



C300/410
Western Tunnels & Caverns Project
Close Out Report

ATS's and associated prisms at Tottenham Court Road Station

CRL Document No. **C300-BFK-C4-RGN-CRT00_ST005-53008**

Contract MDL reference: C14.020

1. Contractor Document Submittal History

Revision	Date	Prepared by	Checked by	Approved by	Reason for issue
2.0	23/02/2017	[REDACTED]	[REDACTED]	[REDACTED]	ACCEPTANCE

2a. Stakeholder Review Required? YES NO

Stakeholder submission required: LU NR DLR RfL 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.

Sign: _____ Name: _____ Role: _____ Date: _____

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2b. Review by Stakeholder (if required):

Stakeholder Organisation	Job Title	Name	Signature	Date	Acceptance
					<input type="checkbox"/>
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3. Acceptance by Crossrail:

		Crossrail Review and Acceptance Decal	
This decal is to be used for submitted documents requiring acceptance by Crossrail.			
<input checked="" type="checkbox"/>	Code 1.	Accepted. Work May Proceed	
<input type="checkbox"/>	Code 2.	Not Accepted. Revise and resubmit. Work may proceed subject to incorporation of changes indicated	
<input type="checkbox"/>	Code 3.	Not Accepted. Revise and resubmit. Work may not proceed	
<input type="checkbox"/>	Received for	Print Name	Position:
Reviewed/Accepted by: (signature)	[REDACTED]	[REDACTED]	Date: 23/08/17
Acceptance by	the designer/supplier	contractual obligations and does not constitute Crossrail approval of design, details, calculations, analyses, test methods or materials developed or selected by the designer/supplier.	



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Learning Legacy Document



1. Purpose of this Document

Close-Out Reports are required by the Works Information within the Instrumentation and Monitoring Specification KX10 Clause KX10.2114 prior to de-commissioning of any instrumentation.

This document summarises the data from the Automated Total Stations System (ATS's) and associated prisms in the TCR area and relates it to the construction activity. The analysis is mainly based on the comparison between initial and final readings.

The format of the document has been agreed during dedicated meetings between CRL, C122 and BFK.

2. Supporting Documents

This section provides references to relevant installation reports and drawings:

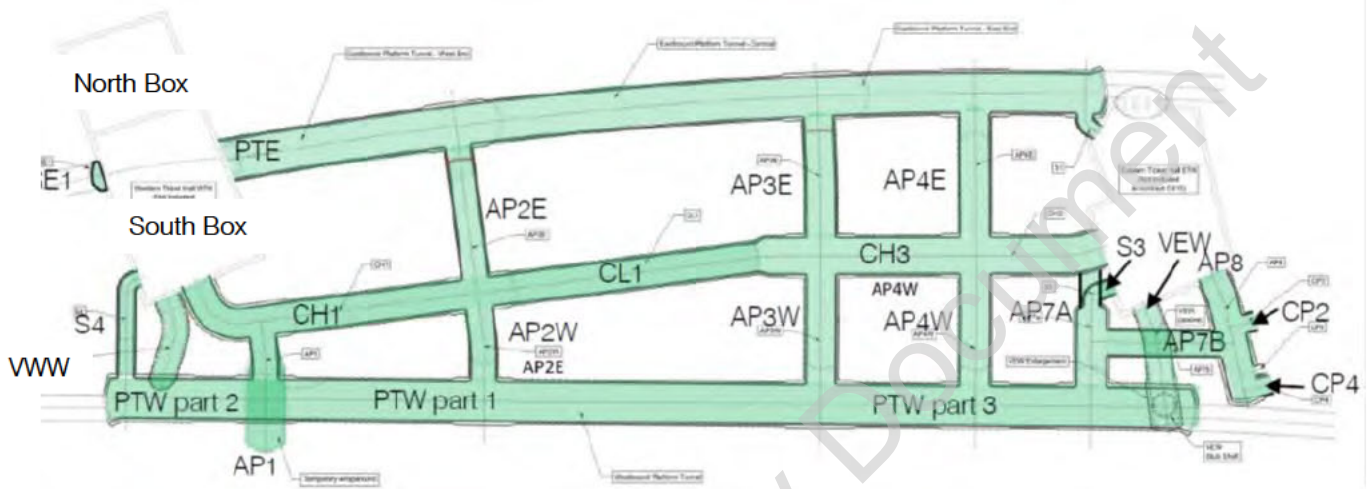
- Installation Report for Geodetic Prisms, BREs and Barcodes in TCR Area
C300-BFK-C4-RGN-CRT00_ST005-50569
- Installation Report ATS Network TCR
C300-BFK-C4-RGN-CRT00_ST005-51118
- Drawing - Instrumentation and Monitoring – Tottenham Court Road Station
C122-OVE-C2-DDA-CR001_Z-31554

3. Construction Activity

Table 3.1 shows the tunnel construction works undertaken within the footprint of the Automated Total Stations System (ATSs) and associated prisms installed at Tottenham Court Road Station.

Table 3.1. Construction Periods for tunnelling works in TCR area.

TUNNEL	ABB.	START DATE	Comment	END DATE
Running Tunnels				
Eastbound TBM passage	EB TBM	21/05/2013		13/06/2013
Westbound TBM passage	WB TBM	25/07/2013		09/09/2013
TCR - SCL				
Access Passage 1 (Temporary Wraparound)	AP1	02/04/2013	to 30.7m from CH1 centreline	04/05/2013
Access Passage 2 East	AP2E	07/09/2013	to 32.4m from CH1 centreline	17/09/2013
Access Passage 2 East	AP2E	23/05/2014	Junction to PTE	25/05/2014
Access Passage 2 West	AP2W	02/09/2013	to 15.9m from CH1 centreline	06/09/2013
Access Passage 2 West	AP2W	01/02/2014	Junction to PTW	03/02/2014
Access Passage 3 East	AP3E	29/09/2013	to 31.2m from CH3 centreline	10/10/2013
Access Passage 3 East	AP3E	10/08/2014	Junction to PTE	13/08/2014
Access Passage 3 West	AP3W	15/09/2013	to 27.1m from CH3 centreline	26/09/2013
Access Passage 3 West	AP3W	28/3/2014	Junction to PTW	31/03/2014
Access Passage 4 East	AP4E	29/09/2013	to ch 11.8m from CH3 centreline	07/10/2013
Access Passage 4 East	AP4E	05/08/2014	Junction to PTE	08/08/2014
Access Passage 4 West	AP4W	08/09/2013	to 27.4m from CH3 centreline	23/09/2013
Access Passage 4 West	AP4W	03/04/2014	Junction to PTW	07/04/2014
Access Passage 7A	AP7A	20/10/2013	to 26.0m from CH3 centreline	01/11/2013
Access Passage 7A	AP7A	10/06/2014	Junction to PTW	14/06/2014
Access Passage 7B	AP7B	10/11/2013	to 27m from AP7A centreline	16/11/2013
Access Passage 7B	AP7B	02/03/2014	Junction to AP8	07/03/2014
Access Passage 8	AP8	05/02/2014		24/06/2014
Central Link 1	CL1	30/05/2013	to 145.5m from WTH	20/06/2013
Lower Concourse 1	CH1	04/02/2013	to 29.7m from WTH	24/03/2013
Lower Concourse 1 extension	CH1Ext	05/05/2013	to 80.9m from WTH	30/05/2013
East concourse pilot	CH3P	22/06/2013		08/07/2013
Platform Tunnel West	PTW	03/12/2013	Complete	18/04/2014
			Adv. 21 ch. -2.3 to Adv 86 ch. 40.6	30/04/2014
		05/12/2013	Adv. 319 ch. 215.6 to Adv. 343 232.2	19/04/2014
Platform Tunnel Eastbound	PTE	25/04/2014	Adv. 229 ch. 165.73 to Adv. 314 220.36	26/07/2014
Platform Tunnel Eastbound	PTE flare	26/05/2014	Adv 1 TH ch 8.19 to Adv 14 Inv ch 0.00	30/05/2014
Services tunnel 4	S4	11/05/2014		19/05/2014
Services tunnel 3	S3	06/07/2014		16/07/2014
Services tunnel 1	S1	10/08/2014		13/08/2014
Soft Eye 1	SE1	03/06/2013		11/06/2013
Vent East Westbound	VEW	16/08/2014		07/09/2014
Vent West Westbound	VWW	30/08/2014		14/09/2014
TCR - WTH				
Western Ticket Hall: South Box	WTH	17/04/2012		22/09/2012
Western Ticket Hall: North Box	WTH	02/02/2014		20/04/2014



4. Location Plan

Figure 4.1. Location plan of instruments split into areas.



Figure 4.2. Vectors of final displacement (mm).





Figure 4.1 shows location of groups of instruments according to prefix on BFK ID. However, the majority of the prisms at TCR were installed by the LU TCRSU contractor: their original IDs have been retained by BFK. The nomenclature is based on street names as indicated in Table 4.1.

Table 4.1 TCRSU Nomenclature

TCRSU STREET ABBREVIATIONS	
CHA	Charing Cross Road
CPT	Centrepoint
DEN	Denmark Street
DPL	Denmark Place
DPN	Denmark Place North
FAC	Falconberg Court
FAL	Falconberg Mews
GOS	Goslett Yard
GRE	Greek Street
HOS	House of St. Barnabus
MAN	Mannette Street
SGH	St Giles High Street
SOH	Soho Square
SPC	St. Patrick's Church
SST	Soho Street
SUT	Sutton Row

Figure 4.2 shows vectors of horizontal displacement. These are an approximate indication of the distribution of horizontal movement over the whole of the Tottenham Court Road Station zone of influence. The prisms are located at varying elevations and the magnitude of horizontal movements will vary with elevation due to any rotation associated with settlement either associated with rigid body tilting or with bending. It is also noted that the "final" readings associated with each prism are plotted which are not necessarily all contemporaneous, however only instruments with data after October 2014 has been used. Examples of the data from the prisms are presented in the plots included in Section 6:.

5. Comparison between Initial and Final Readings

Table 5.1 includes all prisms read by ATS at TCR station. Only those with a final reading after 1st October 2014 have been used to generate the vecotrs shown on Figure 4.2.

Table 5.1. Difference between initial and final readings from ATSs at TCR

BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)			
B08RPA002	C208-RP155003	79889.370	36027.942	139.103	7.1	-13.1	-13.4	10/02/13	26/02/15
B08RPA003	C208-RP155004	79893.735	36014.500	133.690	10.2	-11.0	-16.3	10/02/13	26/02/15
B08RPA004	C208-RP155005	79891.343	36021.806	133.779	6.6	9.6	-27.0	11/04/12	26/02/15
B08RPA005	C208-RP155007	79892.578	36018.027	129.647	9.4	-10.9	-17.8	10/02/13	26/02/15
B08RPA006	C208-RP155008	79889.350	36027.923	129.948	7.6	-10.5	-14.4	10/02/13	26/02/15
B08RPA007	C208-RP800002	79889.018	36029.011	136.346	5.7	-10.5	-12.9	10/02/13	26/02/15
B08RPA008	C208-RP205002	79887.585	36033.333	136.340	4.4	-10.8	-13.5	10/02/13	26/02/15
B08RPA009	C208-RP205003	79888.295	36031.273	133.077	5.1	-9.6	-13.2	10/02/13	26/02/15
B08RPA010	C208-RP205004	79888.994	36028.964	129.396	6.2	-11.3	-14.8	10/02/13	26/02/15
B08RPA011	C208-RP205005	79887.562	36033.354	129.379	3.8	-13.5	-15.9	10/02/13	26/02/15
B08RPA012	C208-RP215001	79887.126	36034.885	136.268	6.6	10.7	-26.6	11/04/12	26/02/15
B08RPA013	C208-RP215002	79885.726	36039.565	136.297	4.7	-11.1	-13.4	10/02/13	26/02/15
B08RPA014	C208-RP215003	79886.442	36037.197	132.853	6.0	10.7	-26.2	11/04/12	26/02/15
B08RPA015	C208-RP215004	79887.160	36034.690	129.437	-2.9	18.1	-29.3	10/02/13	26/02/15
B08RPA016	C208-RP215005	79885.689	36039.559	129.589	7.8	8.2	-27.7	11/04/12	26/02/15
B08RPA017	C208-RP225001	79885.281	36040.877	134.549	5.3	7.9	-26.7	11/04/12	26/02/15
B08RPA018	C208-RP225002	79884.369	36043.669	134.548	4.7	-11.1	-12.7	10/02/13	26/02/15
B08RPA019	C208-RP245003	79880.138	36052.206	139.433	4.5	-1.2	-4.5	07/03/13	26/02/15
B08RPA020	C208-RP245005	79874.544	36074.708	139.613	4.4	-11.6	-5.6	10/02/13	26/02/15
B08RPA021	C208-RP245007	79877.085	36066.473	132.832	5.0	-11.9	-8.9	10/02/13	26/02/15
B08RPA022	C208-RP245010	79879.689	36058.127	130.279	6.1	5.5	-20.9	11/04/12	26/02/15
B08RPA023	C208-RP245011	79874.533	36074.656	130.060	5.3	6.9	-17.2	11/04/12	26/02/15
B08RPA024	C208-RP1035100	79874.184	36075.023	142.951	4.0	-12.6	-7.0	10/02/13	26/02/15
B08RPA025	C208-RP1035101	79869.185	36090.694	143.212	5.5	-8.2	-1.0	11/04/12	26/02/15
B08RPA026	C208-RP1035102	79870.511	36086.491	137.542	9.5	7.9	-16.4	11/04/12	26/02/15
B08RPA027	C208-RP1035103	79874.259	36075.160	131.225	3.4	-10.7	-11.4	10/02/13	26/02/15
B08RPA030	C300-RP001409	79917.569	36087.457	131.276	9.5	-3.4	-1.1	07/03/13	10/02/15
B08RPA031	C300-RP001410	79923.890	36072.045	131.236	7.8	-2.0	-5.1	07/03/13	14/02/14
B08RPA032	C300-RP001411	79927.765	36063.114	142.866	7.3	-6.5	-10.7	07/03/13	26/02/15
B08RPA033	C300-RP001412	79942.696	36028.312	142.690	6.6	-5.8	-14.7	07/03/13	26/02/15
B08RPA034	C300-RP001413	79950.872	36009.637	129.396	1.5	-4.5	-21.8	07/03/13	26/02/15
B08RPA035	C300-RP001414	79952.345	36005.921	132.623	1.1	-5.4	-22.1	07/03/13	26/02/15
B08RPA036	C300-RP001415	79953.095	36004.068	129.399	1.4	-4.6	-21.8	07/03/13	26/02/15
B08RPA037	C300-RP001416	79955.180	35998.975	130.814	1.0	-5.4	-21.8	07/03/13	26/02/15
B08RPA038	C300-RP001417	79956.623	35995.023	133.104	0.8	-6.5	-22.5	07/03/13	26/02/15
B08RPA040	C300-RP001456	79930.236	36058.460	147.178	6.4	-6.8	-8.8	31/05/13	14/02/14
B08RPA064	C300-RP800165	79869.061	36091.050	140.136	4.5	-2.0	-2.7	10/02/13	26/02/15
B08RPA066	C300-RP001516	79880.836	36053.017	136.249	5.4	-5.2	-5.2	30/04/13	26/02/15
B08RPA901	C300-RP001405	79870.016	36040.018	140.952	7.3	2.7	-6.7	07/03/13	26/02/15
B08RPA902	C300-RP001387	79894.948	36010.770	128.641	7.6	-14.2	-23.4	10/02/13	26/02/15



BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	Settlement (mm)		
B08RPA903	C300-RP001385	79918.536	36084.651	128.749	2.8	-10.7	-10.8	10/02/13	21/01/15
B08RPA904	C300-RP001388	79889.210	36028.347	128.458	-3.0	-7.5	-10.9	10/02/13	16/04/13
B08RPA905	C300-RP001386	79966.054	35974.256	129.570	1.9	8.1	-6.2	29/04/13	14/02/14
B08RPB001	C300-RP000625	79805.815	36082.557	130.813	0.1	0.8	-0.9	07/03/13	03/07/13
B08RPB008	C300-RP000682	79805.780	36082.540	140.754	0.5	-1.3	0.5	07/03/13	25/07/13
B08RPB009	C208-RP800032	79866.462	36092.322	142.967	6.2	-2.7	-1.3	07/03/13	26/02/15
B08RPB010	C208-RP800033	79862.228	36091.636	137.611	7.6	-3.6	-0.1	23/05/12	26/02/15
B08RPB011	C208-RP800034	79858.079	36091.085	131.073	6.5	-1.3	-1.4	07/03/13	26/02/15
B08RPB017	C208-RP800039	79848.597	36089.549	135.734	-13.1	3.7	-2.6	10/02/13	26/02/15
B08RPB018	C208-RP800042	79843.906	36088.768	135.804	-12.8	6.0	-2.2	10/02/13	26/02/15
B08RPB019	C208-RP800037	79851.314	36089.983	131.419	7.2	-1.1	0.2	23/05/12	26/02/15
B08RPB020	C208-RP800040	79845.892	36089.096	131.428	6.9	-0.6	0.2	23/05/12	26/02/15
B08RPB021	C300-RP001439	79943.655	36107.198	146.014	7.3	-10.6	-0.9	07/03/13	26/02/15
B08RPB022	C300-RP001440	79943.737	36107.299	130.355	6.5	-6.8	0.3	07/03/13	19/02/15
B08RPB023	C300-RP001441	79915.051	36099.885	130.017	6.5	-3.6	-0.3	07/03/13	26/02/15
B08RPB024	C300-RP001442	79869.160	36090.887	131.956	4.5	-3.4	-6.2	07/03/13	26/02/15
B08RPB025	C300-RP001443	79866.705	36092.463	131.047	1.4	0.7	-0.5	08/03/13	14/02/14
B08RPB026	C300-RP001444	79858.239	36091.028	142.907	7.2	-1.8	-1.4	07/03/13	26/02/15
B08RPB027	C300-RP001445	79857.237	36090.934	131.426	6.6	-1.4	-1.5	07/03/13	26/02/15
B08RPB028	C300-RP001446	79839.766	36088.083	131.353	9.2	0.7	-2.8	08/03/13	26/02/15
B08RPB901	C300-RP001447	79845.449	36128.182	144.932	0.0	0.0	0.0	07/03/13	26/02/15
B08RPB902	C300-RP001448	79837.599	36119.974	144.694	0.0	0.0	0.0	07/03/13	26/02/15
B08RPF001	C300-RP001537	79890.081	35989.238	137.840	0.0	0.0	0.0	10/02/13	10/02/13
B08RPF002	C208-RP800152	79909.818	35984.126	137.167	-4.9	7.9	-13.8	18/10/13	26/02/15
B08RPF003	C208-RP800153	79911.440	35979.671	134.175	0.1	10.4	-20.6	10/02/13	26/02/15
B08RPF004	C208-RP800154	79909.739	35984.258	130.571	-0.3	17.0	-32.6	10/02/13	26/02/15
B08RPF006	C208-RP800156	79903.792	35998.604	134.477	-7.1	-6.6	-0.6	11/05/12	26/02/15
B08RPF007	C208-RP800157	79902.505	36001.812	131.018	-7.0	-6.7	-0.4	11/05/12	26/02/15
B08RPF008	C208-RP800158	79903.848	35998.561	129.116	5.2	-14.5	0.0	10/02/13	26/02/15
B08RPF009	C208-RP800159	79904.227	35997.548	134.439	-0.2	-18.2	-45.5	10/02/13	01/02/15
B08RPF010	C208-RP800160	79905.683	35993.940	134.466	-11.1	-8.4	-2.1	11/05/12	26/02/15
B08RPF011	C208-RP800161	79909.384	35985.058	134.525	-4.4	6.5	-14.5	18/10/13	26/02/15
B08RPF012	C208-RP800162	79907.368	35989.919	131.767	-4.0	4.8	-18.3	18/10/13	26/02/15
B08RPF013	C208-RP800163	79904.242	35997.554	128.999	4.1	-15.1	-1.2	10/02/13	26/02/15
B08RPF014	C208-RP800164	79905.757	35993.900	129.079	5.3	-12.6	-0.5	10/02/13	26/02/15
B08RPF015	C208-RP800165	79909.417	35985.025	129.121	-2.5	3.6	-17.2	05/11/13	26/02/15
B08RPF017	C208-RP800167	79900.084	35994.403	130.072	6.8	-1.8	-19.7	05/11/13	26/02/15
B08RPF018	C208-RP145102	79897.265	36003.686	138.105	-7.8	-7.1	-0.2	11/05/12	26/02/15
B08RPF019	C208-RP145105	79899.002	35999.072	132.081	11.5	-5.1	-32.9	10/02/13	26/02/15
B08RPF020	C300-RP001428	79901.485	36004.388	134.464	0.2	6.1	-26.7	07/03/13	26/02/15
B08RPF021	C300-RP001429	79901.525	36004.297	129.361	1.8	4.4	-27.0	07/03/13	26/02/15
B08RPF022	C300-RP001430	79897.297	36003.560	129.855	8.6	-0.6	-15.9	07/03/13	26/02/15
B08RPF023	C300-RP001458	79905.105	35995.390	133.433	-4.1	2.4	-23.6	31/05/13	26/02/15
B08RPF025	C300-RP001533	79897.525	36003.029	138.350	6.0	-5.8	-12.0	31/05/13	26/02/15
B08RPF026	C300-RP001534	79897.520	36002.977	129.567	3.3	-5.2	-12.3	31/05/13	26/02/15
B08RPF027	C300-RP001539	79988.038	35991.107	130.087	1.8	5.1	-8.8	31/05/13	15/08/13
B08RPH001	C300-RP001785	79829.437	36021.745	137.087	1.4	0.9	-4.3	15/05/13	09/01/15



BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
B08RPH002	C300-RP001786	79838.549	36025.785	137.394	2.3	-1.6	-4.0	15/05/13	09/01/15
B08RPH003	C300-RP001787	79833.297	36023.397	133.490	1.2	0.2	-4.0	15/05/13	09/01/15
B08RPH004	C300-RP001788	79823.515	36019.124	129.958	-0.2	-0.2	-4.0	15/05/13	09/01/15
B08RPH005	C300-RP001789	79829.443	36021.736	129.660	3.4	-0.6	-4.0	15/05/13	09/01/15
B08RPH006	C300-RP001790	79838.554	36025.787	129.447	4.2	-2.1	-6.2	15/05/13	09/01/15
B08RPH007	C300-RP001791	79840.419	36025.737	138.029	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH008	C300-RP001792	79847.507	36029.139	138.039	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH009	C300-RP001793	79855.121	36032.793	138.026	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH010	C300-RP001794	79862.736	36036.446	138.020	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH011	C300-RP001795	79840.355	36026.080	134.499	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH012	C300-RP001796	79847.543	36029.217	134.497	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH013	C300-RP001797	79855.174	36032.874	134.495	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH014	C300-RP001798	79862.698	36036.487	134.481	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH015	C300-RP001799	79870.390	36040.632	134.557	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH016	C300-RP001800	79844.398	36027.749	132.357	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH017	C300-RP001801	79858.908	36034.660	132.344	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH018	C300-RP001802	79866.446	36038.584	132.344	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH019	C300-RP001803	79839.965	36025.991	129.219	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH020	C300-RP001804	79862.699	36036.465	129.212	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH021	C300-RP001805	79870.395	36040.566	129.209	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH022	C701-RP-20322-CR086	79823.514	36019.127	138.322	-3.9	-0.5	-19.5	10/02/13	26/02/15
B08RPH023	C208-RP225003	79882.152	36045.053	134.673	-10.0	-17.2	-13.2	10/02/13	26/02/15
B08RPH024	C208-RP225004	79871.305	36041.493	134.780	2.0	-1.9	-7.3	15/05/13	09/01/15
B08RPH025	C208-RP225005	79877.314	36043.498	132.342	2.4	-1.6	-6.7	15/05/13	09/01/15
B08RPH026	C208-RP225006	79885.288	36040.825	130.310	-5.5	-8.2	-5.4	10/02/13	26/02/15
B08RPH027	C208-RP225007	79884.374	36043.609	130.394	-4.7	-6.7	-5.9	10/02/13	26/02/15
B08RPH029	C208-RP225009	79871.308	36041.487	130.831	-11.0	-12.4	-16.8	10/02/13	26/02/15
B08RPH030	C208-RP800196	79844.408	36027.756	133.584	17.9	2.5	-14.2	10/02/13	26/02/15
B08RPH031	C208-RP800197	79862.732	36036.445	139.245	4.6	1.3	-9.1	22/04/13	26/02/15
B08RPH032	C208-RP800198	79862.693	36036.488	135.706	4.7	1.5	-8.9	22/04/13	26/02/15
B08RPH033	C208-RP800199	79851.350	36031.037	133.564	4.2	1.8	-8.4	22/04/13	26/02/15
B08RPH034	C208-RP800200	79862.694	36036.466	130.437	4.1	1.4	-8.6	22/04/13	26/02/15
B08RPH035	C208-RP1525005	79852.143	35972.835	133.479	-6.5	-1.6	-9.1	10/02/13	26/02/15
B08RPH041	C300-RP001497	79870.546	36040.173	139.304	6.0	-2.3	-8.7	30/04/13	26/02/15
B08RPH042	C300-RP001498	79855.107	36032.783	139.249	6.9	-2.5	-8.8	30/04/13	26/02/15
B08RPH043	C300-RP001499	79847.551	36029.162	139.246	7.5	-2.8	-8.9	30/04/13	26/02/15
B08RPH044	C300-RP001500	79840.449	36025.754	139.247	7.4	-2.9	-7.9	30/04/13	26/02/15
B08RPH045	C300-RP001501	79870.402	36040.629	135.782	5.9	-1.8	-8.6	30/04/13	26/02/15
B08RPH046	C300-RP001502	79866.445	36038.594	133.566	6.0	-2.0	-8.7	30/04/13	26/02/15
B08RPH047	C300-RP001503	79858.918	36034.662	133.569	6.0	-2.2	-8.5	30/04/13	26/02/15
B08RPH048	C300-RP001504	79855.185	36032.876	135.720	6.8	-2.4	-8.5	30/04/13	26/02/15
B08RPH049	C300-RP001505	79847.570	36029.230	135.710	7.0	-2.5	-8.6	30/04/13	26/02/15
B08RPH050	C300-RP001506	79840.370	36026.092	135.722	6.8	-2.4	-8.0	30/04/13	26/02/15
B08RPH051	C300-RP001507	79870.331	36040.810	130.430	5.3	-1.7	-8.5	30/04/13	26/02/15
B08RPH052	C300-RP001508	79855.135	36032.835	130.446	6.0	-2.1	-8.4	30/04/13	26/02/15
B08RPH053	C300-RP001509	79847.579	36029.217	130.438	6.3	-2.4	-8.3	30/04/13	26/02/15
B08RPH054	C300-RP001510	79839.971	36025.999	130.442	6.5	-2.4	-7.7	30/04/13	26/02/15
B08RPH901	C300-RP001389	79853.821	36042.615	129.488	0.0	0.0	0.0	10/02/13	10/02/13
B08RPH903	C300-RP001391	79829.276	36032.478	128.630	-1.4	4.4	-8.8	10/02/13	05/06/13
B08RPJ001	C300-RP001521	79826.995	36011.113	138.737	4.3	-2.6	-6.8	14/05/13	26/02/15
B08RPJ002	C300-RP001522	79829.991	36005.133	138.760	4.2	-2.6	-7.4	14/05/13	26/02/15



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
B08RPJ003	C300-RP001523	79835.024	35995.004	138.739	3.7	-2.6	-9.6	14/05/13	26/02/15
B08RPJ004	C300-RP001524	79825.150	36014.818	135.097	4.9	-1.5	-4.2	14/03/13	26/02/15
B08RPJ005	C300-RP001525	79828.845	36007.428	135.111	4.2	-2.4	-5.4	14/03/13	26/02/15
B08RPJ006	C300-RP001526	79832.215	36000.822	135.242	4.4	-2.1	-7.9	14/05/13	26/02/15
B08RPJ007	C300-RP001527	79826.998	36011.140	131.344	4.8	-1.8	-5.5	14/03/13	26/02/15
B08RPJ008	C300-RP001528	79829.995	36005.137	131.323	4.4	-2.4	-5.6	14/03/13	26/02/15
B08RPJ009	C300-RP001529	79835.074	35994.925	131.240	4.2	-2.5	-7.9	14/03/13	26/02/15
B08RPJ010	C300-RP001531	79859.210	36044.935	138.279	4.5	-4.7	-5.8	29/05/13	26/02/15
B08RPJ011	C208-RP800125	79873.226	36050.092	139.433	4.7	-4.4	-5.5	29/05/13	26/02/15
B08RPJ012	C208-RP800126	79863.754	36047.087	138.282	4.8	-4.9	-6.7	21/03/13	26/02/15
B08RPJ013	C208-RP800127	79868.206	36049.186	138.285	7.2	-7.2	-6.2	11/05/13	26/02/15
B08RPJ014	C208-RP800128	79863.807	36047.064	130.354	4.5	-4.2	-5.6	26/04/13	26/02/15
B08RPJ015	C208-RP800129	79868.201	36049.122	130.353	7.5	-6.0	-5.6	11/05/13	26/02/15
B08RPJ016	C300-RP800129	79818.150	36030.170	141.863	-0.2	-2.6	-2.4	10/02/13	01/07/13
B08RPJ017	C300-RP800130	79818.320	36030.000	130.837	1.0	2.4	-1.9	10/02/13	21/06/13
B08RPJ018	C300-RP800131	79821.440	36028.990	141.857	-0.6	-1.0	-5.2	10/02/13	15/08/13
B08RPJ019	C300-RP800132	79821.260	36028.950	130.945	-2.0	5.7	-1.8	10/02/13	21/06/13
B08RPJ020	C300-RP800133	79826.320	36031.190	134.595	-9.3	-2.6	3.4	10/02/13	09/07/13
B08RPJ021	C300-RP800134	79834.190	36034.790	141.795	1.5	5.9	-6.8	10/02/13	03/09/13
B08RPJ022	C300-RP800135	79834.200	36034.800	130.954	2.0	8.0	-3.5	10/02/13	29/05/13
B08RPJ023	C300-RP800136	79838.790	36037.090	134.486	-1.2	7.8	-4.6	10/02/13	29/05/13
B08RPJ024	C300-RP800137	79842.410	36038.680	141.788	0.2	5.0	-4.2	10/02/13	12/06/13
B08RPJ025	C300-RP800138	79842.420	36038.690	130.949	-0.7	5.5	-4.7	10/02/13	24/05/13
B08RPJ026	C300-RP800139	79848.840	36041.720	141.789	-3.2	4.4	-1.2	10/02/13	08/07/13
B08RPJ027	C300-RP800160	79854.531	36042.705	130.372	4.9	-4.7	-6.4	26/04/13	26/02/15
B08RPJ028	C300-RP001432	79869.409	36048.845	139.430	-1.2	-1.4	-5.7	21/03/13	14/02/14
B08RPJ029	C300-RP001433	79869.229	36048.806	129.617	3.5	-3.8	-5.0	29/05/13	26/02/15
B08RPJ030	C300-RP001434	79873.763	36050.269	132.884	3.8	-4.5	-5.2	29/05/13	26/02/15
B08RPJ031	C300-RP001435	79879.541	36052.148	129.641	7.1	-6.1	-6.8	14/05/13	26/02/15
B08RPJ032	C300-RP001436	79854.678	36042.816	137.810	-0.6	-2.1	-6.5	21/03/13	14/02/14
B08RPJ033	C300-RP001437	79859.181	36044.884	130.356	4.6	-4.2	-5.9	26/04/13	26/02/15
B08RPJ034	C300-RP001438	79848.836	36041.734	130.958	5.4	-3.1	-0.2	14/03/13	24/05/13
B08RPK001	C701-RP20117-CR086	79852.691	35960.681	130.196	0.2	0.2	-0.2	04/05/12	26/02/15
B08RPK002	C701-RP20118-CR086	79856.524	35952.173	130.187	0.3	-0.2	-0.2	10/02/13	26/02/15
B08RPK003	C701-RP20119-CR086	79858.685	35947.360	130.202	0.1	-0.3	-0.2	04/05/12	26/02/15
B08RPK004	C701-RP20120-CR086	79862.422	35939.072	130.135	0.0	0.0	0.1	10/02/13	26/02/15
B08RPK005	C701-RP20121-CR086	79854.702	35956.209	132.911	0.2	-0.1	-0.3	04/05/12	26/02/15
B08RPK006	C701-RP20130-CR086	79852.795	35960.720	138.330	0.3	-0.3	-0.2	04/05/12	26/02/15
B08RPK007	C701-RP20131-CR086	79856.726	35951.980	138.318	0.5	0.0	-0.4	04/05/12	26/02/15
B08RPK008	C701-RP20132-CR086	79858.813	35947.346	138.235	0.4	0.0	-0.2	04/05/12	26/02/15
B08RPK009	C701-RP20133-CR086	79862.625	35938.884	138.229	0.3	-0.1	-0.1	10/02/13	26/02/15
B08RPK010	C701-RP20134-CR086	79864.218	35935.092	138.089	0.5	-0.1	-0.3	10/02/13	26/02/15
B08RPK011	C701-RP20135-CR086	79867.945	35926.974	137.964	0.0	0.0	0.0	08/03/13	26/02/15
B08RPK012	C701-RP20136-CR086	79864.322	35934.900	130.061	0.2	-0.3	0.0	10/02/13	26/02/15



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
B08RPK013	C701-RP20137-CR086	79867.969	35926.937	131.145	0.0	0.0	0.0	08/03/13	26/02/15
B08RPK014	C701-RP20138-CR086	79866.166	35930.996	134.776	0.3	0.0	-0.3	10/02/13	26/02/15
B08RPK015	C300-RP001835	79888.469	35989.891	138.877	5.3	-3.9	-16.0	10/02/13	26/02/15
B08RPK017	C300-RP001837	79869.489	35980.667	135.861	-3.2	8.4	-11.4	10/02/13	25/02/15
B08RPK021	C300-RP001841	79869.442	35980.656	129.699	1.5	1.2	-9.6	10/02/13	26/02/15
B08RPK023	C300-RP001843	79888.742	35989.896	130.348	5.5	-0.7	-16.9	10/02/13	26/02/15
B08RPK024	C300-RP001844	79838.368	35988.799	136.224	0.0	-0.1	-9.5	10/02/13	26/02/15
B08RPK025	C300-RP001845	79841.824	35981.444	136.315	0.8	0.1	-9.4	10/02/13	26/02/15
B08RPK026	C300-RP001846	79844.182	35976.392	136.369	8.1	19.1	-6.6	10/02/13	26/02/15
B08RPK027	C300-RP001847	79839.494	35986.405	133.025	0.6	0.4	-10.0	10/02/13	26/02/15
B08RPK028	C300-RP001848	79842.979	35978.992	132.873	0.1	1.0	-6.2	10/02/13	26/02/15
B08RPK029	C300-RP001849	79838.362	35988.831	130.668	-0.4	0.4	-9.6	10/02/13	26/02/15
B08RPK030	C300-RP001850	79841.818	35981.459	130.736	0.9	1.1	-9.5	10/02/13	26/02/15
B08RPK031	C300-RP001851	79836.744	35994.778	135.776	-0.5	-0.1	-8.2	10/02/13	26/02/15
B08RPK032	C300-RP001852	79835.553	35994.805	130.316	-0.6	0.7	-8.7	10/02/13	26/02/15
B08RPK033	C701-RP20110-CR086	79893.198	35981.146	130.104	-0.1	0.0	-0.3	10/02/13	26/02/15
B08RPK034	C701-RP20111-CR086	79886.637	35978.205	130.131	0.3	-0.6	-0.1	12/05/12	26/02/15
B08RPK035	C701-RP20112-CR086	79880.983	35975.500	130.128	0.0	-0.4	-0.2	12/05/12	26/02/15
B08RPK036	C701-RP20113-CR086	79875.223	35972.954	130.151	1.9	-0.2	-8.0	17/04/13	26/02/15
B08RPK037	C701-RP20114-CR086	79868.495	35970.080	130.186	0.1	-0.1	-0.1	12/05/12	26/02/15
B08RPK038	C701-RP20115-CR086	79860.064	35966.340	130.115	0.1	-0.2	-0.1	12/05/12	26/02/15
B08RPK039	C701-RP20116-CR086	79853.944	35963.626	130.506	0.5	-0.4	0.0	04/05/12	26/02/15
B08RPK040	C701-RP20123-CR086	79893.122	35981.115	135.828	0.0	-0.2	-0.4	10/02/13	26/02/15
B08RPK041	C701-RP20124-CR086	79886.782	35978.280	135.877	0.1	-0.2	-0.3	12/05/12	26/02/15
B08RPK042	C701-RP20125-CR086	79880.911	35975.494	135.873	0.3	-0.1	-0.3	10/02/13	26/02/15
B08RPK043	C701-RP20126-CR086	79875.018	35972.863	138.200	0.2	-0.1	-0.2	10/02/13	26/02/15
B08RPK044	C701-RP20127-CR086	79869.015	35970.197	138.142	2.4	1.1	-6.8	17/04/13	26/02/15
B08RPK045	C701-RP20128-CR086	79860.057	35966.222	138.150	1.8	1.6	-5.7	17/04/13	26/02/15
B08RPK046	C701-RP20129-CR086	79853.950	35963.512	138.093	0.4	-0.3	-0.3	10/02/13	26/02/15
B08RPK047	C208-RP800201	79881.362	35986.737	138.958	0.1	0.4	-0.4	10/02/13	26/02/15
B08RPK048	C208-RP800202	79881.324	35986.721	135.666	0.0	0.6	-0.5	10/02/13	26/02/15
B08RPK049	C208-RP800203	79888.605	35989.963	135.742	0.0	0.4	-0.1	10/02/13	26/02/15
B08RPK050	C208-RP800204	79881.434	35986.644	130.356	0.0	0.7	-0.8	10/02/13	26/02/15
B08RPK051	C208-RP800205	79848.079	35971.487	135.796	0.4	0.1	0.2	10/02/13	26/02/15
B08RPK052	C208-RP800206	79860.767	35976.724	135.769	0.2	0.2	-0.2	12/05/12	26/02/15
B08RPK053	C208-RP800207	79846.859	35974.081	133.507	4.3	-3.2	-8.5	17/04/13	26/02/15
B08RPK054	C208-RP800208	79860.995	35976.835	129.692	0.2	0.1	0.1	10/02/13	26/02/15
B08RPK055	C208-RP800209	79873.688	35983.334	139.100	0.0	0.5	-0.6	10/02/13	26/02/15
B08RPK056	C208-RP800210	79873.602	35983.298	135.676	4.6	-3.7	-11.7	17/04/13	26/02/15
B08RPK057	C208-RP800211	79877.488	35985.019	133.659	-0.1	0.6	-0.5	12/05/12	26/02/15



