/15 12 00	16/01/15 12 00
C305-EL010001	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	8.93	8.92	8.9	8.92	8.93	8.94	9.26	9.04	9.02	8.92	9.17	9.21	9.01	9	9.18	8.94	9.02	8.93	8.96	9
C305-EL010003	7.64	7.71	7.68	7.71	7.68	7.67	7.96	7.86	7.87	7.79	7.94	7.8	7.8	7.82	7.88	7.75	7.91	7.78	7.8	7.82
C305-EL010004	3.82	3.82	3.82	3.83	3.94	3.95	4.13	4.18	4.09	4.09	4.12	3.97	3.95	4.06	3.92	3.93	3.94	4.04	4.01	4.06
C305-EL010005	3.39	3.38	3.41	3.44	3.56	3.53	3.44	3.68	3.61	3.7	3.6	3.41	3.51	3.6	3.43	3.46	3.42	3.62	3.57	3.61
C305-EL010006	6.57	6.64	6.66	6.71	6.83	6.73	6.39	6.68	6.7	6.87	6.69	6.44	6.67	6.71	6.53	6.7	6.64	6.8	6.88	6.86
C305-EL010007	23.79	23.9	23.95	23.97	24.05	23.92	23.44	23.78	23.87	24.07	23.78	23.57	23.83	23.86	23.68	23.89	23.86	23.98	24.1	24.06
C305-EL010008	51.15	51.19	51.18	51.27	51.4	51.29	50.84	51.24	51.27	51.42	51.08	50.92	51.17	51.23	50.94	51.15	51.01	51.33	51.39	51.44
C305-EL010009	69.13	69.26	69.23	69.34	69.38	69.24	68.49	69	69.06	69.29	68.83	68.56	68.99	69	68.75	69.05	68.94	69.17	69.27	69.3
C305-EL010010	70.3	70.32	70.29	70.41	70.67	70.55	69.99	70.4	70.19	70.44	70.06	69.88	70.15	70.23	69.82	70.14	69.9	70.43	70.34	70.53
C305-EL010011	61.77	61.78	61.68	61.83	62.14	62.03	61.4	61.88	61.66	61.91	61.52	61.33	61.6	61.67	61.25	61.57	61.31	61.9	61.8	62.02
C305-EL010012	51.09	50.99	50.92	51.09	51.5	51.41	50.87	51.35	51.06	51.25	50.89	50.74	50.95	51.1	50.54	50.85	50.53	51.26	51.11	51.4
C305-EL010013	52.16	52.06	52.02	52.15	52.57	52.49	51.95	52.44	52.18	52.31	51.97	51.82	52.01	52.24	51.58	51.93	51.6	52.43	52.22	52.55
C305-EL010014	60.22	60.1	60.05	60.2	60.63	60.57	60.34	60.6	60.34	60.36	60.27	60.16	60.14	60.37	59.89	60	59.75	60.49	60.31	60.67
C305-EL010015	68.22	68.24	68.22	68.3	68.58	68.53	68.24	68.52	68.33	68.35	68.22	68.15	68.17	68.34	67.95	68.06	67.94	68.44	68.4	68.65
C305-EL010016	69.14	69.14	69.15	69.2	69.49	69.42	69.17	69.36	69.16	69.16	69.14	69.07	69.08	69.18	68.85	68.94	68.86	69.31	69.31	69.49
C305-EL010017	68.91	68.9	68.9	69.02	69.3	69.3	69.23	69.34	69.02	69.02	69.12	68.92	69.07	69.07	68.77	68.77	69.19	69.11	69.38	69.38
C305-EL010018	75.36	75.05	75.08	75.26	75.94	75.95	76.15	76.08	75.42	75.31	75.59	75.8	75.26	75.58	75.13	74.98	74.68	75.68	75.36	75.85
C305-EL010019	76.24	75.87	75.94	76.09	76.83	76.94	77.32	77.12	76.35	76.18	76.63	76.87	76.13	76.53	76.09	75.79	75.43	76.57	76.14	76.76
C305-EL010020	72.1	71.88	71.97	72.06	72.6	72.68	73.14	72.83	72.25	72.06	72.6	72.76	72.02	72.33	72.2	71.73	71.58	72.34	72.08	72.52
C305-EL010021	62.59	62.51	62.53	62.65	62.98	63.09	63.62	63.18	62.79	62.54	63.23	63.38	62.54	62.74	62.94	62.33	62.31	62.73	62.65	63.02
C305-EL010022	55.82	55.72	55.78	55.87	56.3	56.33	57.14	56.52	56.11	55.8	56.65	56.84	55.85	56.04	56.33	55.62	55.63	56.05	55.96	56.32
C305-EL010023	52.2	52.24	52.28	52.34	52.59	52.58	53.52	52.72	52.53	52.22	53.17	53.26	52.31	52.34	52.96	52.15	52.3	52.34	51.85	52
C305-EL010024	50.52	50.45	50.48	50.55	50.94	51	52.58	51.5	51.21	50.84	52.05	52.22	50.97	51.04	51.71	50.7	50.93	50.38	50.65	50.65
C305-EL010025	51.95	51.87	51.93	51.94	52.42	52.49	54.39	53.13	52.74	52.26	53.67	53.94	52.53	52.54	53.35	52.19	52.28	52.32	51.85	52.11
C305-EL010026	56.02	55.88	55.92	55.95	56.48	56.62	58.79	57.35	56.9	56.32	57.98	58.24	56.62	56.68	57.58	56.22	56.34	56.39	55.91	56.2
C305-EL010027	67.77	67.48	67.47	67.56	68.27	68.47	71.01	69.35	68.7	68.01	69.92	70.31	68.31	68.49	69.35	67.84	67.86	68.19	67.51	67.97