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	Settlement (mm)		
B08RPK058	C208-RP800212	79885.05 4	35988.37 8	133.63 3	0.1	0.6	0.1	12/05/12	26/02/15
B08RPK059	C208-RP800213	79873.682	35983.214	130.368	-0.5	0.6	-0.7	10/02/13	26/02/15
B08RPK060	C208-RP800214	79854.963	35974.108	135.775	0.2	0.2	-0.1	10/02/13	26/02/15
B08RPK061	C208-RP800215	79857.79 6	35975.38 7	133.48 9	0.1	0.1	-0.1	12/05/12	26/02/15
B08RPK062	C208-RP800216	79854.99 4	35974.12 7	129.69 2	0.0	0.1	-0.2	12/05/12	26/02/15
B08RPK063	C208-RP800217	79890.418	35989.363	129.784	8.8	9.3	-30.3	10/02/13	26/02/15
B08RPK064	C300-RP001517	79809.983	36021.620	136.381	7.1	-6.4	-9.4	30/04/13	26/02/15
B08RPK065	C300-RP001519	79844.135	35976.529	130.683	4.1	-3.2	-10.9	30/04/13	26/02/15
B08RPK066	C300-RP001520	79849.008	35971.422	135.781	4.7	-3.7	-9.9	30/04/13	26/02/15
B08RPK067	C300-RP001532	79848.177	35971.289	129.771	4.4	-3.0	-9.4	30/04/13	26/02/15
B08RPK901	C300-RP001380	79795.685	36077.398	129.155	-1.5	3.6	-2.3	10/02/13	14/06/13
B08RPK902	C300-RP001381	79877.187	35907.702	127.211	-2.4	5.0	1.5	10/02/13	26/02/15
B08RPK903	C300-RP001382	79868.210	35926.092	128.231	-4.7	3.9	3.4	10/02/13	26/02/15
B08RPK904	C300-RP001383	79857.251	35925.674	129.293	4.1	5.0	3.0	10/02/13	17/11/14
B08RPK905	C300-RP001518	79775.107	36133.897	145.766	0.0	0.0	0.0	16/05/13	26/02/15
C08RPA001	C300-RP000605	79953.061	36004.096	135.304	5.4	-11.0	-26.3	10/02/13	26/02/15
C08RPA004	C300-RP000608	79879.725	36058.090	139.767	6.5	-12.4	-9.5	10/02/13	26/02/15
C08RPA005	C208-RP75001	79948.675	36015.878	136.797	1.4	-5.8	-17.8	22/04/13	26/02/15
C08RPA006	C208-RP800003	79949.84 2	36013.26 2	134.54 0	-4.6	-2.3	-36.2	11/04/12	26/02/15
C08RPA007	C208-RP75004	79948.670	36015.905	130.517	4.2	-5.0	-15.8	15/05/13	26/02/15
C08RPA008	C208-RP800004	79953.07 1	36004.08 8	135.31 4	-7.1	-9.5	-20.6	11/04/12	26/02/15
C08RPA009	C208-RP800005	79955.185	35998.937	135.222	3.9	-12.1	-26.6	10/02/13	26/02/15
C08RPA010	90 99999	79953.907	36002.065	131.919	5.2	-11.0	-26.4	10/02/13	26/02/15
C08RPA011	C208-RP95004	79953.241	36003.214	130.782	-6.0	-8.3	-20.8	15/01/13	26/02/15
C08RPA012	C208-RP15001	79926.731	36072.963	146.163	5.1	-9.8	-7.9	22/04/13	26/02/15
C08RPA014	C208-RP800007	79925.65 3	36072.60 1	139.93 6	1.1	0.8	-28.5	11/04/12	26/02/15
C08RPA015	C208-RP800008	79927.280	36063.871	131.250	2.8	-10.1	-15.5	10/02/13	30/01/15
C08RPA016	C208-RP800009	79955.44 1	35998.34 9	136.30 3	-6.0	-4.6	-36.0	11/04/12	26/02/15
C08RPA017	C208-RP800001	79958.17 2	35992.02 3	136.28 7	-6.0	-10.3	-22.3	11/04/12	26/02/15
C08RPA018	C208-RP800010	79955.46 3	35997.72 2	131.73 1	-4.8	-3.8	-36.3	11/04/12	26/02/15
C08RPA019	C208-RP800011	79958.164	35992.048	131.805	6.2	-10.9	-29.6	10/02/13	26/02/15
C08RPA021	C208-RP15002	79928.377	36069.272	146.099	5.0	-10.4	-10.2	22/04/13	26/02/15
C08RPA022	C208-RP15003	79919.352	36088.013	140.044	8.0	-13.6	-15.7	10/02/13	26/02/15
C08RPA023	C208-RP15004	79922.957	36079.185	139.940	7.5	-13.1	-10.9	10/02/13	19/02/15
C08RPA024	C208-RP15006	79928.662	36065.327	140.013	-15.7	-11.3	-11.6	22/04/13	19/02/15
C08RPA025	C208-RP15008	79921.187	36078.575	131.215	0.0	0.0	0.0	10/02/13	10/02/13
C08RPA026	C208-RP25002	79933.90 3	36049.00 6	142.58 6	-2.3	-5.0	-43.1	11/04/12	26/02/15
C08RPA027	C208-RP25003	79940.05 0	36034.83 6	142.72 8	-4.3	-6.6	-41.2	11/04/12	26/02/15
C08RPA028	C208-RP25004	79929.832	36058.392	136.422	5.3	-12.5	-21.0	10/02/13	26/02/15
C08RPA029	C208-RP25005	79937.969	36039.624	136.569	6.2	-11.6	-25.9	10/02/13	26/02/15
C08RPA030	C208-RP25006	79927.788	36063.115	130.960	4.8	-11.2	-17.6	10/02/13	26/02/15
C08RPA031	C208-RP25007	79933.91 8	36048.98 6	131.35 0	-1.6	-1.4	-44.3	11/04/12	26/02/15
C08RPA032	C208-RP25008	79940.08 3	36034.79 1	131.30 4	-2.7	-2.2	-42.0	11/04/12	26/02/15
C08RPA033	C208-RP55001	79940.096	36034.181	142.700	6.2	-13.9	-23.9	10/02/13	26/02/15



BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	Settlement (mm)		
C08RPA034	C208-RP55003	79940.907	36032.415	133.266	6.7	-10.8	-23.2	10/02/13	26/02/15
C08RPA035	C208-RP55004	79940.268	36033.865	131.092	-3.0	-1.9	-41.8	11/04/12	26/02/15
C08RPA036	C208-RP55005	79942.607	36028.583	131.275	-3.1	-2.6	-38.3	11/04/12	26/02/15
C08RPA037	C208-RP65001	79943.019	36027.608	138.509	7.5	-11.1	-21.3	10/02/13	26/02/15
C08RPA038	C208-RP65004	79942.996	36027.737	130.654	-3.8	-1.9	-38.2	11/04/12	26/02/15
C08RPA039	C208-RP75002	79950.981	36010.658	136.798	-5.1	-4.1	-36.2	11/04/12	26/02/15
C08RPA040	C208-RP75005	79951.031	36010.580	131.113	-5.0	-2.3	-36.6	11/04/12	26/02/15
C08RPA041	C208-RP85001	79950.908	36009.457	135.247	-4.8	-3.4	-36.2	11/04/12	26/02/15
C08RPA042	C208-RP925008	79925.743	36014.931	138.702	0.0	0.0	0.0	10/02/13	10/02/13
C08RPA043	C208-RP925009	79928.912	36016.273	134.569	0.3	5.7	-39.6	11/04/12	26/02/15
C08RPA044	C208-RP800026	79934.930	36018.908	131.388	5.0	-17.1	-31.1	10/02/13	26/02/15
C08RPA045	C208-RP925011	79925.954	36015.013	130.441	10.2	-12.9	-25.5	10/02/13	26/02/15
C08RPA048	C208-RP925014	79918.629	36011.886	132.185	0.0	0.0	0.0	10/02/13	10/02/13
C08RPA050	C208-RP800028	79912.052	36009.135	130.036	0.0	0.0	0.0	10/02/13	10/02/13
C08RPA054	C300-RP800106	79975.520	35952.265	135.550	7.2	0.4	-8.6	10/02/13	26/02/15
C08RPA055	C300-RP800107	79980.214	35941.227	141.892	7.7	1.4	-7.0	10/02/13	26/02/15
C08RPA056	C300-RP800108	79980.248	35941.175	129.298	7.4	-0.3	-7.1	10/02/13	26/02/15
C08RPA058	C300-RP800110	79985.956	35927.680	141.879	8.1	1.9	-5.8	10/02/13	26/02/15
C08RPA059	C300-RP800111	79985.957	35927.698	129.295	7.9	-0.5	-6.5	10/02/13	26/02/15
C08RPA060	C300-RP800161	79946.250	36020.128	134.555	-4.3	-8.7	-14.5	10/02/13	26/02/15
C08RPA061	C300-RP800162	79947.776	36016.572	137.506	-5.1	-8.7	-16.2	10/02/13	26/02/15
C08RPA062	C300-RP800163	79947.798	36016.569	130.540	-5.2	-8.0	-15.6	10/02/13	26/02/15
C08RPA901	C300-RP001404	79918.670	36088.670	152.260	2.3	-0.7	1.9	07/03/13	26/09/13
C08RPB001	C208-RP800014	79931.699	36104.160	145.870	4.0	-13.4	-1.1	13/04/12	26/02/15
C08RPB002	C208-RP800016	79922.196	36101.700	145.756	0.3	1.7	-0.6	13/04/12	26/02/15
C08RPB003	C208-RP800019	79915.149	36099.878	145.882	0.8	1.4	-0.3	13/04/12	26/02/15
C08RPB004	C208-RP800021	79914.775	36098.914	145.871	0.8	1.0	-0.7	13/04/12	26/02/15
C08RPB005	C208-RP800015	79926.710	36102.880	140.541	4.4	-12.9	-1.4	13/04/12	26/02/15
C08RPB006	C208-RP800018	79917.724	36100.551	140.549	-1.9	1.9	-0.1	13/04/12	26/02/15
C08RPB007	C208-RP800022	79916.065	36093.677	140.482	5.4	-10.8	-3.3	13/04/12	26/02/15
C08RPB008	C300-RP000628	79931.879	36104.241	130.679	11.5	-10.9	-4.1	10/02/13	24/02/15
C08RPB009	C208-RP800017	79922.099	36101.705	130.094	0.4	2.0	-0.4	13/04/12	26/02/15
C08RPB010	C208-RP800020	79914.724	36098.982	129.970	5.2	-8.4	-1.8	13/04/12	26/02/15
C08RPB011	C208-RP800024	79917.359	36088.505	146.512	7.9	-8.1	-4.9	22/04/13	19/02/15
C08RPB012	C208-RP800013	79936.900	36105.488	140.559	5.5	-5.2	0.1	10/02/13	26/02/15
C08RPB013	C208-RP800023	79917.345	36088.519	130.142	4.1	-4.4	-1.5	15/01/14	19/02/15
C08RPB901	C300-RP001454	79877.501	36210.649	152.038	0.0	0.0	0.0	15/01/14	19/02/15
C08RPC001	C300-RP800002	79949.938	36108.206	145.874	-1.5	-1.4	0.5	10/02/13	26/02/15
C08RPC002	C300-RP800003	79954.523	36108.886	145.857	-1.9	-4.4	-0.5	10/02/13	26/02/15
C08RPC003	C300-RP800004	79959.131	36109.563	145.846	-2.3	-7.1	-0.4	10/02/13	26/02/15
C08RPC004	C300-RP800005	79962.184	36109.804	139.787	0.0	0.0	0.0	10/02/13	10/02/13



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
C08RPC005	C300-RP800006	79969.649	36110.960	139.797	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC006	C300-RP800007	79970.391	36111.309	137.895	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC007	C300-RP800008	79975.019	36111.979	137.767	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC008	C300-RP800009	79979.767	36112.675	137.824	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC009	C300-RP800010	79979.761	36112.654	131.211	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC010	C300-RP800011	79974.979	36111.969	131.139	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC011	C300-RP800012	79970.394	36111.304	131.339	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC012	C300-RP800013	79969.609	36110.943	131.664	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC013	C300-RP800014	79962.212	36109.799	131.524	0.0	0.0	0.0	10/02/13	10/02/13
C08RPC015	C300-RP800016	79974.203	36146.303	139.792	0.0	0.0	0.0	22/04/13	19/02/15
C08RPC016	C300-RP800017	79974.121	36146.439	133.077	0.0	0.0	0.0	08/03/13	26/09/13
C08RPC017	C701-RP-20610-CR086	79961.344	36109.916	133.046	-1.6	-7.4	2.9	10/02/13	26/02/15
C08RPC018	C701-RP-20611-CR086	79954.091	36108.846	133.053	-1.9	-5.9	2.4	10/02/13	26/02/15
C08RPC019	C701-RP-20612-CR086	79949.397	36108.155	133.050	-1.2	-5.9	2.2	10/02/13	26/02/15
C08RPC020	C701-RP-20613-CR086	79944.213	36107.394	133.056	-0.4	-8.4	-13.6	10/02/13	26/02/15
C08RPC101	C300-RP800001	79945.325	36107.526	145.893	-0.9	1.7	0.5	10/02/13	26/02/15
C08RPC901	C300-RP001392	79970.324	36178.484	129.326	0.0	0.0	0.0	07/03/13	14/01/14
C08RPC902	C300-RP001393	79978.168	36134.117	129.196	0.6	-5.4	-5.4	07/03/13	26/02/15
C08RPC903	C300-RP001394	79759.012	36075.072	128.543	-1.0	-2.3	-2.1	10/02/13	23/10/14
C08RPC904	C300-RP001401	79904.350	36258.310	153.534	0.0	0.0	0.0	07/03/13	26/02/15
C08RPC905	C300-RP001402	79957.180	36177.900	136.503	0.0	0.0	0.0	07/03/13	26/02/15
C08RPC906	C300-RP001403	79964.159	35978.705	129.460	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD001	C300-RP001730	80011.979	35956.391	132.528	-3.2	4.1	-1.6	10/02/13	26/02/15
C08RPD002	C300-RP001731	80009.169	35963.529	130.398	1.3	-0.4	-6.6	10/02/13	26/02/15
C08RPD003	C300-RP001732	80102.221	35994.018	138.337	0.4	-4.6	0.5	10/02/13	06/05/13
C08RPD004	C300-RP001733	80104.150	35989.799	138.585	1.6	-5.9	2.4	10/02/13	06/05/13
C08RPD005	C300-RP001734	79991.483	36004.258	128.492	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD007	C208-RP800168	79987.558	36013.894	136.927	10.2	-4.6	-22.2	22/04/13	19/02/15
C08RPD008	C208-RP800169	79988.376	36011.981	130.273	8.4	-3.9	-22.6	22/04/13	19/02/15
C08RPD009	C208-RP800170	79983.427	36023.553	138.903	8.7	-6.5	-19.0	22/04/13	19/02/15
C08RPD010	C208-RP800171	79985.130	36019.667	133.592	-13.4	19.4	-33.3	10/02/13	26/02/15
C08RPD011	C208-RP800172	79985.817	36018.002	130.417	5.8	-5.3	-22.6	16/05/13	19/02/15
C08RPD012	C208-RP800173	79983.413	36023.535	130.489	-12.9	13.5	-3.1	10/02/13	02/05/13
C08RPD018	C208-RP800179	79988.727	36011.203	138.606	5.7	-5.5	-22.9	22/04/13	19/02/15
C08RPD019	C208-RP800180	79990.580	36006.983	133.601	-3.8	1.4	-35.7	10/02/13	26/02/15
C08RPD020	C208-RP800181	79989.525	36009.382	133.582	2.1	-12.6	-33.3	10/02/13	26/02/15
C08RPD021	C208-RP800182	79988.677	36011.259	130.874	0.6	-11.3	-30.5	10/02/13	26/02/15
C08RPD036	C300-RP800051	80053.914	35923.827	138.404	-0.9	-3.0	-1.7	10/02/13	26/02/15
C08RPD037	C300-RP800052	80050.391	35932.212	138.425	0.4	-2.3	-2.0	10/02/13	26/02/15
C08RPD038	C300-RP800053	80050.521	35931.961	130.535	-0.2	-3.5	-2.1	10/02/13	26/02/15
C08RPD039	C300-RP800054	80046.845	35940.634	138.374	0.9	-2.5	-2.2	10/02/13	26/02/15
C08RPD040	C300-RP800055	80046.929	35940.499	130.556	0.1	-3.4	-2.2	10/02/13	26/02/15
C08RPD041	C300-RP800056	80043.607	35948.077	141.579	1.0	-2.0	-2.8	10/02/13	26/02/15
C08RPD042	C300-RP800057	80043.517	35948.315	130.516	0.6	-2.6	-2.5	10/02/13	26/02/15
C08RPD043	C300-RP800058	80041.594	35952.789	141.627	1.1	-1.4	-3.3	10/02/13	26/02/15
C08RPD044	C300-RP800059	80041.612	35952.746	130.573	1.1	-2.5	-3.1	10/02/13	26/02/15
C08RPD045	C300-RP800060	80039.322	35956.896	134.561	1.0	-2.1	-3.5	10/02/13	26/02/15
C08RPD046	C300-RP800061	80056.240	35969.038	143.548	2.0	-2.2	-5.1	10/02/13	26/02/15
C08RPD047	C300-RP800062	80056.159	35969.079	138.797	1.6	-2.4	-5.2	10/02/13	26/02/15



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C08RPD048	C300-RP800063	80056.200	35969.040	130.417	2.6	-0.2	-5.2	10/02/13	26/02/15
C08RPD049	C300-RP800064	80049.692	35966.241	143.532	1.4	-2.1	-5.0	10/02/13	26/02/15
C08RPD050	C300-RP800065	80049.550	35966.331	130.392	1.6	-2.4	-4.5	10/02/13	26/02/15
C08RPD051	C300-RP800066	80048.118	35965.561	138.734	1.9	-2.1	-4.7	10/02/13	26/02/15
C08RPD052	C300-RP800067	80043.810	35963.780	133.644	3.0	-0.1	-4.6	10/02/13	26/02/15
C08RPD053	C300-RP800068	80039.286	35961.850	138.745	1.3	-2.0	-4.2	10/02/13	26/02/15
C08RPD054	C300-RP800069	80039.213	35961.920	130.410	1.2	-2.6	-4.1	10/02/13	26/02/15
C08RPD055	C300-RP800070	80025.178	35955.305	138.865	1.7	-3.2	-3.1	10/02/13	26/02/15
C08RPD056	C300-RP800071	80023.197	35954.460	134.904	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD057	C300-RP800072	80020.138	35953.159	138.862	1.6	-2.9	-3.4	10/02/13	26/02/15
C08RPD058	C300-RP800073	80021.110	35953.580	129.867	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD059	C300-RP800074	80014.516	35951.002	138.856	1.5	-2.2	-3.5	10/02/13	26/02/15
C08RPD060	C300-RP800075	80014.598	35950.788	129.883	1.5	-2.5	-3.2	10/02/13	26/02/15
C08RPD061	C300-RP800076	80014.808	35950.888	138.856	1.5	-2.2	-3.5	10/02/13	26/02/15
C08RPD062	C300-RP800077	80014.601	35950.789	130.033	1.7	-2.9	-3.4	10/02/13	26/02/15
C08RPD063	C300-RP800078	80013.663	35952.994	134.977	1.5	-2.4	-3.6	10/02/13	26/02/15
C08RPD064	C300-RP800079	80012.748	35955.150	138.863	2.0	-2.0	-4.0	10/02/13	26/02/15
C08RPD065	C300-RP800080	80012.717	35955.215	129.869	2.1	-2.4	-3.6	10/02/13	26/02/15
C08RPD066	C300-RP800081	80011.994	35956.370	138.873	1.3	1.3	-4.7	10/02/13	26/02/15
C08RPD068	C300-RP800083	80010.064	35961.466	134.978	0.9	0.5	-5.8	10/02/13	26/02/15
C08RPD069	C300-RP800084	80009.255	35963.355	138.651	1.0	1.0	-6.3	10/02/13	26/02/15
C08RPD071	C300-RP800086	80006.601	35968.952	139.131	0.7	1.6	-7.9	10/02/13	26/02/15
C08RPD072	C300-RP800087	80006.596	35968.944	129.905	1.6	-0.3	-7.6	10/02/13	26/02/15
C08RPD073	C300-RP800088	80006.691	35969.355	139.182	0.7	3.0	-8.5	10/02/13	26/02/15
C08RPD074	C300-RP800089	80006.674	35969.372	129.910	1.5	0.2	-8.2	10/02/13	26/02/15
C08RPD075	C300-RP800090	80005.414	35972.320	134.818	1.9	1.6	-9.6	10/02/13	26/02/15
C08RPD076	C300-RP800091	80003.221	35977.479	139.253	1.6	6.2	-12.0	10/02/13	26/02/15
C08RPD077	C300-RP800092	80003.324	35977.172	129.853	2.7	0.9	-12.0	10/02/13	26/02/15
C08RPD078	C300-RP800093	80003.352	35977.130	139.284	2.6	3.7	-12.2	10/02/13	26/02/15
C08RPD079	C300-RP800094	80003.200	35977.442	129.636	3.1	0.7	-12.3	10/02/13	26/02/15
C08RPD080	C300-RP800095	80001.979	35980.374	133.630	3.1	2.7	-15.5	10/02/13	26/02/15
C08RPD081	C300-RP800096	79999.991	35985.134	139.337	2.8	7.1	-21.3	10/02/13	26/02/15
C08RPD082	C300-RP800097	79999.952	35985.140	130.908	2.7	2.3	-21.5	10/02/13	26/02/15
C08RPD083	C300-RP800098	80077.370	35978.050	139.429	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD084	C300-RP800099	80077.350	35978.040	130.320	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD085	C300-RP800100	80072.320	35975.880	140.553	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD086	C300-RP800101	80072.330	35975.880	135.642	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD087	C300-RP800102	80067.370	35973.740	139.427	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD088	C300-RP800103	80067.340	35973.720	130.318	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD089	C300-RP800104	80063.680	35972.040	134.412	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD090	C300-RP800105	80063.680	35972.030	130.359	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD092	C300-RP800141	79979.360	36049.335	130.384	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD093	C300-RP800142	79979.926	36049.651	137.674	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD094	C300-RP800143	79979.939	36049.654	134.599	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD095	C300-RP800144	79979.938	36049.651	131.541	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD096	C300-RP800145	79982.866	36050.661	137.683	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD097	C300-RP800146	79982.869	36050.662	134.603	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD098	C300-RP800147	79982.867	36050.664	131.551	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD099	C300-RP800148	79986.220	36052.447	137.685	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD100	C300-RP800149	79986.213	36052.449	134.682	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD101	C300-RP800150	79989.811	36053.667	137.695	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD102	C300-RP800151	79989.820	36053.664	134.606	0.0	0.0	0.0	10/02/13	10/02/13