C305-EL010028	65.19	64.84	64.77	64.92	65.69	65.95	68.72	66.92	66.12	65.33	67.45	67.84	65.72	65.89	66.76	65.14	65.11	65.56	64.84	65.29
C305-EL010029	55.29	55.03	54.89	55.06	55.79	56.07	59.07	57.13	56.41	55.51	57.79	58.17	55.95	56.06	57.12	55.39	55.4	55.76	55.02	55.46
C305-EL010030	43.18	43.05	42.95	43.09	43.63	43.78	46.81	44.79	44.25	43.38	45.68	46.05	43.87	43.87	45.16	43.38	43.52	43.6	43	43.27
C305-EL010031	43.66	43.6	43.54	43.6	44.05	44.27	47.25	45.19	44.77	43.94	46.26	46.63	44.42	44.37	45.8	43.91	44.13	44.03	43.56	43.73
C305-EL010032	42.72	42.6	42.57	42.61	43.11	43.34	46.46	44.35	43.87	43.03	45.41	45.83	43.51	43.49	44.92	42.98	43.14	43.09	42.65	42.85
C305-EL010033	39.36	39.32	39.27	39.29	39.71	39.99	43.13	41.01	40.52	39.66	42.08	42.44	40.15	40.12	41.6	39.63	39.88	39.69	39.33	39.52
C305-EL010034	51.83	51.91	51.85	51.84	52.13	52.39	55.44	53.52	52.95	52.12	54.56	54.88	52.65	52.56	54.18	52.2	52.52	52.16	51.88	52.06
C305-EL010035	36.52	36.68	36.6	36.62	36.81	37	39.9	37.78	37.54	36.7	39.11	39.42	37.32	37.18	38.93	36.94	37.3	36.8	36.56	36.72
C305-EL010036	12.61	12.85	12.76	12.79	12.85	13	15.71	13.7	13.53	12.82	15.01	15.32	13.39	13.19	14.94	13.04	13.44	12.85	12.68	12.83
C305-EL010037	5.28	5.56	5.45	5.5	5.52	5.6	8.15	6.2	6.11	5.48	7.59	7.85	6	5.74	7.59	5.63	6.11	5.38	5.3	5.38
C305-EL010038	2.3	2.56	2.48	2.51	2.53	2.63	5.16	3.23	3.13	2.52	4.63	4.89	3.05	2.83	4.6	2.74	3.21	2.53	2.44	2.51
C305-EL010039	4.12	4.24	4.19	4.19	4.21	4.32	6.86	4.98	4.87	4.24	6.28	6.58	4.72	4.53	6.21	4.39	4.9	4.17	4.07	4.22
C305-EL010040	10.47	10.57	10.55	10.57	10.6	10.73	13.09	11.34	11.21	10.57	12.51	12.84	11.06	10.94	12.54	10.79	11.24	10.6	10.49	10.68
C305-EL010041	10.8	10.84	10.81	10.8	10.89	11.07	13.36	11.65	11.55	10.89	12.72	13.05	11.33	11.3	12.77	11.13	11.53	10.98	10.86	10.99
C305-EL010042	14.3	14.42	14.33	14.34	14.43	14.59	16.78	15.16	15.09	14.47	16.18	16.51	14.91	14.87	16.34	15.12	14.68	14.57	14.44	14.64
C305-EL010043	19.64	19.75	19.69	19.71	19.72	19.89	21.86	20.43	20.34	19.8	21.31	21.68	20.23	20.13	21.47	20.03	20.41	19.86	19.82	20.05
C305-EL010044	18.28	18.33	18.35	18.35	18.31	18.45	20.09	18.3	18.39	18.42	19.62	19.99	18.77	18.65	19.85	18.91	18.46	18.4	18.62	18.62
C305-EL010045	38.87	38.86	38.82	38.85	39.01	40.47	39.41	39.25	38.87	40	40.36	39.21	39.13	39.13	40.19	39.05	38.96	38.75	39.05	39.05
C305-EL010046	18.66	18.55	18.49	18.57	18.69	18.91	20.31	19.36	18.99	18.64	19.69	20.14	18.89	18.94	19.76	18.7	18.82	18.75	18.44	18.72
C305-EL010047	2.15	2.15	2.04	2.1	2.12	2.27	3.52	2.67	2.42	2.16	3.09	3.44	2.4	2.44	3.17	2.24	2.39	2.19	2	2.18
C305-EL010048	1.08	1.08	0.99	0.98	1.01	1.13	2.27	1.53	1.32	1.08	1.87	2.22	1.28	1.31	1.91	1.19	1.2	1.08	0.98	1.09
C305-EL010049	1.72	1.83	1.77	1.74	1.68	1.69	2.38	1.89	1.84	1.77	2.23	2.36	1.86	1.8	2.33	1.83	1.93	1.68	1.78	1.63
C305-EL010050	1.42	1.48	1.49	1.43	1.38	1.41	1.77	1.53	1.46	1.39	1.66	1.79	1.47	1.44	1.73	1.46	1.55	1.38	1.43	1.35
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	17/01/15 12.00	18/01/15 12.00	19/01/15 12.00	20/01/15 12.00	21/01/15 9.00	22/01/15 12.00	23/01/15 12.00	24/01/15 12.00	25/01/15 12.00	26/01/15 12.00	27/01/15 12.00
C305-EL010001	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
C305-EL010002	9.06	9.02	8.96	9.01	9.03	8.95	8.92	8.93	8.93	8.97	8.92
C305-EL010003	7.91	7.86	7.83	7.85	7.93	7.85	7.84	7.86	7.87	7.9	7.85
C305-EL010004	4.17	4.12	4.18	4.2	4.25	4.23	4.29	4.26	4.24	4.12	4.22
C305-EL010005	3.69	3.64	3.69	3.67	3.74	3.78	3.85	3.83	3.81	3.68	3.82
C305-EL010006	6.91	6.91	6.9	6.8	6.88	6.93	6.92	7.01	6.95	6.86	6.98
C305-EL010007	24.04	24.09	24.06	23.92	24.02	24.03	24.04	24.14	24.08	23.98	24.11
C305-EL010008	51.43	51.43	51.5	51.36	51.43	51.45	51.49	51.54	51.49	51.28	51.47
C305-EL010009	69.21	69.27	69.27	69.09	69.18	69.22	69.22	69.28	69.24	69.07	69.27
C305-EL010010	70.6	70.56	70.77	70.64	70.62	70.61	70.72	70.61	70.53	70.1	70.5
C305-EL010011	62.05	62.02	62.32	62.15	62.15	62.11	62.23	62.13	62.01	61.62	62
C305-EL010012	51.5	51.47	51.76	51.64	51.65	51.58	51.72	51.58	51.47	50.97	51.4
C305-EL010013	52.66	52.63	52.95	52.8	52.78	52.76	52.92	52.75	52.68	52.09	52.53
C305-EL010014	60.86	60.78	61.04	60.94	60.94	60.84	60.97	60.8	60.74	60.19	60.58
C305-EL010015	68.8	68.72	68.93	68.83	68.85	68.76	68.82	68.75	68.65	68.18	68.56
C305-EL010016	69.66	69.59	69.78	69.64	69.64	69.56	69.59	69.53	69.44	69	69.37
C305-EL010017	69.62	69.55	69.74	69.65	69.66	69.5	69.6	69.5	69.41	68.92	69.35
C305-EL010018	76.34	76.18	76.54	76.56	76.4	76.25	76.51	76.22	76.14	75.31	75.92
C305-EL010019	77.36	77.15	77.55	77.61	77.43	77.24	77.47	77.15	77.08	76.14	76.81
C305-EL010020	73.1	72.93	73.19	73.27	73.14	72.86	73.03	72.76	72.73	72.04	72.55
C305-EL010021	63.48	63.36	63.51	63.59	63.58	63.17	63.26	63.04	63.02	62.62	62.89
C305-EL010022	56.89	56.72	56.81	56.95	56.87	56.47	56.53	56.32	56.3	55.89	56.16
C305-EL010023	52.29	52.17	52.26	52.35	52.33	52.24	52.27	52.16	52.11	51.93	52.07
C305-EL010024	51.1	50.9	50.97	51.2	51.11	50.93	51.21	51.06	51.02	50.74	51.01
C305-EL010025	52.71	52.42	52.47	52.72	52.69	52.47	52.72	52.54	52.54	52.26	52.78
C305-EL010026	56.91	56.52	56.62	56.92	56.86	56.6	56.87	56.65	56.61	56.32	56.87
C305-EL010027	68.93	68.64	68.76	69.16	68.94	68.74	69.07	68.72	68.69	68.2	68.85
C305-EL010028	66.4	65.93	66.08	66.58	66.29	66.04	66.43	66	65.94	65.36	66.08
C305-EL010029	56.63	56.07	56.22	56.72	56.45	56.16	56.52	56.1	56.04	55.55	56.25
C305-EL010030	44.42	43.76	43.89	44.31	44.15	43.83	44.06	43.8	43.74	43.48	43.94
C305-EL010031	44.89	44.28	44.4	44.77	44.73	44.33	44.58	44.32	44.27	44.09	44.57
C305-EL010032	44.03	43.42	43.58	43.96	43.93	43.54	43.76	43.55	43.51	43.28	43.77
C305-EL010033	40.68	40.03	40.17	40.56	40.5	40.11	40.31	40.15	40.07	39.88	40.3
C305-EL010034	53.1	52.54	52.62	53.02	53.02	52.6	52.72	52.66	52.59	52.52	52.79
C305-EL010035	37.64	37.08	37.1	37.46	37.48	37.07	37.16	37.11	37.09	37.11	37.25
C305-EL010036	13.53	12.97	12.94	13.25	13.39	12.89	13	12.91	12.95	13	13.13
C305-EL010037	5.92	5.31	5.22	5.5	5.65	5.16	5.2	5.02	5.06	5.3	5.37
C305-EL010038	2.94	2.33	2.22	2.47	2.6	2.15	2.21	2.08	2.12	2.31	2.35
C305-EL010039	4.62	3.92	3.8	4.05	4.15	3.72	3.79	3.62	3.63	3.81	3.92
C305-EL010040	11.01	10.44	10.31	10.57	10.6	10.26	10.35	10.1	10.11	10.24	10.48
C305-EL010041	11.34	10.82	10.76	10.98	10.94	10.66	10.71	10.6	10.67	10.7	10.9
C305-EL010042	15.02	14.63	14.56	14.8	14.81	14.45	14.52	14.55	14.58	14.65	14.85
C305-EL010043	20.36	19.97	19.93	20.17	20.16	19.8	19.89	19.93	19.97	20.03	20.17
C305-EL010044	18.9	18.55	18.51	18.71	18.67	18.41	18.48	18.53	18.57	18.57	18.7
C305-EL010045	39.35	39.01	38.99	39.11	39.09	38.8	38.83	38.84	38.89	38.84	39.01
C305-EL010046	19.18	18.88	18.96	19.12	19.08	18.79	18.89	18.72	18.82	18.67	18.79
C305-EL010047	2.56	2.31	2.33	2.5	2.47	2.29	2.32	2.25	2.31	2.24	2.25
C305-EL010048	1.46	1.25	1.3	1.48	1.47	1.29	1.33	1.22	1.29	1.22	1.18
C305-EL010049	1.8	1.72	1.7	1.81	1.82	1.69	1.7	1.68	1.71	1.77	1.63
C305-EL010050	1.46	1.42	1.43	1.47	1.45	1.4	1.43	1.38	1.42	1.42	1.35
C305-EL010051	0	0	0	0	0	0	0	0	0	0	0