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	Settlement (mm)		
C08RPD103	C300-RP800152	79989.819	36053.673	131.556	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD104	C300-RP800153	79992.567	36055.097	137.678	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD105	C300-RP800154	79992.556	36055.099	134.617	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD106	C300-RP800155	79992.559	36055.107	131.556	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD107	C300-RP800156	80003.949	36113.508	140.659	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD108	C300-RP800157	80003.945	36113.623	134.966	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD109	C300-RP800158	80062.887	36085.434	140.005	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD110	C300-RP800159	80062.896	36085.438	132.500	0.0	0.0	0.0	10/02/13	10/02/13
C08RPD111	C300-RP001419	79991.599	36004.506	138.796	10.0	-4.9	-23.2	16/04/13	26/02/15
C08RPD112	C300-RP001420	79991.567	36004.587	131.185	8.9	-4.5	-23.5	16/04/13	26/02/15
C08RPD113	C300-RP001421	79988.313	36012.090	142.388	12.0	-5.2	-23.2	16/04/13	26/02/15
C08RPD114	C300-RP001422	79986.111	36017.294	142.301	11.7	-5.6	-22.0	16/04/13	26/02/15
C08RPD115	C300-RP001423	79985.983	36017.646	138.897	10.9	-4.7	-15.6	16/04/13	16/05/14
C08RPD133	C300-RP001481	79998.561	35988.479	134.223	5.8	8.4	-27.7	01/05/13	26/02/15
C08RPD141	C300-RP001489	79996.420	35993.423	130.816	19.7	-13.1	-24.7	15/05/13	26/02/15
C08RPD149	C300-RP001515	79996.513	35993.603	139.325	7.5	13.9	-32.1	30/04/13	26/02/15
C08RPD901	C300-RP001395	80068.026	35891.207	128.123	0.0	0.0	0.0	07/03/13	26/02/15
C08RPD902	C300-RP001450	79995.794	36004.269	128.656	-6.8	-7.5	-26.7	07/03/13	26/02/15
C08RPD903	C300-RP001396	80009.312	35951.643	147.472	0.0	0.0	0.0	10/02/13	10/02/13
C08RPE001	C300-RP001374	79991.263	36003.988	131.170	5.6	-2.2	-23.0	10/02/13	26/02/15
C08RPE003	C300-RP001376	79935.445	36018.712	138.831	4.1	-14.0	-24.6	10/02/13	26/02/15
C08RPE005	C300-RP001378	79915.736	35971.078	136.884	7.1	1.7	-15.8	10/02/13	26/02/15
C08RPE006	C300-RP001379	79960.024	35958.800	134.213	1.8	17.3	-13.1	10/02/13	25/02/15
C08RPE007	C208-RP800043	79931.636	35967.014	136.624	6.1	16.1	-11.1	10/02/13	26/02/15
C08RPE008	C208-RP800044	79933.774	35967.925	132.108	-10.0	5.7	-11.0	10/02/13	26/02/15
C08RPE009	C208-RP800045	79931.549	35966.970	129.601	-0.9	3.6	-5.0	10/02/13	26/02/15
C08RPE010	C208-RP800046	79930.685	35966.598	137.830	-0.4	12.3	-8.8	10/02/13	26/02/15
C08RPE011	C208-RP800047	79925.840	35964.556	137.906	-0.7	3.9	-3.2	10/02/13	26/02/15
C08RPE012	C208-RP800048	79928.251	35965.569	132.696	-11.7	2.9	-8.4	10/02/13	26/02/15
C08RPE013	C208-RP800049	79930.591	35966.720	130.319	-12.3	4.6	-5.8	10/02/13	26/02/15
C08RPE014	C208-RP800050	79925.777	35964.516	130.255	-0.9	2.0	-3.4	10/02/13	26/02/15
C08RPE015	C208-RP800051	79957.518	35964.769	134.275	-4.2	-1.7	-0.4	10/02/13	05/04/13
C08RPE016	C208-RP800052	79958.131	35963.061	131.460	-4.2	-1.6	-0.2	10/02/13	25/03/13
C08RPE017	C208-RP800053	79986.035	36017.440	130.739	6.6	-3.5	-18.6	15/05/13	19/02/15
C08RPE018	C208-RP800054	79919.718	35972.783	136.721	-5.5	-3.8	0.4	10/02/13	26/02/15
C08RPE019	C208-RP800055	79919.910	35972.892	130.510	-5.3	-4.0	0.5	27/04/12	26/02/15
C08RPE020	C208-RP800056	79920.896	35973.295	136.954	1.3	0.1	-1.9	10/02/13	26/02/15
C08RPE021	C208-RP800057	79924.818	35974.971	136.945	1.2	-0.2	-2.6	27/04/12	26/02/15
C08RPE022	C208-RP800058	79920.895	35973.329	129.980	1.0	0.2	-1.8	10/02/13	26/02/15
C08RPE023	C208-RP800059	79925.080	35974.960	130.292	0.7	0.7	-2.6	10/02/13	26/02/15
C08RPE024	C208-RP800060	79925.824	35975.423	137.026	1.2	-0.6	-2.8	27/04/12	26/02/15
C08RPE025	C208-RP800061	79930.631	35977.492	137.248	1.3	-1.7	-3.8	10/02/13	25/02/15
C08RPE026	C208-RP800062	79929.091	35976.841	132.250	1.4	-1.2	-3.3	10/02/13	26/02/15
C08RPE027	C208-RP800063	79925.921	35975.485	129.669	0.9	-0.3	-2.2	10/02/13	26/02/15
C08RPE028	C208-RP800064	79930.605	35977.500	129.849	1.2	-0.6	-3.6	10/02/13	25/02/15
C08RPE029	C208-RP800065	79931.552	35977.903	136.039	1.2	-1.5	-3.8	27/04/12	25/02/15
C08RPE030	C208-RP800066	79937.021	35980.273	136.113	1.3	-2.1	-4.2	27/04/12	25/02/15
C08RPE031	C208-RP800067	79934.306	35979.051	132.864	1.2	-1.4	-3.7	10/02/13	25/02/15
C08RPE032	C208-RP800068	79931.635	35977.956	129.218	1.2	-0.4	-3.4	10/02/13	25/02/15



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C08RPE033	C208-RP800069	79937.060	35980.268	129.246	18.9	7.6	18.5	10/02/13	26/02/15
C08RPE034	C208-RP800070	79970.975	35995.350	135.714	-6.3	-0.3	0.5	10/02/13	25/02/15
C08RPE035	C208-RP800071	79976.187	35997.553	135.807	-6.7	0.3	0.2	27/04/12	26/02/15
C08RPE036	C208-RP800072	79972.688	35996.060	133.150	-6.5	0.0	0.4	10/02/13	26/02/15
C08RPE037	C208-RP800073	79976.340	35997.655	129.706	-6.6	0.0	0.3	10/02/13	26/02/15
C08RPE038	C208-RP800074	79959.588	35989.424	137.475	-6.2	-0.6	0.0	10/02/13	26/02/15
C08RPE039	C208-RP800075	79960.959	35991.106	136.385	-6.4	-0.5	0.0	10/02/13	26/02/15
C08RPE040	C208-RP800076	79970.140	35994.748	136.327	-6.3	-0.4	0.5	10/02/13	25/02/15
C08RPE041	C208-RP800077	79959.658	35989.434	133.041	-6.3	-0.8	-0.3	10/02/13	26/02/15
C08RPE042	C208-RP800078	79966.048	35993.262	132.971	-6.3	-0.3	0.6	10/02/13	25/02/15
C08RPE043	C208-RP800079	79960.810	35991.033	131.396	-6.4	-0.6	0.0	27/04/12	26/02/15
C08RPE044	C208-RP800080	79970.029	35994.707	131.383	-6.2	-0.1	0.5	10/02/13	25/02/15
C08RPE047	C208-RP800083	79959.902	35958.655	129.047	-3.6	-1.7	0.0	10/02/13	22/03/13
C08RPE048	C208-RP800084	79957.426	35964.421	128.970	-4.2	-1.8	-0.2	10/02/13	21/03/13
C08RPE049	C208-RP800085	79957.101	35965.745	134.616	-4.3	-1.6	-0.3	10/02/13	25/02/15
C08RPE050	C208-RP800086	79955.104	35970.530	134.893	-4.6	-2.1	-0.2	27/04/12	26/02/15
C08RPE051	C208-RP800087	79953.213	35975.037	134.911	-5.1	-1.9	-0.1	27/04/12	08/04/13
C08RPE052	C208-RP800088	79952.423	35975.938	134.969	1.1	11.8	-14.5	10/02/13	26/02/15
C08RPE053	C208-RP800089	79956.038	35968.187	132.257	-4.6	-1.8	-0.2	27/04/12	26/02/15
C08RPE054	C208-RP800090	79953.986	35973.088	132.299	-5.0	-2.3	-0.1	10/02/13	26/02/15
C08RPE055	C208-RP800091	79956.681	35966.479	130.898	-4.6	-1.8	-0.3	10/02/13	26/02/15
C08RPE056	C208-RP800092	79954.980	35970.636	131.143	-4.4	-2.0	-0.3	27/04/12	26/02/15
C08RPE057	C208-RP800093	79953.077	35975.048	131.122	-5.4	-1.5	0.3	10/02/13	26/02/15
C08RPE059	C208-RP800095	79938.361	35980.847	138.560	-5.6	-2.5	0.0	27/04/12	26/02/15
C08RPE060	C208-RP800096	79948.736	35985.669	138.626	-6.2	-1.4	0.1	27/04/12	25/02/15
C08RPE061	C208-RP800097	79946.113	35992.085	138.620	-6.3	-1.4	0.4	27/04/12	25/02/15
C08RPE062	C208-RP800098	79943.115	35982.863	134.938	10.5	-1.0	-27.1	22/04/13	19/02/15
C08RPE063	C208-RP800099	79947.285	35989.243	135.066	-6.5	-1.5	-0.1	27/04/12	25/02/15
C08RPE064	C208-RP800100	79938.025	35980.704	131.864	-5.8	-2.8	0.1	10/02/13	25/02/15
C08RPE065	C208-RP800101	79948.696	35985.715	131.872	9.8	-4.9	-35.2	10/02/13	26/02/15
C08RPE066	C208-RP800102	79946.095	35992.242	132.031	-6.7	-2.0	0.2	10/02/13	26/02/15
C08RPE067	C208-RP800103	79945.420	35994.039	139.370	-6.5	-1.3	0.3	27/04/12	26/02/15
C08RPE068	C208-RP800104	79942.974	36000.020	139.443	-7.5	-1.7	-0.1	10/02/13	25/02/15
C08RPE069	C208-RP800105	79941.452	36003.708	139.447	-7.6	-1.8	0.0	27/04/12	25/02/15
C08RPE070	C208-RP800106	79938.993	36009.701	139.433	-8.0	-2.0	0.0	10/02/13	25/02/15
C08RPE071	C208-RP800107	79943.822	35997.920	134.460	-6.6	-1.7	0.3	27/04/12	26/02/15
C08RPE072	C208-RP800108	79940.607	36005.743	133.909	-7.8	-2.1	0.0	27/04/12	25/02/15
C08RPE073	C208-RP800109	79945.409	35994.044	130.979	-6.6	-1.8	0.0	10/02/13	26/02/15
C08RPE074	C208-RP800110	79942.976	35999.970	130.897	-7.3	-2.1	0.0	27/04/12	26/02/15
C08RPE075	C208-RP800111	79941.400	36003.791	130.819	-7.2	-2.0	-0.1	10/02/13	25/02/15
C08RPE076	C208-RP800112	79938.994	36009.658	131.328	-7.8	-2.2	0.5	27/04/12	25/02/15



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C08RPE077	C208-RP800113	79938.34 4	36011.50 1	138.77 7	-8.3	-2.3	0.1	27/04/12	25/02/15
C08RPE078	C208-RP800114	79937.413	36013.588	134.057	-8.7	-2.7	0.1	10/02/13	25/02/15
C08RPE079	C208-RP800115	79936.27 4	36016.58 7	134.05 9	-8.7	-2.5	-0.1	27/04/12	26/02/15
C08RPE080	C208-RP800116	79938.33 6	36011.49 0	130.99 4	-8.2	-2.3	0.4	27/04/12	26/02/15
C08RPE082	C208-RP800118	79977.237	35997.994	138.881	-6.4	0.7	0.3	10/02/13	26/02/15
C08RPE083	C208-RP800119	79982.401	36000.007	138.879	-6.7	1.0	-0.1	10/02/13	26/02/15
C08RPE084	C208-RP800120	79986.292	36001.682	138.814	-7.1	1.4	-0.1	10/02/13	26/02/15
C08RPE085	C208-RP800121	79979.71 0	35998.99 5	133.73 8	-6.8	0.7	0.2	27/04/12	26/02/15
C08RPE086	C208-RP800122	79976.85 0	35997.84 9	130.72 6	-6.3	0.2	0.3	27/04/12	26/02/15
C08RPE087	C208-RP800123	79982.373	36000.042	130.722	0.0	0.0	0.0	10/02/13	10/02/13
C08RPE088	C300-RP001408	79915.687	35971.082	130.505	2.4	10.2	-10.9	07/03/13	26/02/15
C08RPE089	C300-RP001418	79935.408	36018.774	131.379	5.6	-5.2	-19.0	07/03/13	26/02/15
C08RPE090	C300-RP001479	79970.694	35995.241	131.089	7.0	-7.9	-25.4	30/04/13	25/02/15
C08RPE091	C300-RP001511	79988.097	35991.132	139.248	7.0	17.3	-30.1	30/04/13	26/02/15
C08RPE094	C300-RP001514	79985.101	35988.726	134.479	7.4	14.0	-30.5	30/04/13	26/02/15
C08RPE095	C300-RP001540	79984.283	35999.433	136.685	-0.3	-0.7	-21.7	31/05/13	26/02/15
C08RPE096	C300-RP001541	79991.191	36003.891	138.802	-0.3	0.2	-20.0	31/05/13	26/02/15
C08RPE097	C300-RP001542	79984.201	35999.490	130.638	0.9	-0.3	-21.6	31/05/13	26/02/15
C08RPE901	C300-RP001397	79986.216	35926.799	127.794	11.1	3.3	-4.1	10/02/13	26/02/15
C08RPE902	C300-RP001398	79982.997	35902.606	128.478	0.0	0.0	0.0	07/03/13	26/02/15
C08RPE903	C300-RP001399	79938.914	36010.053	128.978	4.6	-5.6	-31.5	10/02/13	25/02/15
C08RPE904	C300-RP001452	79986.251	35926.991	135.724	0.0	0.0	0.0	07/03/13	26/02/15
C08RPF002	C208-RP800148	79947.49 3	35973.68 0	135.30 2	-4.4	-3.0	0.1	11/05/12	26/02/15
C08RPF003	C208-RP800149	79949.231	35974.514	132.352	10.3	-1.0	14.3	10/02/13	26/02/15
C08RPF004	C208-RP800150	79947.508	35973.714	130.218	9.4	-1.7	15.1	10/02/13	26/02/15
C08RPF005	C208-RP800151	79952.41 6	35975.95 5	130.78 6	-4.6	-3.1	-0.1	11/05/12	26/02/15
C08RPF006	C208-RP800130	79947.12 5	35973.53 1	135.84 7	-4.8	-3.3	-0.1	11/05/12	26/02/15
C08RPF007	C208-RP800131	79942.06 0	35971.41 3	135.85 1	-4.5	-3.8	-0.3	11/05/12	26/02/15
C08RPF008	C208-RP800132	79944.534	35972.457	131.615	8.6	-2.4	16.0	10/02/13	26/02/15
C08RPF009	C208-RP800133	79947.109	35973.539	129.327	8.2	-2.7	15.5	10/02/13	26/02/15
C08RPF010	C208-RP800134	79942.02 1	35971.38 9	129.15 8	-4.4	-3.6	-0.1	11/05/12	26/02/15
C08RPF011	C208-RP800135	79941.110	35971.039	136.425	8.3	-0.7	16.0	10/02/13	26/02/15
C08RPF012	C208-RP800136	79936.845	35969.228	136.458	-6.8	-9.9	19.3	10/02/13	26/02/15
C08RPF013	C208-RP800137	79938.99 5	35970.12 5	132.33 8	-4.4	-3.9	-0.2	11/05/12	26/02/15
C08RPF014	C208-RP800138	79941.144	35971.051	129.651	7.9	-4.0	16.5	10/02/13	26/02/15
C08RPF015	C208-RP800139	79936.711	35969.176	129.676	8.1	-5.0	19.6	10/02/13	26/02/15
C08RPF016	C208-RP800140	79935.89 8	35968.80 0	136.51 8	-4.3	-4.3	-0.1	11/05/12	26/02/15
C08RPF017	C208-RP800141	79935.87 8	35968.80 4	129.67 1	-4.3	-4.3	0.1	11/05/12	26/02/15
C08RPF018	C208-RP800142	79925.152	35964.325	137.496	-0.7	3.6	-3.2	10/02/13	26/02/15
C08RPF019	C208-RP800143	79915.231	35960.063	137.524	-14.9	9.1	-9.8	10/02/13	26/02/15
C08RPF020	C208-RP800144	79919.17 6	35961.74 3	133.85 9	13.1	19.7	-6.7	11/05/12	26/02/15
C08RPF021	C208-RP800145	79925.14 0	35964.28 7	130.08 8	13.2	18.2	-7.0	11/05/12	26/02/15