LONG LEVELLING POINTS C305-ELE001 AND C305-ELE051

	13/09/14 16:30	14/09/14 16:30	22/09/14 12:30	22/09/14 16:00	23/09/14 9:30	23/09/14 11:00	23/09/14 16:00	24/09/14 9:30	24/09/14 16:30	25/09/14 10:00	25/09/14 16:00	26/09/14 9:30	26/09/14 14:00	27/09/14 12:15	28/09/14 13:15
C305-ELE001	101.2314	101.2315	101.2317	101.2312	101.23	101.2295	101.2316	101.2315	101.2312	101.2313	101.2313	101.2309	101.2313	101.2316	#N/A
C305-ELE051	101.2603	101.2603	101.2605	101.2602	101.258	101.2586	101.2609	101.2599	#N/A	101.2606	101.2606	101.2609	101.2609	101.2602	101.2601

	28/09/14 13:45	29/09/14 13:45	29/09/14 15:45	30/09/14 9:30	30/09/14 16:30	01/10/14 9:00	01/10/14 16:00	02/10/14 9:30	02/10/14 15:30	03/10/14 15:30	03/10/14 15:30	04/10/14 9:00	04/10/14 12:30	05/10/14 9:00	05/10/14 12:30
C305-ELE001	#N/A	101.2315	101.2316	101.2315	101.2315	101.2314	101.2316	101.2316	101.2316	101.2316	101.2315	101.2313	101.2316	101.2313	101.2315
C305-ELE051	101.2604	101.2604	101.2607	101.2609	101.2608	101.2608	101.2609	101.2606	101.2608	101.2609	101.2604	101.2606	101.2604	101.261	101.2604

	06/10/14 9:00	06/10/14 16:00	07/10/14 9:30	07/10/14 16:30	08/10/14 9:00	08/10/14 16:00	09/10/14 9:30	09/10/14 16:00	10/10/14 9:30	10/10/14 16:00	11/10/14 0:32	11/10/14 9:00	11/10/14 15:30	12/10/14 9:00	12/10/14 14:30
C305-ELE001	101.231	101.2311	101.2313	101.2313	101.2313	101.2314	101.2312	101.2313	101.2313	101.2314	101.2315	101.2312	101.2314	101.2312	101.2312
C305-ELE051	101.2609	101.2613	101.261	101.2606	101.2607	101.2614	101.2612	101.2612	101.261	101.2612	#N/A	101.261	101.2612	101.261	101.2609

	13/10/14 0:00	13/10/14 4:00	13/10/14 9:30	13/10/14 13:30	13/10/14 14:45	13/10/14 17:40	13/10/14 20:30	14/10/14 0:00	14/10/14 3:30	14/10/14 9:15	14/10/14 13:55	14/10/14 14:30	14/10/14 17:30	14/10/14 19:30	14/10/14 20:15
C305-ELE001	101.2328	101.233	101.231	101.231	101.2311	101.2307	101.2307	101.2325	101.2326	101.2311	101.2319	101.2319	101.2404	101.2404	101.2403
C305-ELE051	#N/A	#N/A	101.2606	#N/A	#N/A	101.2607	#N/A	#N/A	#N/A	101.261	#N/A	#N/A	101.2603	#N/A	#N/A

	14/10/14 21:00	14/10/14 23:46	15/10/14 1:00	15/10/14 3:15	15/10/14 4:10	15/10/14 5:10	15/10/14 6:10	15/10/14 8:30	15/10/14 10:25	15/10/14 11:55	15/10/14 14:45	15/10/14 19:45	15/10/14 21:10	16/10/14 0:00	16/10/14 1:15
C305-ELE001	101.2405	101.2402	101.2415	101.2446	101.245	101.245	101.2447	101.2442	101.2439	101.2437	101.2438	101.2444	101.244	101.244	101.244
C305-ELE051	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	101.2614	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

	16/10/14 4:00	16/10/14 8:45	16/10/14 10:00	16/10/14 11:15	16/10/14 15:20	16/10/14 17:30	16/10/14 21:00	17/10/14 0:00	17/10/14 3:30	17/10/14 8:45	17/10/14 10:15	17/10/14 12:15	17/10/14 14:30	17/10/14 17:45	17/10/14 21:00
C305-ELE001	101.244	101.2438	#N/A	101.2437	101.2438	101.2436	101.2437	101.2437	101.2437	101.2437	#N/A	101.244	101.2437	101.2436	101.2435
C305-ELE051	#N/A	#N/A	101.261	#N/A	#N/A	101.2605	#N/A	#N/A	#N/A	#N/A	101.2609	#N/A	#N/A	101.2607	#N/A

	18/10/14 0:30	18/10/14 4:00	18/10/14 9:30	18/10/14 16:00	19/10/14 1:00	19/10/14 4:00	19/10/14 9:30	19/10/14 14:00	20/10/14 1:00	20/10/14 9:30	20/10/14 16:00	21/10/14 0:30	21/10/14 4:00	21/10/14 14:00	22/10/14 9:30
C305-ELE001	101.2436	101.2434	101.2435	101.2434	101.2438	101.2431	101.2431	101.2435	101.2428	101.2433	101.2432	101.2426	101.2429	101.2429	101.2431
C305-ELE051	101.2607	101.2602	101.2604	101.261	101.2608	101.2603	101.26	101.2603	101.2606	101.2602	101.2601	101.2599	101.26	101.2599	101.2602

	30/10/14 9:00
C305-ELE001	101.2426
C305-ELE051	101.2604

(#N/A) No readings. These two long leveling points are situated at the beginning and at the end of the electrolevels line, C305-ELE001 and C305-ELE051. The readings are manual and they were taken for reference only.

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**APPENDIX C:
SOFT GROUND PINS DATA**

C305-LP027101 - C305-LP27105 SECTION 1

Name	04/08/2014 18:00	04/08/2014 18:30	04/08/2014 19:00	05/08/2014 08:30	05/08/2014 09:00	05/08/2014 09:30	05/08/2014 17:00	06/08/2014 14:00	07/08/2014 14:00	08/08/2014 11:00	09/08/2014 11:00
C305-LP027101	100.9625	100.9626	100.9624	100.9627	100.9627	100.9627	100.9623	100.9635	100.9634	100.9631	100.9637
C305-LP027102	100.9383	100.9383	100.9382	100.9385	100.9383	100.9385	100.9379	100.9389	100.9395	100.9390	100.9397
C305-LP027103	100.9591	100.9589	100.9589	100.9590	100.9590	100.9590	100.9588	100.9596	100.9601	100.9597	100.9604
C305-LP027104	100.7825	100.7825	100.7823	100.7822	100.7824	100.7823	100.7820	100.7832	100.7832	100.7830	100.7836
C305-LP027105	100.9440	100.9438	100.9438	100.9439	100.9440	100.9439	100.9435	100.9446	100.9445	100.9441	100.9448