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C08RPF022	C208-RP800146	79915.214	35960.054	130.091	-0.4	1.0	-2.2	10/02/13	26/02/15
C08RPF023	C300-RP800112	79970.075	35982.539	138.296	10.4	4.2	8.5	10/02/13	26/02/15
C08RPF024	C300-RP800113	79970.400	35982.620	130.192	0.0	12.6	-20.4	10/02/13	26/02/15
C08RPF025	C300-RP800114	79968.317	35981.775	133.565	7.8	1.0	8.5	10/02/13	26/02/15
C08RPF026	C300-RP800115	79964.100	35979.930	138.324	6.7	16.4	-16.6	22/04/13	19/02/15
C08RPF027	C300-RP800116	79964.201	35979.971	130.063	6.6	-2.2	11.6	10/02/13	26/02/15
C08RPF028	C300-RP800117	79964.111	35978.677	138.269	4.6	17.7	-15.4	30/04/13	09/01/15
C08RPF029	C300-RP800118	79964.153	35978.713	129.433	-3.4	5.7	-14.9	10/02/13	26/02/15
C08RPF030	C300-RP001449	79964.157	35978.700	129.461	0.2	-0.2	1.5	07/03/13	07/05/13
C08RPN001	C701-RP-21011-CR086	79964.575	35947.333	129.367	-0.4	2.1	0.4	22/04/13	24/05/13
C08RPN002	C701-RP-21013-CR086	79959.418	35944.534	134.333	-1.5	-0.1	0.9	22/04/13	23/05/13
C08RPN003	C701-RP-21014-CR086	79964.660	35947.382	134.259	2.5	4.0	1.4	22/04/13	24/05/13
C08RPN004	C701-RP-21015-CR086	79962.104	35953.427	134.732	-2.3	0.5	1.0	22/04/13	23/05/13
C08RPN005	C701-RP-21110-CR086	79961.821	35953.790	128.799	-2.4	0.0	0.5	22/04/13	23/05/13
C08RPN006	C701-RP-21111-CR086	79960.173	35957.786	128.655	-3.4	-1.4	0.0	10/02/13	26/02/15
C08RPN007	C701-RP-21112-CR086	79961.829	35953.794	136.776	-0.4	0.1	0.0	10/02/13	24/05/13
C08RPN008	C701-RP-21113-CR086	79960.203	35957.760	136.578	-0.1	0.0	-0.1	27/04/12	26/02/15
C08RPN009	C300-RP001471	79959.447	35944.618	129.852	-2.8	0.5	6.0	10/02/13	23/05/13
C08RPN010	C300-RP001472	79962.161	35953.175	129.629	-2.0	3.9	7.6	10/02/13	24/05/13
C08RPN011	C300-RP800119	79966.204	35973.943	132.564	3.3	14.2	-12.6	30/04/13	26/02/15
C08RPN012	C300-RP800120	79967.880	35970.062	138.284	-0.8	10.4	-12.9	10/02/13	26/02/15
C08RPN013	C300-RP800121	79967.724	35970.481	129.436	2.4	6.9	-19.7	10/02/13	26/02/15
C08RPN014	C300-RP800122	79968.135	35969.481	141.832	3.1	12.4	-12.5	10/02/13	26/02/15
C08RPN015	C300-RP800123	79968.057	35969.710	129.178	4.1	6.8	-12.9	10/02/13	26/02/15
C08RPN016	C300-RP800124	79971.226	35962.343	134.749	3.6	9.0	-9.6	10/02/13	26/02/15
C08RPN017	C300-RP800125	79974.130	35955.580	141.817	-0.7	11.1	-3.5	19/04/13	26/02/15
C08RPN018	C300-RP800126	79974.084	35955.691	129.202	3.8	6.4	-7.0	10/02/13	26/02/15
C08RPN019	C300-RP800127	79974.270	35955.210	141.818	0.5	3.6	-3.1	19/04/13	26/02/15
C08RPN020	C300-RP800128	79974.241	35955.315	129.189	5.4	6.7	-5.6	10/02/13	26/02/15
C08RPN021	C300-RP001535	79971.052	35962.752	141.814	-0.6	12.5	-5.4	31/05/13	26/02/15
C08RPN022	C300-RP001536	79974.008	35955.861	134.675	-1.9	9.0	-2.7	31/05/13	26/02/15
C08RPN023	C300-RP001538	79970.925	35963.060	129.653	-5.4	7.1	-7.2	31/05/13	26/02/15
C08RPN905	C300-RP001400	79920.105	35922.568	128.174	0.0	0.0	0.0	10/02/13	10/02/13
CHA111PRIR1C1	C300-RP890333	80199.981	35931.272	94.921	0.5	0.0	-0.8	26/02/13	06/03/15
CHA111PRIR1C2	C300-RP890334	80196.825	35943.411	94.943	-1.7	0.1	0.7	26/02/13	06/03/15
CHA111PRIR2C1	C300-RP890335	80199.959	35931.283	89.202	1.1	-0.1	-1.0	26/02/13	06/03/15
CHA111PRIR2C2	C300-RP890336	80196.805	35943.437	89.229	-3.8	0.8	0.0	26/02/13	06/03/15
CHA113PRIR1C1	C300-RP890337	80196.450	35944.731	95.160	-1.0	0.0	0.4	26/02/13	06/03/15
CHA113PRIR1C2	C300-RP890049	80194.619	35951.250	95.152	-0.2	-0.5	-0.2	27/09/12	06/03/15
CHA113PRIR1C3	C300-RP890050	80192.026	35960.556	95.300	1.0	-0.6	-1.4	27/09/12	06/03/15
CHA113PRIR2C1	C300-RP890338	80196.451	35944.696	89.792	-0.6	-0.3	0.2	26/02/13	06/03/15



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CHA113PRIR2C2	C300-RP890051	80194.61 4	35951.22 1	89.869	-0.1	-1.1	-0.1	27/09/12	06/03/15
CHA113PRIR2C3	C300-RP890052	80192.00 4	35960.58 8	89.848	0.9	-0.9	-1.2	27/09/12	06/03/15
CHA118PRIR1C1	C300-RP890361	80214.90 2	35949.02 0	94.397	-1.1	0.5	-0.1	25/02/13	06/03/15
CHA118PRIR1C2	C300-RP890362	80217.54 3	35938.27 5	94.282	-3.6	-1.2	2.0	25/02/13	06/03/15
CHA118PRIR2C1	C300-RP890363	80214.88 4	35949.11 6	87.558	-1.0	-0.5	0.3	25/02/13	06/03/15
CHA118PRIR2C2	C300-RP890364	80217.52 4	35938.42 2	87.474	-3.9	-1.3	1.7	25/02/13	06/03/15
CHA119PRIR1C1	C300-RP890053	80191.86 2	35961.21 1	95.628	1.0	0.6	-1.6	27/09/12	06/03/15
CHA119PRIR1C2	C300-RP890054	80190.61 5	35965.71 4	95.620	0.6	0.7	-3.8	27/09/12	06/03/15
CHA119PRIR2C1	C300-RP890055	80191.84 3	35961.18 4	89.456	1.1	-0.8	-1.5	27/09/12	06/03/15
CHA119PRIR2C2	C300-RP890056	80190.61 6	35965.67 8	89.478	0.3	-0.8	-3.7	27/09/12	06/03/15
CHA120PRIR1C1	C300-RP890365	80209.82 9	35969.10 9	101.76 8	1.4	1.1	-4.6	25/02/13	06/03/15
CHA120PRIR1C2	C300-RP890366	80211.65 7	35961.95 9	101.73 0	0.3	1.0	-2.3	25/02/13	06/03/15
CHA120PRIR1C3	C300-RP890367	80214.70 2	35949.76 5	101.84 7	-0.2	0.1	0.1	25/02/13	06/03/15
CHA120PRIR2C1	C300-RP890368	80209.78 7	35969.27 6	96.825	1.6	0.5	-5.7	25/02/13	06/03/15
CHA120PRIR2C2	C300-RP890369	80211.65 0	35961.96 4	96.772	0.2	-0.1	-2.4	25/02/13	06/03/15
CHA120PRIR2C3	C300-RP890370	80214.67 6	35949.87 3	96.899	-0.4	0.4	0.1	25/02/13	06/03/15
CHA120PRIR3C1	C300-RP890371	80209.78 5	35969.28 1	90.081	4.3	-0.4	-5.3	25/02/13	06/03/15
CHA120PRIR3C2	C300-RP890372	80211.63 9	35962.01 9	90.039	1.0	0.1	-2.6	25/02/13	06/03/15
CHA120PRIR3C3	C300-RP890373	80214.66 1	35949.97 6	90.050	-0.5	-1.0	0.2	25/02/13	06/03/15
CHA121PRIR1C1	C300-RP890057	80187.64 6	35976.75 6	95.672	1.0	3.5	-21.6	27/09/12	06/03/15
CHA121PRIR1C2	C300-RP890058	80185.95 3	35983.28 3	95.593	4.4	4.6	-31.2	27/09/12	06/03/15
CHA121PRIR2C1	C300-RP890059	80187.63 0	35976.76 4	90.013	3.0	0.7	-21.4	27/09/12	06/03/15
CHA124PRIR1C1	C300-RP890353	80204.90 1	35988.77 3	95.681	5.5	-1.6	-10.5	25/02/13	06/03/15
CHA124PRIR1C2	C300-RP890354	80205.71 4	35985.54 8	95.753	4.2	-1.7	-11.2	25/02/13	06/03/15
CHA124PRIR1C3	C300-RP890355	80207.11 3	35980.03 8	95.685	2.4	-2.1	-11.4	25/02/13	06/03/15
CHA124PRIR1C4	C300-RP890356	80209.58 6	35970.20 1	95.681	1.0	-0.9	-8.0	25/02/13	06/03/15
CHA124PRIR2C1	C300-RP890357	80204.93 1	35988.71 9	88.833	6.0	-1.0	-10.6	25/02/13	06/03/15
CHA124PRIR2C2	C300-RP890358	80205.71 5	35985.60 6	88.837	5.5	-0.9	-11.5	25/02/13	06/03/15
CHA124PRIR2C3	C300-RP890359	80207.19 1	35979.77 1	88.687	3.5	-1.2	-12.0	25/02/13	06/03/15
CHA124PRIR2C4	C300-RP890360	80209.52 8	35970.39 1	88.701	2.9	-1.0	-6.2	25/02/13	06/03/15
CHA125PRIR1C1A	C300-RP890060	80185.84 0	35983.91 4	95.085	7.8	0.8	-29.1	27/09/12	15/07/14
CHA125PRIR1C2	C300-RP890061	80184.77 7	35989.24 4	92.519	9.8	9.4	-35.1	27/09/12	06/03/15



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CHA132PRIR1C1A	C300-RP890431	80197.081	36020.046	106.101	-7.4	-6.8	2.3	19/06/13	06/03/15
CHA133PRIROC1	C300-RP890062	80183.310	35995.465	97.742	8.2	-5.0	-31.8	27/09/12	06/03/15
CHA133PRIROC2	C300-RP890063	80180.441	36007.684	97.782	10.3	-2.8	-24.0	27/09/12	15/07/14
CHA133PRIR1C1	C300-RP890064	80183.281	35995.433	91.378	6.5	-2.6	-31.8	27/09/12	06/03/15
CHA133PRIR1C2	C300-RP890065	80180.478	36007.489	90.523	9.0	-1.6	-23.3	27/09/12	15/07/14
CHA133PRIR2C1	C300-RP890066	80183.148	35995.403	5.855	-1.6	4.0	-10.6	27/09/12	25/02/13
CHA136PRIROC1	C300-RP890374	80195.213	36028.058	13.025	-10.4	-2.2	12.7	25/02/13	06/03/15
CHA136PRIROC1A	C300-RP890436	80195.637	36028.349	33.022	-10.4	-4.7	1.0	19/06/13	06/03/15
CHA136PRIR1C2	C300-RP890375	80198.391	36014.218	9.333	12.7	-12.1	-0.8	25/02/13	28/02/15
CHA136PRIR1C2A	C300-RP890376	80198.999	36014.466	76.737	10.8	-1.4	-1.3	25/02/13	11/11/13
CHA136PRIR1C3	C300-RP890377	80200.732	36004.794	9.460	16.5	-11.4	-2.5	25/02/13	28/02/15
CHA136PRIR2C1	C300-RP890378	80195.251	36027.886	6.360	-6.6	-1.3	9.5	25/02/13	06/03/15
CHA136PRIR2C1B	C300-RP890437	80195.677	36028.176	26.351	-8.9	-4.1	1.7	19/06/13	06/03/15
CHA136PRIR2C2	C300-RP890379	80198.413	36014.198	5.991	12.7	-12.0	-0.9	25/02/13	28/02/15
CHA136PRIR2C3	C300-RP890381	80200.776	36004.680	6.164	16.1	-11.0	-2.6	25/02/13	28/02/15
CPTHPRIR1C1	C300-RP890454	80250.425	36121.427	9.071	2.1	-2.7	0.3	19/06/13	16/11/14
CPTHPRIR1C2	C300-RP890455	80258.131	36099.317	9.072	0.7	-0.8	0.3	19/06/13	16/11/14
CPTHPRIR2C1	C300-RP890457	80250.423	36121.421	6.900	4.0	-3.2	1.4	19/06/13	16/11/14
CPTHPRIR2C2	C300-RP890458	80258.140	36099.309	6.809	0.3	-0.9	-0.5	19/06/13	16/11/14
CPTNPRIR1C2	C300-RP890461	80199.887	36136.072	55.962	3.3	-5.4	-2.7	19/06/13	10/10/14
CPTNPRIR2C2	C300-RP890464	80199.844	36136.135	40.767	0.7	-3.7	0.2	19/06/13	20/08/14
CPTNPRIR2C2A	C300-RP890463	80199.841	36136.356	108.169	-1.6	-0.4	-0.3	19/06/13	27/10/13
CPTNPRIR3C2	C300-RP890466	80199.783	36136.160	25.670	2.3	-4.8	-2.1	19/06/13	25/02/15
CPTNPRIR4C2	C300-RP890468	80199.785	36136.192	16.563	-10.9	-11.2	1.1	19/06/13	06/03/15
CPTPRI006	C300-RP890471	80245.901	36130.038	3.002	-0.1	-1.6	-2.2	19/06/13	16/11/14
CPTPRI007	C300-RP890472	80225.785	36124.885	2.964	-0.8	-1.3	0.5	19/06/13	29/10/13
CPTPRI008	C300-RP890473	80218.872	36119.807	3.147	0.2	-0.9	0.8	19/06/13	20/10/13
CPTSPRIR1C1	C300-RP890474	80209.219	36096.818	56.025	-0.8	0.6	1.9	19/06/13	08/10/14
CPTSPRIR1C2	C300-RP890476	80220.494	36099.553	55.944	-15.1	0.0	-2.8	19/06/13	28/02/15
CPTSPRIR1C2A	C300-RP890475	80177.562	36138.838	53.362	-3.3	-2.2	-4.5	19/06/13	17/11/14
CPTSPRIR2C1	C300-RP890477	80209.328	36096.779	40.713	0.2	0.4	4.6	19/06/13	31/07/14
CPTSPRIR2C2	C300-RP890478	80220.528	36099.508	40.750	-14.5	0.1	-0.5	19/06/13	28/02/15
CPTSPRIR3C1	C300-RP890481	80209.277	36096.741	24.865	-2.8	0.2	-1.7	19/06/13	23/01/14
CPTSPRIR3C1A	C300-RP890479	80209.146	36096.931	22.906	-0.2	0.2	0.0	19/06/13	08/07/14
CPTSPRIR3C1B	C300-RP890480	80209.441	36097.150	22.898	-4.1	4.3	0.4	19/06/13	04/12/14
CPTSPRIR3C2	C300-RP890482	80220.516	36099.426	24.930	-3.3	0.2	-1.4	19/06/13	23/01/14
CPTSPRIR4C1	C300-RP890484	80209.281	36096.719	15.752	-2.2	0.4	-1.2	19/06/13	23/01/14
CPTSPRIR4C1A	C300-RP890483	80209.146	36096.910	13.792	-2.6	1.8	-0.7	19/06/13	04/12/14
CPTSPRIR4C2	C300-RP890485	80220.537	36099.421	15.835	-2.9	0.0	-0.7	19/06/13	23/01/14
CPTWPRIR1C1	C300-RP890486	80198.552	36133.682	55.949	-0.8	6.8	8.9	19/06/13	07/10/14
CPTWPRIR1C2	C300-RP890487	80200.393	36120.784	55.943	1.2	-3.3	-1.7	19/06/13	23/09/14
CPTWPRIR1C3	C300-RP890488	80202.803	36110.699	55.901	-1.1	-1.8	5.1	19/06/13	08/10/14
CPTWPRIR1C4	C300-RP890490	80207.013	36098.350	55.963	-2.5	-1.7	3.5	19/06/13	07/10/14
CPTWPRIR1C4A	C300-RP890489	80207.210	36098.667	123.375	4.7	-1.2	-4.1	29/08/13	11/11/13



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CPTWPRIR2C1	C300-RP890491	80198.477	36133.735	40.735	0.9	-3.5	0.3	19/06/13	20/08/14
CPTWPRIR2C2	C300-RP890492	80200.330	36120.844	40.774	0.0	-1.0	3.4	19/06/13	28/07/14
CPTWPRIR2C3	C300-RP890493	80202.774	36110.602	40.889	2.7	-1.2	7.9	19/06/13	31/07/14
CPTWPRIR2C4	C300-RP890495	80206.990	36098.355	40.715	-1.5	0.4	6.7	19/06/13	29/07/14
CPTWPRIR2C4A	C300-RP890494	80207.189	36098.648	108.110	-2.2	-0.2	-2.7	19/06/13	24/09/13
CPTWPRIR3C1	C300-RP890496	80198.422	36133.786	25.737	1.9	-5.4	-2.6	19/06/13	14/02/15
CPTWPRIR3C2	C300-RP890497	80200.274	36120.867	25.680	1.1	-2.0	0.8	19/06/13	09/07/14
CPTWPRIR3C3	C300-RP890498	80202.716	36110.606	25.657	0.6	0.8	3.0	19/06/13	08/07/14
CPTWPRIR3C4	C300-RP890499	80206.942	36098.317	25.524	0.8	0.6	3.9	19/06/13	09/07/14
CPTWPRIR4C1	C300-RP890500	80198.396	36133.728	16.617	-0.4	-1.7	1.3	19/06/13	03/07/14
CPTWPRIR4C2	C300-RP890501	80200.254	36120.817	16.522	1.2	-1.2	0.8	19/06/13	01/07/14
CPTWPRIR4C4	C300-RP890503	80206.930	36098.232	16.496	-10.6	-4.9	2.3	19/06/13	28/02/15
DEN03PRIR1C2	C300-RP890509	80256.362	36028.675	10.408	-0.3	-1.0	0.5	31/07/13	04/12/14
DEN03PRIR1C3	C300-RP890510	80250.287	36024.238	10.423	0.1	-1.0	0.5	31/07/13	04/12/14
DEN03PRIR2C2	C300-RP890512	80256.343	36028.647	4.324	-2.0	0.3	0.8	03/08/13	04/12/14
DEN03PRIR2C3	C300-RP890513	80250.281	36024.211	4.237	-1.8	0.8	0.9	03/08/13	04/12/14
DEN04PRIR1C1	C300-RP890514	80249.317	36023.608	10.219	0.0	-0.6	0.4	31/07/13	04/12/14
DEN04PRIR1C2	C300-RP890515	80245.251	36020.599	10.224	0.2	-1.4	0.3	19/06/13	04/12/14
DEN04PRIR2C1	C300-RP890516	80249.323	36023.589	4.328	0.6	-0.7	0.2	03/08/13	04/12/14
DEN04PRIR2C2	C300-RP890517	80245.248	36020.591	4.329	0.1	-1.0	0.3	19/06/13	04/12/14
DEN05PRIR1C1	C300-RP890518	80244.782	36020.196	9.324	0.3	-1.4	0.3	19/06/13	04/12/14
DEN05PRIR1C2	C300-RP890519	80240.133	36016.826	9.315	0.2	-1.9	0.4	19/06/13	04/12/14
DEN05PRIR2C1	C300-RP890520	80244.755	36020.151	3.570	0.6	-0.9	-0.4	19/06/13	04/12/14
DEN05PRIR2C2	C300-RP890521	80240.157	36016.804	3.622	0.4	-2.0	0.4	19/06/13	04/12/14
DEN06PRIR1C1	C300-RP890522	80239.637	36016.467	8.223	0.2	-2.2	0.3	19/06/13	04/12/14
DEN06PRIR1C2	C300-RP890523	80234.945	36013.051	8.218	-0.5	-1.4	-0.8	19/06/13	04/12/14
DEN06PRIR2C1	C300-RP890524	80239.683	36016.454	2.720	-2.1	0.8	0.0	19/06/13	04/12/14
DEN06PRIR2C2	C300-RP890525	80235.003	36013.035	2.779	0.1	-1.9	-0.2	19/06/13	04/12/14
DEN07PRIR1C1	C300-RP890526	80234.320	36012.594	7.470	-0.4	-2.1	-0.8	19/06/13	04/12/14
DEN07PRIR1C2	C300-RP890527	80229.610	36009.087	7.609	0.1	-3.3	-0.7	19/06/13	04/12/14
DEN07PRIR2C1	C300-RP890528	80234.388	36012.595	3.446	0.0	-1.6	-0.5	19/06/13	04/12/14
DEN07PRIR2C2	C300-RP890529	80229.619	36009.065	3.639	-0.6	-2.9	-0.7	19/06/13	04/12/14
DEN08PRIR1C1	C300-RP890530	80228.936	36008.630	9.079	-0.2	-4.2	-0.7	19/06/13	04/12/14
DEN08PRIR1C2	C300-RP890531	80224.872	36005.649	9.083	0.4	-4.4	-0.7	19/06/13	04/12/14
DEN08PRIR2C1	C300-RP890532	80228.929	36008.622	4.729	-0.4	-3.5	-0.7	19/06/13	04/12/14
DEN08PRIR2C2	C300-RP890533	80224.873	36005.652	4.727	0.2	-3.4	-1.0	19/06/13	04/12/14
DEN09PRIR1C1	C300-RP890534	80224.111	36005.228	7.496	0.5	-3.7	-1.6	19/06/13	04/12/14
DEN09PRIR1C2	C300-RP890535	80219.704	36001.876	7.671	-0.7	-3.2	-2.6	19/06/13	04/12/14
DEN09PRIR2C1	C300-RP890536	80224.372	36005.219	2.159	-0.2	-3.3	-1.3	19/06/13	04/12/14
DEN09PRIR2C2	C300-RP890537	80219.742	36001.919	3.971	-1.0	-2.8	-2.8	19/06/13	04/12/14
DEN10PRIR1C1	C300-RP890538	80219.197	36001.498	8.517	-1.2	-3.1	-2.6	19/06/13	04/12/14
DEN10PRIR1C2	C300-RP890539	80214.870	35998.316	8.403	-0.6	-3.3	-3.5	19/06/13	04/12/14
DEN10PRIR2C1	C300-RP890540	80219.177	36001.492	3.168	-0.5	-3.8	-2.3	19/06/13	04/12/14
DEN10PRIR2C2	C300-RP890541	80214.885	35998.331	3.247	3.4	-0.2	-1.0	19/06/13	04/12/14
DEN11BPRIR1C1	C300-RP890542	80208.926	35994.140	8.437	-0.6	-3.9	-4.3	19/06/13	04/12/14
DEN11BPRIR1C2	C300-RP890543	80205.604	35991.504	8.444	0.0	-4.4	-4.9	19/06/13	04/12/14
DEN11BPRIR2C1	C300-RP890544	80208.930	35994.131	3.160	-0.4	-3.5	-3.6	19/06/13	04/12/14
DEN11BPRIR2C2	C300-RP890545	80205.627	35991.492	3.302	-0.3	-4.1	-4.1	19/06/13	04/12/14
DEN11PRIR1C1	C300-RP890546	80214.284	35998.076	9.436	-0.6	-3.5	-3.1	19/06/13	04/12/14
DEN11PRIR1C2	C300-RP890547	80209.688	35994.691	9.452	-0.5	-4.1	-3.8	19/06/13	04/12/14
DEN11PRIR2C1	C300-RP890548	80214.884	35998.331	3.247	3.7	-0.2	-0.7	19/06/13	04/12/14
DEN11PRIR2C2	C300-RP890549	80209.700	35994.702	4.465	-0.6	-3.2	-3.7	19/06/13	04/12/14



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DEN17PRIR1C1	C300-RP890550	80203.697	36004.074	6.879	-2.5	-0.7	-2.8	03/08/13	04/12/14
DEN17PRIR1C2	C300-RP890551	80213.730	36011.607	6.748	-2.3	-4.1	-0.9	19/06/13	04/12/14
DEN17PRIR2C1	C300-RP890552	80203.725	36004.090	3.668	-3.0	0.3	-3.1	03/08/13	04/12/14
DEN17PRIR2C2	C300-RP890553	80213.754	36011.621	3.759	-2.4	-3.0	-0.9	31/07/13	04/12/14
DEN19PRIR1C1	C300-RP890554	80214.792	36012.261	7.589	-2.4	-4.6	-0.8	19/06/13	04/12/14
DEN19PRIR1C2	C300-RP890555	80218.972	36015.391	7.585	-3.1	-2.8	0.1	19/06/13	04/12/14
DEN19PRIR2C1	C300-RP890556	80214.812	36012.270	4.613	-2.6	-2.0	-0.7	31/07/13	04/12/14
DEN19PRIR2C2	C300-RP890558	80218.955	36015.376	4.602	-2.9	-2.0	-0.4	31/07/13	04/12/14
DEN19PRIR2C2A	C300-RP890557	80218.912	36015.558	4.593	-3.6	-3.5	-0.5	19/06/13	04/12/14
DEN20PRIR1C1	C300-RP890559	80219.502	36015.928	9.923	-2.7	-3.1	-0.5	19/06/13	04/12/14
DEN20PRIR1C2	C300-RP890560	80223.943	36018.966	9.826	-3.1	-2.2	0.7	19/06/13	04/12/14
DEN20PRIR2C1	C300-RP890561	80219.513	36015.930	3.799	-2.9	-2.6	-0.4	19/06/13	04/12/14
DEN20PRIR2C2	C300-RP890562	80224.013	36019.026	3.869	-3.0	-1.0	0.9	02/08/13	04/12/14
DEN21PRIR1C1	C300-RP890563	80224.653	36019.682	7.679	-1.7	-2.1	0.0	26/09/13	04/12/14
DEN21PRIR1C2	C300-RP890564	80229.652	36023.359	7.692	-2.5	-2.7	0.8	19/06/13	04/12/14
DEN21PRIR2C1	C300-RP890565	80224.013	36019.026	3.869	-2.1	0.3	-0.9	09/08/13	04/12/14
DEN21PRIR2C2	C300-RP890567	80229.903	36023.437	4.265	-2.9	-2.3	1.0	19/06/13	04/12/14
DEN21PRIR2C2A	C300-RP890566	80229.894	36023.576	4.255	-3.1	-2.1	0.7	19/06/13	04/12/14
DEN22PRIR1C1	C300-RP890568	80230.225	36023.783	6.581	-2.6	-1.8	0.9	19/06/13	04/12/14
DEN22PRIR1C2	C300-RP890570	80235.461	36027.448	6.783	-2.3	-2.6	1.6	19/06/13	04/12/14
DEN22PRIR1C2A	C300-RP890569	80235.469	36027.564	6.772	-2.5	-2.9	1.5	19/06/13	04/12/14
DEN22PRIR2C1	C300-RP890571	80230.203	36023.783	2.618	-2.2	-3.1	0.6	19/06/13	04/12/14
DEN22PRIR2C2	C300-RP890573	80235.487	36027.487	2.749	-2.7	-1.7	0.5	31/07/13	04/12/14
DEN22PRIR2C2A	C300-RP890572	80235.495	36027.603	2.738	-1.8	-2.5	0.9	19/06/13	04/12/14
DEN23PRIR1C1	C300-RP890575	80236.213	36028.110	7.804	-0.3	-0.6	0.8	19/06/13	04/12/14
DEN23PRIR1C1A	C300-RP890574	80236.221	36028.224	7.793	0.2	0.3	1.6	19/06/13	04/12/14
DEN23PRIR1C2	C300-RP890577	80240.145	36031.035	7.595	-1.0	-0.4	0.7	19/06/13	04/12/14
DEN23PRIR1C2A	C300-RP890576	80240.167	36031.134	7.584	-2.0	0.7	2.0	19/06/13	04/12/14
DEN23PRIR2C1	C300-RP890579	80236.229	36028.128	3.771	-1.1	-1.0	0.8	19/06/13	04/12/14
DEN23PRIR2C1A	C300-RP890578	80236.239	36028.241	3.761	-1.4	-1.0	1.1	19/06/13	04/12/14
DEN23PRIR2C2	C300-RP890581	80240.125	36031.025	3.562	-1.1	-0.7	0.9	19/06/13	04/12/14
DEN23PRIR2C2A	C300-RP890580	80240.148	36031.123	3.551	-1.7	5.4	-7.4	19/06/13	04/12/14
DEN24PRIR1C1	C300-RP890582	80241.190	36031.747	8.759	-0.9	-0.5	0.6	19/06/13	04/12/14
DEN24PRIR1C2	C300-RP890583	80245.228	36034.684	7.621	-1.4	-0.3	0.3	19/06/13	04/12/14
DEN24PRIR1C3	C300-RP890584	80250.012	36038.161	7.637	-1.8	0.2	-0.1	19/06/13	04/12/14
DEN24PRIR2C1	C300-RP890586	80241.186	36031.752	4.870	-1.1	0.0	0.3	31/07/13	04/12/14
DEN24PRIR2C1A	C300-RP890585	80241.209	36031.849	4.858	-1.6	0.0	1.0	19/06/13	04/12/14
DEN24PRIR2C2	C300-RP890587	80245.232	36034.691	4.660	-1.5	-0.2	0.0	31/07/13	04/12/14
DEN24PRIR2C3	C300-RP890588	80250.020	36038.171	4.677	-2.4	-0.9	0.5	31/07/13	04/12/14
DEN26PRIR1C1	C300-RP890589	80250.538	36038.687	8.322	-2.5	-0.5	-1.8	19/06/13	04/12/14
DEN26PRIR1C2	C300-RP890590	80255.009	36041.832	8.239	-1.2	-0.9	-3.1	19/06/13	04/12/14
DEN26PRIR2C1	C300-RP890591	80250.615	36038.740	3.455	-1.2	-2.0	-0.7	19/06/13	04/12/14
DEN26PRIR2C2	C300-RP890592	80254.672	36041.629	4.897	-3.5	1.5	-0.1	19/06/13	04/12/14
DEN27PRIR1C1	C300-RP890593	80255.662	36042.195	9.615	1.1	-0.5	-3.7	19/06/13	04/12/14
DEN27PRIR2C1	C300-RP890595	80255.503	36042.159	4.569	1.3	-1.5	-3.1	31/07/13	04/12/14
DPL001PRIR1C1	C300-RP890601	80241.364	36064.799	8.879	2.6	-1.0	0.0	19/06/13	28/02/15
DPL002PRIR1C1	C300-RP890602	80234.737	36059.949	8.807	3.2	-0.7	-0.7	19/06/13	28/02/15
DPL004PRIR1C1	C300-RP890603	80227.679	36054.767	8.653	4.4	-0.7	0.0	19/06/13	28/02/15
DPL004PRIR2C1	C300-RP890604	80227.629	36054.716	6.217	4.3	-0.5	0.0	19/06/13	21/01/15
DPL006PRIR1C1	C300-RP890605	80221.093	36049.921	8.537	6.3	-1.9	1.0	19/06/13	28/02/15
DPL006PRIR2C1	C300-RP890606	80220.954	36049.837	5.742	6.1	-1.8	1.0	19/06/13	21/01/15
DPL015PRIR1C1	C300-RP890607	80204.770	36034.897	9.198	9.7	-10.7	2.9	19/06/13	28/02/15



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DPL015PRIR1C2A	C300-RP890608	80200.134	36031.808	12.261	10.4	-12.2	2.4	19/06/13	28/02/15
DPL015PRIR2C1	C300-RP890609	80204.756	36034.884	6.240	11.4	-9.3	2.5	19/06/13	28/02/15
DPL015PRIR2C2	C300-RP890610	80200.157	36031.809	5.708	10.7	-11.7	2.7	19/06/13	28/02/15
DPL018PRIR1C2	C300-RP890611	80216.129	36042.709	8.124	9.5	-5.9	3.9	19/06/13	28/02/15
DPL018PRIR2C2	C300-RP890612	80216.114	36042.688	4.985	7.3	-6.7	3.4	19/06/13	20/02/15
DPL019PRIR1C1A	C300-RP890613	80226.971	36049.753	9.029	6.6	-1.5	1.8	19/06/13	28/02/15
DPL019PRIR2C1	C300-RP890614	80226.872	36049.688	6.266	0.1	1.0	4.7	19/06/13	23/10/14
DPL019PRIR2C2	C300-RP890615	80222.091	36046.515	6.276	4.0	-5.1	3.7	19/06/13	21/01/15
DPL020PRIR1C1	C300-RP890616	80231.977	36053.439	8.508	3.6	-1.0	0.3	19/06/13	28/02/15
DPL020PRIR1C2	C300-RP890617	80227.799	36050.509	7.963	0.0	2.0	4.9	19/06/13	23/10/14
DPL020PRIR2C1	C300-RP890618	80231.954	36053.412	5.272	0.8	3.8	11.5	19/06/13	23/10/14
DPL020PRIR2C2	C300-RP890619	80227.740	36050.465	5.779	0.0	2.0	3.4	19/06/13	23/10/14
DPL021PRIR1C1	C300-RP890620	80236.833	36056.718	7.289	3.4	1.1	-0.1	19/06/13	28/02/15
DPL053PRIR1C1	C300-RP890621	80243.900	36063.873	8.811	2.3	1.0	-1.0	19/06/13	28/02/15
DPL054PRIR1C1	C300-RP890623	80247.066	36068.069	9.081	0.6	1.4	1.7	19/06/13	28/02/15
DPL054PRIR2C1	C300-RP890624	80247.298	36067.889	6.453	1.9	1.6	1.8	19/06/13	28/02/15
DPL136PRIR0C1	C300-RP890627	80199.630	36031.472	16.972	-4.3	-3.6	8.6	19/06/13	21/01/15
DPL136PRIR0C1B	C300-RP890626	80199.646	36031.503	16.817	-3.3	-6.5	-2.0	19/06/13	21/01/15
DPL136PRIR0C2	C300-RP890630	80195.510	36028.643	16.753	-1.9	11.3	17.5	19/06/13	21/01/15
DPL136PRIR0C2B	C300-RP890629	80195.531	36028.675	16.916	-4.1	-5.8	-2.4	19/06/13	21/01/15
DPL136PRIR1C1A	C300-RP890631	80199.655	36031.482	13.095	10.4	-12.3	2.3	19/06/13	28/02/15
DPL136PRIR2C1	C300-RP890632	80199.745	36031.534	7.059	10.8	-12.0	2.5	19/06/13	28/02/15
DPL16PRIR1C1B	C300-RP890635	80210.096	36038.691	29.765	-6.0	-3.1	-0.8	19/06/13	24/10/14
DPL16PRIR1C2	C300-RP890638	80205.393	36035.366	9.809	-3.8	-6.5	-1.9	19/06/13	20/01/15
DPL16PRIR1C2A	C300-RP890636	80205.284	36035.179	76.757	-3.3	-0.7	-0.6	19/06/13	03/09/13
DPL16PRIR2C2	C300-RP890640	80205.398	36035.320	4.852	-7.2	-4.3	-2.1	19/06/13	17/12/14
DPL17PRIR0C1	C300-RP890691	80220.983	36035.274	17.389	-4.6	-4.3	-1.8	24/06/13	21/01/15
DPL17PRIR0C1A	C300-RP890641	80221.094	36035.415	17.411	-3.7	16.7	18.3	24/06/13	21/01/15
DPL17PRIR1C2B	C300-RP890644	80212.037	36038.006	29.077	-2.8	-0.4	-1.5	24/06/13	24/10/14
DPL17PRIR2C1A	C300-RP890645	80216.092	36042.620	25.914	-3.0	-0.9	-1.9	24/06/13	24/10/14
DPL18PRIR1C1	C300-RP890647	80221.950	36046.529	8.128	-2.3	15.4	17.3	19/06/13	21/01/15
DPL18PRIR1C2C	C300-RP890648	80216.631	36042.970	27.961	-7.2	-5.0	3.1	19/06/13	23/10/14
DPL18PRIR2C1	C300-RP890650	80221.979	36046.539	5.330	-2.6	16.9	17.5	19/06/13	21/01/15
DPL18PRIR2C2A	C300-RP890651	80216.293	36042.619	7.982	-7.3	-7.2	-1.2	19/06/13	21/01/15
DPL18PRIR2C2B	C300-RP890652	80216.084	36042.620	25.905	-6.0	-4.0	1.1	19/06/13	24/10/14
DPL19PRIR1C2	C300-RP890653	80222.174	36046.578	8.939	-3.5	-1.8	7.1	19/06/13	21/01/15
DPL19PRIR2C2	C300-RP890654	80222.472	36046.868	6.272	-7.5	13.9	18.7	19/06/13	13/01/15
DPLRPRIR1C2	C300-RP890655	80227.200	36063.446	76.135	4.3	2.4	-3.7	29/08/13	11/11/13
DPLRPRIR2C2	C300-RP890656	80227.209	36063.442	72.825	4.4	1.8	-3.5	29/08/13	11/11/13
DPLRPRIR2C4	C300-RP890657	80216.810	36055.722	72.834	4.0	3.6	-2.8	29/08/13	11/11/13
DPNRPRIR1C3	C300-RP890659	80222.722	36060.035	8.703	-5.4	17.3	13.3	19/06/13	21/01/15
DPNRPRIR2C3	C300-RP890660	80222.791	36060.046	5.460	-5.1	17.0	14.8	19/06/13	21/01/15
DPNRPRIR2C4	C300-RP890661	80216.406	36055.368	5.432	-5.3	18.3	15.4	19/06/13	21/01/15
DPNWPRIR1C1	C300-RP890662	80217.528	36052.391	7.980	-4.5	19.7	15.6	19/06/13	21/01/15
FAC16PRIR1C1	C300-RP890106	80064.74 5	36095.54 1	10.763	7.4	-6.0	-1.6	27/09/12	15/05/14
FAC16PRIR1C2	C300-RP890107	80063.07 5	36098.21 5	10.751	0.1	-3.2	-0.9	27/09/12	15/05/14
FAC16PRIR1C3	C300-RP890108	80057.31 3	36097.37 2	9.767	-0.2	-3.2	-1.0	27/09/12	15/05/14
FAC16PRIR1C4	C300-RP890109	80051.04 5	36095.80 0	10.883	0.3	-3.8	-1.4	27/09/12	15/05/14
FAC16PRIR2C1	C300-RP890110	80064.68 4	36095.67 4	4.531	0.2	-1.6	-1.4	27/09/12	15/05/14



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FAC16PRIR2C2	C300-RP890111	80063.063	36098.192	4.542	0.3	-1.5	-0.8	27/09/12	15/05/14
FAC16PRIR2C3	C300-RP890112	80057.309	36097.349	5.881	0.1	-2.1	-1.1	27/09/12	15/05/14
FAC16PRIR2C4	C300-RP890113	80051.020	36095.771	4.235	0.3	-1.7	-1.2	27/09/12	15/05/14
FAC18PRIR1C1	C300-RP890114	80088.205	36102.921	13.027	-0.9	-1.7	-0.3	27/09/12	15/05/14
FAC18PRIR1C2	C300-RP890115	80077.755	36098.449	13.030	-0.3	-2.4	-1.0	27/09/12	15/05/14
FAC18PRIR1C3	C300-RP890116	80067.381	36094.010	13.037	-0.5	-3.5	-2.2	27/09/12	15/05/14
FAC18PRIR2C1	C300-RP890117	80088.178	36102.909	5.946	-1.0	-0.6	-0.3	27/09/12	15/05/14
FAC18PRIR2C2	C300-RP890118	80077.696	36098.419	5.955	-0.4	-1.3	-0.7	27/09/12	15/05/14
FAC18PRIR2C3	C300-RP890119	80067.382	36094.021	5.946	0.1	-1.7	-1.9	27/09/12	15/05/14
FAC19PRIR1C2	C300-RP890120	80103.521	36110.908	8.234	-0.1	1.1	-0.7	27/09/12	15/05/14
FAC19PRIR2C2	C300-RP890121	80103.578	36110.907	4.729	-1.0	0.7	-0.1	27/09/12	15/05/14
FAC20PRIR1C2	C300-RP890122	80091.675	36104.410	11.583	-0.6	-1.5	0.1	27/09/12	15/05/14
FAC23PRIR1C1	C300-RP890123	80099.705	36110.199	8.194	0.0	0.8	-0.7	27/09/12	15/05/14
FAC25PRIR1C2	C300-RP890124	80098.528	36110.197	14.196	0.1	1.4	-0.7	27/09/12	15/05/14
FAC25PRIR2C2	C300-RP890125	80098.657	36110.211	8.495	0.3	1.1	-0.5	27/09/12	15/05/14
FAC27PRIR1C1	C300-RP890126	80087.584	36108.437	14.074	0.2	2.1	-0.1	27/09/12	15/05/14
FAC27PRIR2C1	C300-RP890127	80087.436	36108.418	8.525	-0.2	2.1	0.0	27/09/12	15/05/14
FAC29EPRIR1C3	C300-RP890128	80087.343	36107.930	12.885	0.2	2.2	-0.1	27/09/12	15/05/14
FAC29EPRIR2C3	C300-RP890129	80087.342	36107.958	6.974	0.1	2.3	0.0	27/09/12	15/05/14
FAC29PRIR1C2	C300-RP890130	80087.137	36107.176	12.352	-0.2	1.3	0.4	27/09/12	15/05/14
FAC29PRIR2C2	C300-RP890131	80087.091	36107.176	5.527	-0.2	1.6	0.3	27/09/12	15/05/14
FAC31PRIR1C1	C300-RP890132	80078.624	36106.213	12.325	-0.1	2.8	-0.1	27/09/12	15/05/14
FAC31PRIR2C1	C300-RP890133	80078.434	36106.203	5.456	-0.3	3.0	0.1	27/09/12	15/05/14
FAC33PRIR1C2	C300-RP890134	80068.611	36104.676	9.672	-0.4	2.7	0.1	27/09/12	15/05/14
FAC33PRIR1C3	C300-RP890135	80077.639	36106.088	9.591	-0.4	2.8	-0.1	27/09/12	15/05/14
FAC33PRIR2C2	C300-RP890136	80068.593	36104.673	4.176	-0.4	2.6	0.2	27/09/12	15/05/14
FAC33PRIR2C3	C300-RP890137	80077.767	36106.109	4.714	-0.1	3.1	-0.1	27/09/12	15/05/14
FAC39PRIR1C1	C300-RP890138	80063.462	36104.132	9.692	-0.5	3.1	0.1	27/09/12	15/05/14
FAC39PRIR2C1	C300-RP890139	80063.515	36104.145	4.164	-0.4	3.2	0.0	27/09/12	15/05/14
FAC41PRIR1C1	C300-RP890140	80056.004	36102.686	8.470	-0.6	1.6	0.0	27/09/12	15/05/14
FAC41PRIR1C2	C300-RP890141	80059.610	36103.284	8.640	-0.5	2.5	0.0	27/09/12	15/05/14
FAC41PRIR2C1	C300-RP890142	80055.752	36102.697	3.623	-0.5	2.5	-0.1	27/09/12	15/05/14