Name	10/08/2014 11:00	11/08/2014 11:00	12/08/2014 11:00	14/08/2014 11:00	20/08/2014 11:30	27/08/2014 10:30	02/09/2014 10:30	14/10/2014 17:00	14/10/2014 18:30	15/10/2014 12:30	16/10/2014 12:15
C305-LP027101	100.9640	100.9638	100.9642	100.9631	100.9629	100.9627	100.9623	100.9628	100.9628	100.9631	100.9622
C305-LP027102	100.9399	100.9400	100.9403	100.9390	100.9386	100.9379	100.9376	#N/A	#N/A	#N/A	100.9367
C305-LP027103	100.9606	100.9606	100.9611	100.9598	100.9591	100.9585	100.9581	100.9575	100.9569	100.9577	100.9565
C305-LP027104	100.7838	100.7836	100.7841	100.7827	100.7814	100.7805	100.7790	100.7788	100.7787	100.7787	100.7770
C305-LP027105	100.9450	100.9449	100.9453	100.9440	100.9431	100.9420	#N/A	100.9400	100.9399	100.9401	100.9370

Name	16/10/2014 16:30	17/10/2014 01:30	17/10/2014 09:00	17/10/2014 15:15	18/10/2014 09:30	22/10/2014 10:00	30/10/2014 09:00
C305-LP027101	100.9625	100.9626	100.9625	100.9628	100.9626	100.9633	100.9629
C305-LP027102	100.9370	100.9371	100.9370	100.9372	100.9370	100.9376	100.9373
C305-LP027103	100.9569	100.9569	100.9568	100.9570	100.9568	100.9573	100.9570
C305-LP027104	100.7776	100.7774	100.7774	100.7778	100.7776	100.7780	100.7776
C305-LP027105	100.9378	100.9378	100.9375	100.9377	100.9381	100.9380	100.9376

C305-LP027201 - C305-LP27205 SECTION 2

Name	05/08/2014 17:20	05/08/2014 17:30	05/08/2014 17:40	06/08/2014 14:00	07/08/2014 14:00	08/08/2014 11:00	09/08/2014 11:00	10/08/2014 11:00	11/08/2014 11:00	12/08/2014 11:00	13/08/2014 11:00
C305-LP027201	100.7440	100.7440	100.7439	100.7444	100.7426	100.7476	100.7468	100.7469	100.7466	100.7467	100.7452
C305-LP027202	100.7960	100.7960	100.7962	100.7964	100.7949	100.8021	100.8010	100.8010	100.8007	100.8004	100.7986
C305-LP027203	100.6429	100.6429	100.6430	100.6435	100.6419	100.6495	100.6488	100.6488	100.6489	100.6483	100.6468
C305-LP027204	100.6605	100.6607	100.6608	100.6612	100.6597	100.6660	100.6654	100.6654	100.6653	100.6654	100.6639
C305-LP027205	100.8806	100.8805	100.8804	100.8811	100.8797	100.8843	100.8836	100.8836	100.8834	100.8836	100.8824

Name	14/08/2014 11:00	20/08/2014 11:30	27/08/2014 10:30	02/09/2014 10:30	14/10/2014 18:30	15/10/2014 12:30	16/10/2014 12:15	16/10/2014 16:30	17/10/2014 01:30	17/10/2014 04:00	17/10/2014 09:00
C305-LP027201	100.7457	100.7458	100.7454	100.7450	100.7454	100.7455	100.7445	100.7446	100.7449	100.7451	100.7455
C305-LP027202	100.7989	100.7987	100.7971	100.7970	100.7970	100.7970	100.7959	100.7960	100.7964	100.7967	100.7973
C305-LP027203	100.6472	100.6467	100.6457	100.6449	100.6449	100.6445	100.6438	100.6437	100.6438	100.6444	100.6454
C305-LP027204	100.6643	100.6639	100.6636	100.6633	100.6633	100.6628	100.6611	100.6624	100.6629	100.6635	100.6643
C305-LP027205	100.8828	100.8824	100.8826	100.8818	100.8818	100.8818	100.8806	100.8811	100.8816	100.8822	100.8829

Name	17/10/2014 15:15	18/10/2014 00:30	18/10/2014 04:00	18/10/2014 09:30	18/10/2014 15:45	19/10/2014 01:20	19/10/2014 04:00	19/10/2014 09:30	19/10/2014 14:00	20/10/2014 00:00	20/10/2014 04:00
C305-LP027201	100.7456	100.7456	100.7453	100.7456	100.7454	#N/A	100.7449	100.7451	100.7457	100.7458	100.7457
C305-LP027202	100.7974	100.7974	100.7972	100.7972	100.7972	#N/A	100.7965	100.7967	100.7973	100.7974	100.7967
C305-LP027203	100.6456	100.6456	100.6454	100.6454	100.6453	100.6446	100.6444	100.6447	100.6453	100.6454	100.6450
C305-LP027204	100.6643	100.6649	100.6649	100.6644	100.6646	100.6638	100.6639	100.6640	100.6647	100.6647	100.6644
C305-LP027205	100.8837	100.8841	100.8839	100.8839	100.8838	100.8829	100.8829	100.8831	100.8838	100.8837	100.8835