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FAC41PRIR2C2	C300-RP890143	80059.57 7	36103.23 9	3.627	-0.2	2.2	-0.1	27/09/12	15/05/14
FALPRIR1C1C	C300-RP890144	80118.95 7	36059.05 8	13.661	5.6	-6.5	-34.1	27/09/12	06/03/15
FALPRIR1C2	C300-RP890145	80114.26 0	36070.50 2	13.964	5.5	-4.1	-10.8	27/09/12	06/03/15
FALPRIR1C3	C300-RP890146	80114.00 1	36071.14 5	14.659	1.8	-4.6	-9.4	27/09/12	06/03/15
FALPRIR1C5	C300-RP890148	80104.67 9	36093.17 7	14.874	0.0	-5.3	13.1	27/09/12	06/03/15
FALPRIR1C6	C300-RP890149	80100.77 9	36103.00 7	14.265	-3.0	-4.2	14.8	27/09/12	06/03/15
FALPRIR2C1C	C300-RP890150	80118.97 1	36059.01 4	6.838	2.6	-3.6	-32.6	27/09/12	06/03/15
FALPRIR2C2	C300-RP890151	80114.34 6	36070.27 2	6.610	3.5	-1.8	-10.8	27/09/12	06/03/15
FALPRIR2C3	C300-RP890152	80114.01 1	36071.09 7	6.982	1.3	-1.3	-8.7	27/09/12	06/03/15
FALPRIR2C4C	C300-RP890430	80073.820	35939.587	7.049	-1.2	-3.7	-11.5	19/06/13	06/03/15
FALPRIR2C5	C300-RP890154	80104.67 3	36093.21 4	6.814	0.2	-2.3	12.7	27/09/12	06/03/15
FALPRIR2C6	C300-RP890155	80100.75 6	36103.01 1	6.937	-3.1	-1.5	15.1	27/09/12	06/03/15
GOSPRIR2C1	C300-RP890260	80175.70 5	36012.69 1	6.451	18.4	-19.8	-15.7	27/09/12	28/02/15
GRE10PRIR1C1	C300-RP890382	80118.60 2	35925.95 7	9.577	-1.0	-0.9	1.0	25/02/13	10/01/15
GRE10PRIR1C2	C300-RP890400	80120.63 9	35921.20 4	9.201	-2.0	-0.8	0.9	25/02/13	10/01/15
GRE10PRIR2C1	C300-RP890383	80118.61 8	35925.89 4	3.808	-1.3	-0.9	0.8	25/02/13	10/01/15
GRE10PRIR2C2	C300-RP890401	80120.59 7	35921.30 0	3.739	-1.6	-0.5	0.4	25/02/13	10/01/15
GRE11PRIR1C1	C300-RP890402	80120.81 5	35920.67 4	9.792	-1.0	-1.2	1.2	25/02/13	10/01/15
GRE11PRIR2C1	C300-RP890403	80120.80 1	35920.59 5	4.299	-2.1	-1.5	1.0	25/02/13	10/01/15
GRE13PRIR1C1	C300-RP890404	80126.57 8	35906.89 8	8.341	-1.5	-1.7	0.9	25/02/13	10/01/15
GRE13PRIR2C1	C300-RP890406	80126.64 6	35906.81 4	2.620	-2.2	-1.9	0.5	25/02/13	10/01/15
GRE2PRIR1C1	C300-RP890288	80099.67 6	35969.69 0	10.205	2.6	9.4	-6.7	05/10/12	10/01/15
GRE2PRIR1C2	C300-RP890289	80101.14 3	35966.10 5	10.236	4.5	9.5	-4.8	05/10/12	10/01/15
GRE2PRIR2C1	C300-RP890290	80099.72 4	35969.63 7	3.782	1.2	7.9	-5.3	05/10/12	10/01/15
GRE2PRIR2C2	C300-RP890291	80101.17 8	35966.09 6	3.777	2.5	6.7	-4.7	05/10/12	10/01/15
GRE3PRIR1C1	C300-RP890292	80101.28 8	35965.64 8	9.257	3.7	8.2	-4.4	05/10/12	10/01/15
GRE3PRIR1C2	C300-RP890293	80103.43 3	35960.82 9	9.296	3.0	7.8	-2.7	05/10/12	10/01/15
GRE3PRIR2C1	C300-RP890294	80101.35 7	35965.65 6	3.112	2.3	5.9	-4.4	05/10/12	10/01/15
GRE3PRIR2C2	C300-RP890295	80103.45 0	35960.92 0	2.305	3.9	0.7	-4.3	05/10/12	10/01/15
GRE4PRIR1C1	C300-RP890339	80103.60 4	35960.24 6	8.467	1.2	3.5	0.0	25/02/13	10/01/15
GRE4PRIR1C2	C300-RP890340	80105.48 2	35955.40 4	8.387	1.8	4.0	1.6	25/02/13	10/01/15
GRE4PRIR2C1	C300-RP890341	80103.59 4	35960.28 7	3.054	1.3	2.8	-0.1	25/02/13	10/01/15



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GRE4PRIR2C2	C300-RP890296	80105.46 9	35955.47 9	3.046	4.2	6.1	-2.2	05/10/12	10/01/15
GRE58PRIR1C1A	C300-RP890398	80103.012	35932.190	12.217	-0.4	-0.1	0.9	02/06/13	10/01/15
GRE58PRIR1C2A	C300-RP890408	80101.172	35936.151	11.989	0.1	0.8	1.4	02/06/13	10/01/15
GRE58PRIR2C1	C300-RP890433	80102.302	35933.440	91.597	-0.1	-1.7	0.2	19/06/13	19/02/15
GRE58PRIR2C1A	C300-RP890409	80102.456	35933.492	9.248	-0.5	-0.8	1.0	02/06/13	10/01/15
GRE58PRIR2C2	C300-RP890410	80101.217	35936.299	8.555	-0.4	-0.4	0.7	25/03/13	10/01/15
GRE59PRIR1C1B	C300-RP890297	80100.81 7	35936.92 9	12.468	0.4	0.6	0.5	05/10/12	10/01/15
GRE59PRIR1C2B	C300-RP890298	80096.95 6	35945.90 0	12.142	0.7	0.6	-0.3	05/10/12	10/01/15
GRE59PRIR1C3	C300-RP890044	80094.11 2	35952.43 1	94.950	1.5	0.3	0.6	27/09/12	19/02/15
GRE5PRIR1C2	C300-RP890300	80107.94 9	35949.94 0	9.468	2.7	6.0	-1.3	05/10/12	10/01/15
GRE5PRIR2C1	C300-RP890301	80106.24 3	35954.48 2	3.750	4.3	5.8	-1.6	05/10/12	10/01/15
GRE5PRIR2C2	C300-RP890302	80107.97 3	35949.95 3	2.891	2.6	5.0	0.7	05/10/12	10/01/15
GRE60PRIR1C1A	C300-RP890394	80093.531	35953.904	12.561	-0.5	2.7	0.2	31/05/13	10/01/15
GRE60PRIR1C2	C300-RP890046	80091.60 8	35958.35 8	94.389	1.2	3.4	0.1	27/09/12	19/02/15
GRE60PRIR1C2A	C300-RP890395	80091.598	35958.357	12.105	0.3	2.7	-0.4	31/05/13	10/01/15
GRE6PRIR1C1	C300-RP890303	80108.06 1	35949.73 0	7.109	1.6	4.1	-0.4	05/10/12	10/01/15
GRE6PRIR1C2	C300-RP890304	80110.28 2	35944.98 8	7.190	-0.7	2.7	-0.8	05/10/12	10/01/15
GRE6PRIR2C2	C300-RP890306	80110.16 4	35944.91 1	3.196	-1.4	1.5	-1.3	05/10/12	10/01/15
GRE7PRIR1C1	C300-RP890342	80110.41 8	35944.64 8	6.637	-2.5	-0.3	-0.5	25/02/13	10/01/15
GRE7PRIR1C2	C300-RP890343	80114.03 6	35936.27 3	6.515	-1.3	0.3	0.8	25/02/13	10/01/15
GRE7PRIR2C1	C300-RP890344	80110.41 8	35944.64 2	3.553	-3.1	-0.9	-0.4	25/02/13	10/01/15
GRE7PRIR2C2	C300-RP890345	80113.88 2	35936.23 8	2.925	-1.7	-0.5	0.5	25/02/13	10/01/15
GRE8PRIR1C1	C300-RP890396	80114.14 8	35935.97 3	8.476	-1.5	0.4	0.4	25/02/13	10/01/15
GRE8PRIR1C2	C300-RP890388	80116.05 3	35931.67 4	7.498	-1.2	-0.1	1.0	25/02/13	10/01/15
GRE8PRIR2C1	C300-RP890397	80114.21 7	35935.89 2	3.312	-1.5	-0.8	0.4	25/02/13	10/01/15
GRE8PRIR2C2	C300-RP890389	80116.01 5	35931.76 3	3.768	-1.2	-0.3	0.4	25/02/13	10/01/15
GRE9PRIR1C1	C300-RP890390	80116.30 9	35931.08 6	7.829	-1.1	0.2	1.2	25/02/13	10/01/15
GRE9PRIR1C2	C300-RP890391	80118.23 7	35926.78 8	7.631	-1.0	-0.8	0.7	25/02/13	10/01/15
GRE9PRIR2C1	C300-RP890392	80116.32 5	35931.06 1	3.328	-1.0	0.2	1.2	25/02/13	10/01/15
GRE9PRIR2C2	C300-RP890393	80118.25 0	35926.75 1	3.135	-0.5	-0.8	2.2	25/02/13	10/01/15
HOSBCHAPRIR1C 1	C300-RP890022	80128.91 6	35959.86 6	89.196	1.8	10.3	-5.8	27/09/12	19/02/15
HOSBCHAPRIR1C 3	C300-RP890023	80133.14 4	35961.63 6	88.714	1.4	10.4	-8.7	27/09/12	19/02/15
HOSBCHAPRIR1C 5	C300-RP890024	80137.56 3	35962.65 6	88.712	0.3	13.4	-9.3	27/09/12	19/02/15
HOSBNPRIR1C1	C300-RP890001	80102.11 8	35988.59 5	10.765	-0.7	4.6	-26.9	05/10/12	10/01/15



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HOSBNPRIR1C2	C300-RP890002	80099.44 5	35987.42 7	10.080	-2.0	7.9	-25.3	05/10/12	10/01/15
HOSBNPRIR1C3	C300-RP890003	80094.70 5	35985.35 1	11.079	-3.2	10.5	-22.0	05/10/12	10/01/15
HOSBNPRIR2C1	C300-RP890004	80102.20 8	35988.62 5	6.307	-2.6	5.8	-27.4	05/10/12	10/01/15
HOSBNPRIR2C2	C300-RP890005	80099.51 0	35987.42 7	5.859	-2.9	7.0	-27.1	05/10/12	10/01/15
HOSBNPRIR2C3	C300-RP890006	80094.69 6	35985.32 6	5.892	-4.2	7.6	-22.2	05/10/12	10/01/15
HOSBNPRIR3C1	C300-RP890007	80102.19 8	35988.59 3	3.099	-2.5	4.4	-27.6	05/10/12	10/01/15
HOSBNPRIR3C2	C300-RP890008	80099.55 4	35987.43 5	2.391	-1.5	7.0	-25.5	05/10/12	10/01/15
HOSBNPRIR3C3	C300-RP890009	80094.75 7	35985.32 9	2.397	-4.8	6.7	-21.2	05/10/12	10/01/15
HOSBSPRIR1C1	C300-RP890025	80103.96 4	35971.75 8	97.867	7.0	18.7	-10.4	27/09/12	19/02/15
HOSBSPRIR1C2	C300-RP890026	80110.76 7	35974.26 0	99.037	6.9	17.1	-15.2	27/09/12	19/02/15
HOSBSPRIR2C1	C300-RP890027	80104.11 0	35971.76 1	95.196	6.1	17.5	-10.5	27/09/12	19/02/15
HOSBSPRIR2C2	C300-RP890028	80110.62 0	35974.20 2	95.607	6.2	16.2	-15.4	27/09/12	19/02/15
HOSBWPRIR1C1	C300-RP890010	80094.03 3	35982.93 6	10.797	-3.8	11.9	-18.9	05/10/12	10/01/15
HOSBWPRIR1C2	C300-RP890011	80094.75 0	35981.21 3	10.730	-3.1	12.0	-17.1	05/10/12	10/01/15
HOSBWPRIR1C3	C300-RP890012	80097.05 0	35975.86 3	10.734	-1.1	11.5	-11.5	05/10/12	10/01/15
HOSBWPRIR1C4	C300-RP890013	80098.91 2	35971.47 7	10.746	2.2	11.4	-7.9	05/10/12	10/01/15
HOSBWPRIR2C1	C300-RP890014	80093.99 5	35982.99 1	6.326	-3.4	7.7	-19.8	05/10/12	10/01/15
HOSBWPRIR2C2	C300-RP890015	80094.73 4	35981.26 4	6.326	-3.8	9.4	-17.1	05/10/12	10/01/15
HOSBWPRIR2C3	C300-RP890016	80097.07 4	35975.88 1	6.300	0.3	8.3	-10.9	05/10/12	10/01/15
HOSBWPRIR2C4	C300-RP890017	80098.92 4	35971.51 2	6.280	2.0	7.6	-6.4	05/10/12	10/01/15
HOSBWPRIR3C1	C300-RP890018	80094.05 9	35982.85 5	3.049	-4.1	7.8	-17.2	05/10/12	10/01/15
HOSBWPRIR3C2	C300-RP890019	80094.73 6	35981.25 6	3.058	-2.6	5.3	-15.2	05/10/12	10/01/15
HOSBWPRIR3C3	C300-RP890020	80097.00 5	35976.01 4	3.099	-0.8	7.2	-9.9	05/10/12	10/01/15
HOSBWPRIR3C4	C300-RP890021	80098.92 9	35971.49 9	3.088	0.9	6.3	-6.6	05/10/12	10/01/15
MAN001PRIR1C1	C300-RP890067	80188.07 3	35965.33 6	95.631	0.4	0.0	-3.6	27/09/12	06/03/15
MAN001PRIR1C2	C300-RP890068	80179.75 1	35962.16 6	95.606	0.4	-0.2	-2.7	27/09/12	06/03/15
MAN001PRIR2C2	C300-RP890069	80179.70 2	35962.16 1	89.761	0.6	-0.8	-2.5	27/09/12	06/03/15
MAN007PRIR1C1	C300-RP890070	80179.01 4	35961.92 0	95.979	0.5	0.0	-3.0	27/09/12	06/03/15
MAN007PRIR1C2	C300-RP890071	80167.24 5	35957.77 9	95.835	0.7	0.8	-2.9	27/09/12	06/03/15
MAN007PRIR2C1	C300-RP890072	80178.86 1	35961.86 4	90.118	0.4	-1.1	-2.5	27/09/12	06/03/15
MAN007PRIR2C2	C300-RP890073	80167.31 8	35957.78 1	90.120	1.0	-0.4	-2.7	27/09/12	06/03/15
MAN009PRIR1C1	C300-RP890074	80157.76 1	35954.49 7	96.224	1.3	1.2	-2.7	27/09/12	06/03/15



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		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
MAN009PRIR1C2	C300-RP890075	80146.24 0	35950.45 9	94.904	2.1	1.1	-2.4	27/09/12	06/03/15
MAN009PRIR1C3	C300-RP890076	80134.88 6	35946.51 7	94.913	2.2	2.3	-2.3	27/09/12	06/03/15
MAN009PRIR2C1	C300-RP890077	80157.73 7	35954.47 4	90.253	1.4	0.2	-2.7	27/09/12	06/03/15
MAN009PRIR2C2	C300-RP890078	80146.28 7	35950.46 1	90.261	1.9	0.7	-1.9	27/09/12	06/03/15
MAN009PRIR2C3	C300-RP890079	80134.87 0	35946.49 1	90.262	2.4	1.6	-2.3	27/09/12	06/03/15
MAN011PRIR1C2	C300-RP890080	80126.14 5	35943.59 5	94.919	2.4	2.7	-2.2	27/09/12	06/03/15
MAN011PRIR2C2	C300-RP890081	80126.14 9	35943.59 7	90.271	2.5	2.5	-1.8	27/09/12	06/03/15
MAN13PRIR1C1	C300-RP890082	80124.66 5	35951.67 6	90.400	1.4	8.5	-3.3	27/09/12	19/02/15
MAN13PRIR1C2	C300-RP890083	80129.45 3	35954.39 8	90.440	0.6	8.1	-4.6	27/09/12	19/02/15
MAN14EPRIR2C1	C300-RP890085	80156.85 1	35965.49 7	89.123	2.4	14.6	-12.1	27/09/12	06/03/15
MAN14PRIR2C1	C300-RP890088	80142.79 4	35960.41 9	91.036	3.0	14.8	-7.4	27/09/12	06/03/15
MAN14WPRIR2C1	C300-RP890091	80141.05 6	35964.07 3	90.028	2.5	16.3	-11.0	27/09/12	19/02/15
MAN16PRIR1C1	C300-RP890092	80166.55 7	35967.69 6	94.501	-3.1	18.8	-13.0	27/09/12	06/03/15
MAN16PRIR2C1	C300-RP890094	80166.53 7	35967.73 2	88.796	-1.5	11.3	-13.0	27/09/12	06/03/15
MAN16WPRIR1C1	C300-RP890096	80165.99 9	35967.87 7	90.200	-5.5	17.3	-14.9	27/09/12	19/02/15
MAN16WPRIR2C1	C300-RP890097	80165.97 3	35967.92 9	84.494	-5.0	10.1	-14.8	27/09/12	19/02/15
MAN17PRIR1C1	C300-RP890098	80171.79 4	35969.46 5	93.872	-2.6	16.7	-16.0	27/09/12	06/03/15
MAN17PRIR2C1	C300-RP890100	80171.67 9	35969.51 1	88.390	-1.2	9.9	-15.9	27/09/12	06/03/15
MAN17PRIR2C2A	C300-RP890101	80176.35 3	35971.21 5	88.875	-1.7	8.7	-18.0	27/09/12	06/03/15
MAN18PRIR1C1	C300-RP890102	80177.06 4	35971.42 7	96.313	-4.8	15.3	-17.6	27/09/12	06/03/15
MAN18PRIR1C2A	C300-RP890103	80186.18 5	35974.57 5	96.177	1.1	3.6	-20.1	27/09/12	06/03/15
MAN18PRIR2C1	C300-RP890104	80177.06 0	35971.43 9	89.907	-1.9	9.7	-17.6	27/09/12	06/03/15
MAN18PRIR2C2A	C300-RP890105	80186.12 6	35974.56 9	89.884	1.4	1.0	-20.2	27/09/12	06/03/15
SGH58PRIR1C2	C300-RP890678	80249.570	36072.213	9.923	-0.7	-2.2	-2.0	19/06/13	17/11/14
SGH58PRIR1C3	C300-RP890679	80236.241	36082.558	9.829	-0.4	-2.9	-0.2	19/06/13	17/11/14
SGH58PRIR2C2	C300-RP890681	80249.583	36072.203	6.693	-0.8	-1.6	-2.0	19/06/13	17/11/14
SGH58PRIR2C3	C300-RP890682	80236.322	36082.502	6.424	-1.0	-1.4	0.4	19/06/13	17/11/14
SGHNPRIR1C1	C300-RP890688	80234.076	36083.009	73.585	3.5	-0.1	0.4	29/08/13	11/11/13
SGHNPRIR1C1A	C300-RP890687	80233.993	36083.048	26.178	-2.1	-7.5	5.4	19/06/13	05/12/14
SGHNPRIR1C2	C300-RP890690	80228.357	36078.362	75.714	4.3	0.0	-2.0	29/08/13	11/11/13
SOH10PRIR1C1	C300-RP890418	79993.649	36055.552	105.372	-0.7	-3.4	-11.5	19/06/13	05/10/14
SOH10PRIR1C2	C300-RP890419	79997.295	36057.118	105.321	0.7	-1.3	-3.5	19/06/13	12/11/13
SOH10PRIR1C3	C300-RP890420	80001.441	36058.889	105.321	0.9	-3.5	-13.6	19/06/13	05/10/14
SOH10PRIR1C4	C300-RP890421	80004.505	36060.227	105.369	-1.1	-4.2	-6.5	19/06/13	05/10/14
SOH10PRIR2C1	C300-RP890422	79993.612	36055.555	99.101	0.8	-0.4	-2.6	19/06/13	12/11/13
SOH10PRIR2C2	C300-RP890423	79997.322	36057.148	99.136	0.5	-0.1	-2.8	19/06/13	12/11/13
SOH10PRIR2C3	C300-RP890424	80001.351	36058.875	99.143	-1.6	-3.0	-20.9	19/06/13	15/07/14