Name	20/10/2014 09:30	20/10/2014 16:00	21/10/2014 00:30	21/10/2014 04:00	22/10/2014 10:00	30/10/2014 09:00	17/11/2014 12:00	25/11/2014 12:00	10/12/2014 12:00
C305-LP027201	100.7451	#N/A	100.7456	100.7454	100.7450	#N/A	100.7451	100.7456	#N/A
C305-LP027202	100.7969	100.7969	100.7966	100.7970	100.7970	100.7973	100.7988	100.7993	#N/A
C305-LP027203	100.6448	100.6451	100.6447	100.6449	100.6449	100.6454	#N/A	100.6461	#N/A
C305-LP027204	100.6638	100.6641	100.6640	100.6641	100.6642	#N/A	100.6642	100.6650	100.6648
C305-LP027205	#N/A	#N/A	100.8829	100.8832	100.8830	#N/A	100.8826	100.8828	100.8829

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APPENDIX D:
GROUTING AREA LEVELLING POINTS SUMMARY

Instrumentation summary – Grouting area levelling points				
Sensor Type	Sensor ID	Date installation	SENSOR Location - GPS reading (m)	
			Eastings X	Northings Y
Levelling point	C305-LP019002	11/03/2014	90510.40	35388.60
Levelling point	C305-LP019004	11/03/2014	90512.86	35389.03
Levelling point	C305-LP019006	11/03/2014	90515.33	35389.42
Levelling point	C305-LP019008	11/02/2014	90517.21	35389.74
Levelling point	C305-LP019010	18/12/2013	90519.65	35390.10
Levelling point	C305-LP019020	18/12/2013	90522.04	35390.50
Levelling point	C305-LP019030	18/12/2013	90524.54	35390.82
Levelling point	C305-LP019040	18/12/2013	90527.16	35391.29
Levelling point	C305-LP019050	18/12/2013	90529.42	35391.62
Levelling point	C305-LP019060	18/12/2013	90531.90	35391.99
Levelling point	C305-LP019070	18/12/2013	90534.44	35392.47
Levelling point	C305-LP019080	18/12/2013	90537.15	35392.95
Levelling point	C305-LP019090	18/12/2013	90539.56	35393.35
Levelling point	C305-LP019100	18/12/2013	90542.09	35393.75
Levelling point	C305-LP019110	18/12/2013	90544.48	35394.03
Levelling point	C305-LP019120	18/12/2013	90546.91	35394.26
Levelling point	C305-LP019130	18/12/2013	90549.55	35394.57
Levelling point	C305-LP019140	18/12/2013	90551.98	35394.87
Levelling point	C305-LP019150	18/12/2013	90554.55	35395.27
Levelling point	C305-LP019160	18/12/2013	90556.97	35395.55
Levelling point	C305-LP019170	18/12/2013	90559.52	35395.91
Levelling point	C305-LP019180	18/12/2013	90561.98	35396.17
Levelling point	C305-LP019190	18/12/2013	90563.51	35396.41
Levelling point	C305-LP019200	18/12/2013	90566.39	35396.80
Levelling point	C305-LP019210	09/01/2014	90568.47	35397.12
Levelling point	C305-LP019220	09/01/2014	90571.05	35397.22
Levelling point	C305-LP019230	09/01/2014	90573.45	35397.60
Levelling point	C305-LP019240	09/01/2014	90575.43	35397.70
Levelling point	C305-LP019250	09/01/2014	90576.08	35398.34
Levelling point	C305-LP019260	09/01/2014	90579.55	35398.51
Levelling point	C305-LP019270	09/01/2014	90583.26	35398.94
Levelling point	C305-LP019280	09/01/2014	90586.54	35399.30
Levelling point	C305-LP019290	09/01/2014	90589.26	35399.63
Levelling point	C305-LP019300	09/01/2014	90591.47	35399.99
Levelling point	C305-LP019310	22/01/2014	90596.71	35400.80
Levelling point	C305-LP019320	22/01/2014	90599.14	35400.80
Levelling point	C305-LP019330	22/01/2014	90601.95	35401.70
Levelling point	C305-LP019400	22/01/2014	90605.77	35403.98
Levelling point	C305-LP019410	22/01/2014	90608.24	35404.28
Levelling point	C305-LP019420	22/01/2014	90610.72	35404.56
Levelling point	C305-LP019430	22/01/2014	90613.21	35404.84
Levelling point	C305-LP019440	22/01/2014	90615.68	35405.14
Levelling point	C305-LP019450	22/01/2014	90618.16	35405.42
Levelling point	C305-LP019460	22/01/2014	90620.67	35405.72
Levelling point	C305-LP019470	22/01/2014	90623.13	35406.00
Levelling point	C305-LP019480	22/01/2014	90625.69	35406.30
Levelling point	C305-LP019490	22/01/2014	90628.59	35406.65
Levelling point	C305-LP019500	22/01/2014	90631.07	35408.06
Levelling point	C305-LP019510	22/01/2014	90632.76	35409.97
Levelling point	C305-LP019520	10/04/2014	90634.79	35411.59
Levelling point	C305-LP019530	10/04/2014	90637.26	35411.85
Levelling point	C305-LP019540	10/04/2014	90639.73	35412.12
Levelling point	C305-LP019550	10/04/2014	90642.22	35412.34

Levelling point	C305-LP011210	11/04/2014	90526.19	35397.50
Levelling point	C305-LP011220	11/04/2014	90526.50	35395.02
Levelling point	C305-LP011310	11/04/2014	90550.81	35400.98
Levelling point	C305-LP011320	11/04/2014	90550.99	35398.50
Levelling point	C305-LP011410	11/04/2014	90578.89	35404.21
Levelling point	C305-LP011420	11/04/2014	90579.22	35401.75
Levelling point	C305-LP011510	11/04/2014	90596.03	35406.11
Levelling point	C305-LP011520	11/04/2014	90596.39	35403.94
Levelling point	C305-LP011710	11/04/2014	90628.40	35409.70
Levelling point	C305-LP015610	12/09/2014	90625.12	35407.30
Levelling point	C305-LP015620	12/09/2014	90627.62	35407.49
Levelling point	C305-LP015630	12/09/2014	90630.48	35407.87
Levelling point	C305-LP015640	12/09/2014	90632.68	35408.09
Levelling point	C305-LP015650	12/09/2014	90636.16	35410.19
Levelling point	C305-LP015660	12/09/2014	90638.68	35410.56
Levelling point	C305-LP015670	12/09/2014	90641.74	35410.78
Levelling point	C305-LP015680	12/09/2014	90644.17	35411.38
Levelling point	C305-LP015690	12/09/2014	90646.54	35411.32
Levelling point	C305-LP015700	12/09/2014	90649.19	35411.92
Levelling point	C305-LP015710	12/09/2014	90651.77	35412.22
Levelling point	C305-LP015720	12/09/2014	90654.20	35412.45
Levelling point	C305-LP010300	11/04/2014	90519.33	35399.28
Levelling point	C305-LP010310	11/04/2014	90525.89	35399.91
Levelling point	C305-LP010320	11/04/2014	90530.77	35400.45
Levelling point	C305-LP010330	11/04/2014	90535.73	35401.16
Levelling point	C305-LP010340	11/04/2014	90540.68	35401.93
Levelling point	C305-LP010350	11/04/2014	90545.62	35402.63
Levelling point	C305-LP010360	11/04/2014	90550.55	35403.36
Levelling point	C305-LP010370	11/04/2014	90555.55	35403.98
Levelling point	C305-LP010380	11/04/2014	90560.34	35404.61
Levelling point	C305-LP010390	11/04/2014	90565.32	35405.18
Levelling point	C305-LP010400	11/04/2014	90570.26	35405.72
Levelling point	C305-LP010410	11/04/2014	90575.11	35406.27
Levelling point	C305-LP010420	11/04/2014	90579.98	35406.82
Levelling point	C340-LP00004	26/09/2014	90681.83	35418.99
Levelling point	C340-LP00025	26/09/2014	90678.61	35418.60
Levelling point	C340-LP00003	26/09/2014	90673.64	35418.03
Levelling point	C340-LP00027	26/09/2014	90669.19	35417.56
Levelling point	C340-LP00028	26/09/2014	90663.70	35417.09
Levelling point	C340-LP00029	26/09/2014	90658.71	35416.49
Levelling point	C340-LP00030	26/09/2014	90653.79	35416.01
Levelling point	C340-LP00002	26/09/2014	90648.76	35415.52
Levelling point	C340-LP00031	26/09/2014	90643.76	35414.99
Levelling point	C340-LP00032	26/09/2014	90638.77	35414.49
Levelling point	C340-LP00033	26/09/2014	90633.71	35413.98
Levelling point	C340-LP00034A	26/09/2014	90627.93	35413.35
Levelling point	C340-LP00001	26/09/2014	90624.40	35412.99
Levelling point	C340-LP00035A	26/09/2014	90621.84	35412.71

All elevations or levels presented in this document are metres above tunnel datum (mATD).
 Those points have not been installed by Geocisa. They were used to control VDP grouting works.