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SOH10PRIR2C4	C300-RP890425	80003.859	36059.957	99.160	0.6	-0.7	-2.6	19/06/13	14/11/13
SOH11PRIR1C1	C300-RP890426	80006.525	36060.967	107.555	-0.7	-5.1	-8.1	19/06/13	05/10/14
SOH11PRIR1C2	C300-RP890427	80009.972	36062.577	104.500	-0.7	-2.5	-7.2	19/06/13	05/10/14
SOH11PRIR2C1	C300-RP890428	80006.319	36060.885	100.763	-0.8	-1.4	-8.2	19/06/13	05/10/14
SOH12PRIR1C1	C300-RP890215	80024.32 1	36068.46 9	107.37 1	1.1	-1.9	0.3	27/09/12	05/10/14
SOH12PRIR1C2	C300-RP890216	80030.27 5	36071.00 7	107.35 9	1.4	-2.8	-0.2	27/09/12	05/10/14
SOH12PRIR2C1	C300-RP890217	80024.29 8	36068.46 2	101.05 4	1.1	-1.5	-0.4	27/09/12	05/10/14
SOH12PRIR2C2	C300-RP890218	80030.20 1	36070.97 3	101.05 1	1.1	-2.3	-0.2	27/09/12	05/10/14
SOH13PRIR1C1	C300-RP890156	80030.80 8	36071.39 3	107.62 2	1.5	-2.9	-0.1	27/09/12	05/10/14
SOH13PRIR1C2	C300-RP890157	80036.59 7	36073.96 1	107.63 2	1.0	-4.5	-2.6	27/09/12	05/10/14
SOH13PRIR2C1	C300-RP890158	80030.86 1	36071.45 7	101.52 2	1.1	-2.3	-0.4	27/09/12	05/10/14
SOH13PRIR2C2	C300-RP890159	80036.54 2	36073.93 7	101.66 0	0.5	-2.9	-2.6	27/09/12	05/10/14
SOH14PRIR1C1	C300-RP890160	80037.02 4	36074.12 8	106.88 1	-0.1	-3.8	-2.8	27/09/12	05/10/14
SOH14PRIR1C2	C300-RP890161	80043.20 1	36076.77 6	107.02 9	1.8	-5.4	-4.0	27/09/12	05/10/14
SOH14PRIR2C1	C300-RP890162	80037.03 2	36074.12 8	100.37 8	-0.1	-2.3	-2.6	27/09/12	05/10/14
SOH14PRIR2C2	C300-RP890163	80043.24 8	36076.80 2	100.44 7	1.5	-3.3	-4.3	27/09/12	05/10/14
SOH15PRIR1C1	C300-RP890164	80043.91 7	36077.11 6	107.72 5	1.5	-5.8	-3.7	27/09/12	05/10/14
SOH15PRIR1C2	C300-RP890165	80049.62 2	36079.59 8	107.66 5	1.4	-7.5	-4.7	27/09/12	05/10/14
SOH15PRIR2C1	C300-RP890166	80043.89 3	36077.17 2	101.06 2	1.5	-3.4	-4.2	27/09/12	05/10/14
SOH15PRIR2C2	C300-RP890167	80049.56 2	36079.60 7	101.19 1	1.3	-4.8	-4.9	27/09/12	05/10/14
SOH16APRIR1C1	C300-RP890168	80050.22 2	36079.87 3	108.29 8	1.3	-8.0	-4.6	27/09/12	05/10/14
SOH16APRIR1C2	C300-RP890169	80055.80 2	36082.29 2	108.29 7	0.8	-7.5	-3.3	27/09/12	05/10/14
SOH16APRIR2C1	C300-RP890170	80050.21 3	36079.89 3	102.12 3	1.1	-5.2	-4.6	27/09/12	05/10/14
SOH16APRIR2C2	C300-RP890171	80055.79 4	36082.29 8	102.17 4	1.0	-5.2	-3.7	27/09/12	05/10/14
SOH16PRIR1C1	C300-RP890172	80058.30 5	36083.84 0	107.68 4	1.0	-7.0	-2.7	27/09/12	05/10/14
SOH16PRIR1C2	C300-RP890411	80062.427	36085.612	107.745	-1.7	-6.7	-0.2	08/04/13	05/10/14
SOH16PRIR2C1	C300-RP890346	80058.416	36083.874	100.551	-1.9	-4.5	-1.4	08/04/13	05/10/14
SOH16PRIR2C2	C300-RP890173	80062.43 4	36085.61 2	100.56 3	1.1	-4.1	-2.3	27/09/12	05/10/14
SOH18PRIR1C1	C300-RP890347	80062.874	36085.435	109.182	-1.6	-7.5	-0.5	08/04/13	05/10/14
SOH18PRIR2C1	C300-RP890348	80062.883	36085.439	101.678	-1.4	-4.7	-0.7	08/04/13	05/10/14
SOH21PRIR2C2	C300-RP890029	80080.67 3	36043.45 8	4.926	-0.4	-6.5	-14.6	05/10/12	10/01/15
SOH22PRIR1C2	C300-RP890030	80093.93 8	36013.06 7	14.629	-6.3	-4.5	-38.1	05/10/12	10/01/15
SOH22PRIR2C2	C300-RP890031	80093.93 2	36013.09 6	8.308	-5.1	-5.1	-36.1	05/10/12	10/01/15
SOH23PRIR2C1	C300-RP890387	80094.232	36012.416	6.543	-3.8	-4.6	-31.0	31/05/13	10/01/15
SOH24PRIR1C2	C300-RP890032	80097.44 4	36005.01 6	14.480	-5.1	-6.4	-31.6	05/10/12	10/01/15



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SOH24PRIR1C3	C300-RP890033	80101.719	35995.163	14.880	-6.6	-5.2	-32.2	05/10/12	10/01/15
SOH24PRIR2C2	C300-RP890034	80097.467	36004.982	7.702	-3.3	-5.6	-32.3	05/10/12	10/01/15
SOH24PRIR2C3	C300-RP890035	80101.742	35995.127	7.782	-4.7	-4.0	-32.4	05/10/12	10/01/15
SOH26EPRIR1C1	C300-RP890280	80120.725	35990.997	14.844	3.0	2.6	-20.1	27/09/12	28/02/15
SOH26EPRIR1C2	C300-RP890281	80118.650	35995.814	14.764	0.6	1.1	-18.9	27/09/12	28/02/15
SOH26EPRIR2C1	C300-RP890283	80120.743	35990.930	10.487	6.5	0.1	-25.4	27/09/12	28/02/15
SOH26EPRIR2C2	C300-RP890284	80118.699	35995.806	8.785	4.7	0.9	-25.4	27/09/12	28/02/15
SOH26PRIR1C1	C300-RP890036	80102.215	35994.000	11.317	-5.3	-4.1	-32.0	05/10/12	10/01/15
SOH26PRIR1C2	C300-RP890037	80104.140	35989.783	11.566	-2.2	-0.8	-27.9	05/10/12	10/01/15
SOH26PRIR2C1	C300-RP890038	80102.346	35993.758	4.190	-3.6	-3.2	-31.5	05/10/12	10/01/15
SOH26PRIR2C2	C300-RP890039	80104.177	35989.716	4.261	-2.1	1.6	-28.0	05/10/12	10/01/15
SOH26SPRIR1C1	C300-RP890047	80112.866	35986.414	98.090	2.2	-0.1	-31.0	27/09/12	19/02/15
SOH26SPRIR2C2	C300-RP890048	80116.444	35988.062	88.086	1.0	-0.1	-29.9	27/09/12	19/02/15
SOH27EPRIR1C1	C300-RP890351	80089.129	35964.246	8.438	-0.1	2.2	-2.3	25/02/13	10/01/15
SOH27EPRIR2C1	C300-RP890352	80088.950	35964.682	2.569	-0.2	1.1	-2.3	25/02/13	10/01/15
SOH27NPRIR1C1	C300-RP890349	80063.698	35972.046	7.383	-0.9	3.8	-5.1	25/02/13	10/01/15
SOH27NPRIR1C2	C300-RP890412	80067.384	35973.749	12.395	0.8	3.0	-6.2	19/06/13	10/01/15
SOH27NPRIR1C3	C300-RP890413	80072.339	35975.884	13.524	0.6	3.8	-7.2	19/06/13	10/01/15
SOH27NPRIR1C4	C300-RP890414	80077.383	35978.060	12.391	0.5	3.2	-8.3	19/06/13	10/01/15
SOH27NPRIR2C1	C300-RP890350	80063.698	35972.032	3.337	-0.8	2.6	-5.2	25/02/13	10/01/15
SOH27NPRIR2C2	C300-RP890415	80067.349	35973.721	3.293	0.1	1.8	-6.0	19/06/13	10/01/15
SOH27NPRIR2C3	C300-RP890416	80072.344	35975.883	8.611	0.6	2.5	-6.7	19/06/13	10/01/15
SOH27NPRIR2C4	C300-RP890417	80077.356	35978.039	3.305	-0.2	2.0	-7.8	19/06/13	10/01/15
SOH27PRIER1C2	C300-RP890040	80085.846	35971.530	8.502	0.3	3.3	-4.4	05/10/12	10/01/15
SOH27PRIER2C2	C300-RP890041	80086.001	35971.143	2.689	-0.1	1.6	-4.4	05/10/12	10/01/15
SOH33PRIR1C1	C300-RP890384	80011.999	35956.368	11.846	-0.6	0.6	0.0	31/05/13	10/01/15
SOH33PRIR2C1	C300-RP890385	80011.980	35956.393	5.504	-0.1	-1.0	0.5	31/05/13	10/01/15
SOH33PRIR2C2	C300-RP890386	80009.176	35963.527	3.372	-0.9	0.5	-2.1	31/05/13	10/01/15
SOH3PRIR1C1	C300-RP890307	79982.979	36024.508	112.034	3.5	-3.2	-12.4	08/04/13	17/05/14
SOH3PRIR1C2	C300-RP890308	79980.677	36029.719	111.874	3.7	0.2	-0.7	08/04/13	04/10/14
SOH3PRIR3C1	C300-RP890309	79983.175	36024.587	102.151	5.5	-1.6	-9.8	16/04/13	24/06/14
SOH3PRIR3C2	C300-RP890310	79980.908	36029.894	102.227	1.8	0.1	-5.5	16/04/13	03/10/14
SOH3PRIR4C1	C300-RP890311	79983.412	36023.538	99.669	1.0	-0.6	0.4	08/04/13	16/04/13
SOH3PRIR4C2	C300-RP890312	79980.888	36029.945	99.536	-0.5	3.7	-8.3	08/04/13	04/10/14
SOH4PRIR1C1	C300-RP890313	79980.357	36030.622	108.333	1.7	0.0	-8.4	08/04/13	04/10/14
SOH4PRIR1C7	C300-RP890316	79973.366	36046.406	108.350	1.0	-0.5	-12.4	08/04/13	05/10/14
SOH4PRIR2C2	C300-RP890317	79979.340	36032.857	104.636	1.6	0.8	-8.9	08/04/13	04/08/14
SOH4PRIR2C4	C300-RP890221	79976.342	36039.698	104.346	-0.4	-6.5	-10.0	27/09/12	05/10/14
SOH4PRIR2C6	C300-RP890222	79974.385	36044.119	104.334	-1.7	-5.1	-12.2	27/09/12	05/10/14



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SOH4PRIR3C1	C300-RP890318	79980.330	36030.609	100.230	2.6	-0.5	-7.4	08/04/13	04/10/14
SOH4PRIR3C3	C300-RP890223	79978.256	36035.373	100.183	1.4	-4.4	-9.0	27/09/12	05/10/14
SOH4PRIR3C5	C300-RP890224	79975.371	36041.943	100.082	0.4	-2.5	-11.8	27/09/12	05/10/14
SOH4PRIR3C7	C300-RP890225	79973.390	36046.357	100.126	0.6	-5.0	-13.4	27/09/12	05/10/14
SOH7PRIR1C1	C300-RP890226	79973.880	36047.157	114.913	1.1	-2.6	-13.8	27/09/12	05/10/14
SOH7PRIR1C3	C300-RP890227	79978.748	36049.206	115.099	2.3	-11.2	-14.2	27/09/12	05/10/14
SOH7PRIR2C2	C300-RP890228	79975.686	36047.875	105.577	-0.9	-9.2	-13.9	27/09/12	05/10/14
SOH7PRIR3C1	C300-RP890229	79973.323	36046.852	99.782	-1.6	-1.9	-13.5	27/09/12	05/10/14
SOH7PRIR3C3	C300-RP890230	79979.358	36049.345	99.565	0.9	-6.9	-14.2	27/09/12	05/10/14
SOH9PRIR1C1	C300-RP890319	79979.925	36049.655	106.853	1.1	-2.8	-13.8	10/04/13	05/10/14
SOH9PRIR1C2	C300-RP890320	79982.864	36050.665	106.861	1.7	-3.0	-13.0	08/04/13	05/10/14
SOH9PRIR1C3	C300-RP890321	79986.219	36052.449	106.862	0.6	-3.0	-12.9	08/04/13	05/10/14
SOH9PRIR1C4	C300-RP890322	79989.811	36053.670	106.872	-0.1	-3.5	-12.5	08/04/13	05/10/14
SOH9PRIR1C5	C300-RP890323	79992.567	36055.099	106.854	0.0	-4.7	-11.4	08/04/13	05/10/14
SOH9PRIR2C1	C300-RP890324	79979.938	36049.658	103.779	0.6	-2.3	-13.6	09/04/13	05/10/14
SOH9PRIR2C2	C300-RP890325	79982.868	36050.666	103.781	0.7	-1.3	-13.3	08/04/13	05/10/14
SOH9PRIR2C3	C300-RP890326	79986.213	36052.452	103.861	0.2	-1.5	-13.0	08/04/13	05/10/14
SOH9PRIR2C4	C300-RP890327	79989.820	36053.667	103.785	-0.4	-1.9	-12.5	08/04/13	05/10/14
SOH9PRIR2C5	C300-RP890328	79992.556	36055.101	103.795	0.0	-3.0	-11.7	08/04/13	05/10/14
SOH9PRIR3C1	C300-RP890329	79979.938	36049.655	100.720	0.0	-0.6	-13.8	08/04/13	05/10/14
SOH9PRIR3C2	C300-RP890330	79982.866	36050.668	100.731	0.1	-0.5	-13.7	08/04/13	05/10/14
SOH9PRIR3C4	C300-RP890331	79989.819	36053.674	100.735	-0.5	-0.1	-12.3	08/04/13	05/10/14
SOH9PRIR3C5	C300-RP890332	79992.559	36055.109	100.736	-0.2	-0.8	-11.5	08/04/13	05/10/14
SOHPBPRIR1C2	C300-RP890042	80090.938	36019.997	12.515	-7.5	-11.5	-34.9	05/10/12	10/01/15
SOHPBPRIR2C2	C300-RP890043	80090.995	36019.972	5.101	-5.1	-7.3	-35.1	05/10/12	10/01/15
SPCEPRI01B	C300-RP890174	80136.673	36046.617	12.081	-7.0	0.8	-0.8	27/09/12	20/02/15
SPCEPRI02A	C300-RP890175	80136.409	36047.391	6.012	-3.0	2.1	-0.6	27/09/12	20/02/15
SPCEPRI03A	C300-RP890176	80136.403	36047.410	4.109	-1.8	3.6	-3.5	27/09/12	06/03/15
SPCNPRIR0C1	C300-RP890177	80130.765	36049.912	12.000	-10.1	7.4	4.2	27/09/12	20/02/15
SPCNPRIR1C2	C300-RP890178	80125.459	36050.545	6.286	-6.8	4.3	1.0	27/09/12	20/02/15
SPCNPRIR1C3	C300-RP890179	80112.290	36045.060	8.626	-6.5	1.9	-2.9	27/09/12	20/02/15
SPCNPRIR1C4	C300-RP890180	80099.210	36039.608	8.531	-5.2	-3.9	0.8	27/09/12	20/02/15
SPCNPRIR2C2	C300-RP890181	80125.448	36050.535	4.121	-5.7	2.8	-0.6	27/09/12	20/02/15
SPCNPRIR2C3	C300-RP890182	80112.296	36045.062	4.869	-5.7	3.1	-2.7	27/09/12	20/02/15
SPCNPRIR2C4	C300-RP890183	80099.209	36039.606	4.708	-4.8	-1.7	0.8	27/09/12	20/02/15
SPCNPRIRAC1	C300-RP890184	80130.902	36049.963	14.523	-9.6	3.2	4.5	27/09/12	20/02/15
SPCSPRIR1C2	C300-RP890185	80130.834	36038.613	15.120	-12.9	-7.1	-0.4	27/09/12	20/02/15



BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	Settlement (mm)		
SPCSPRIR1C3	C300-RP890186	80130.818	36039.829	14.657	-9.5	-4.8	0.1	27/09/12	20/02/15
SPCSPRIR1C4	C300-RP890187	80135.801	36042.524	14.661	-13.7	3.5	4.3	27/09/12	20/02/15
SPCSPRIR2C2	C300-RP890188	80130.878	36038.612	9.388	-6.0	-3.5	-0.3	27/09/12	20/02/15
SPCSWPRIR3C1	C300-RP890197	80135.370	36029.165	1.711	-2.3	3.5	3.8	27/09/12	30/11/12
SPCSWPRIR3C3	C300-RP890199	80137.233	36037.693	1.620	2.5	3.5	-11.9	27/09/12	27/11/12
SPCSWPRIR3C3A	C300-RP890198	80134.594	36036.613	1.600	0.4	-1.6	-0.2	27/09/12	30/11/12
SPCSWPRIR3C4	C300-RP890200	80140.156	36038.798	1.595	0.5	0.0	-0.8	27/09/12	27/11/12
SPCWPRIR1C1	C300-RP890201	80122.150	36172.880	12.705	-11.0	-9.1	-25.5	25/11/12	10/01/15
SPCWPRIR1C2	C300-RP890202	80087.707	36027.972	12.694	-4.5	-12.0	-24.0	05/10/12	10/01/15
SPCWPRIR2C1	C300-RP890203	80085.612	36032.433	7.335	4.9	-9.9	-27.2	08/10/12	10/01/15
SPCWPRIR2C2	C300-RP890204	80087.708	36027.501	7.340	1.1	-11.1	-32.5	05/10/12	10/01/15
SST11PRIR1C1	C300-RP890231	80012.646	36064.209	108.110	0.8	-7.8	-7.0	27/09/12	05/10/14
SST11PRIR1C2	C300-RP890232	80008.715	36073.517	108.420	-0.4	-7.6	0.1	27/09/12	05/10/14
SST11PRIR1CA	C300-RP890429	80011.347	36067.093	104.502	-0.6	-3.0	-4.5	19/06/13	05/10/14
SST11PRIR2C1	C300-RP890233	80012.649	36064.201	100.996	0.0	-4.8	-7.0	27/09/12	05/10/14
SST11PRIR2C2	C300-RP890234	80008.654	36073.627	100.995	0.0	-5.3	-0.2	27/09/12	05/10/14
SST13PRIR1C1	C300-RP890235	80003.219	36086.559	108.184	1.1	1.8	-3.0	27/09/12	21/11/12
SST13PRIR1C2	C300-RP890236	79999.019	36095.695	108.257	-0.1	0.8	-1.4	27/09/12	14/11/12
SST13PRIR1C3	C300-RP890237	79995.816	36102.984	107.570	0.0	-0.4	0.2	27/09/12	08/11/12
SST13PRIR2C1	C300-RP890238	80003.180	36086.449	102.108	-0.3	1.9	-5.2	27/09/12	22/11/12
SST13PRIR2C2	C300-RP890239	79999.033	36095.694	102.089	0.6	0.8	-4.3	27/09/12	22/11/12
SST13PRIR2C3	C300-RP890240	79995.827	36102.995	99.900	0.2	0.0	-0.6	27/09/12	13/11/12
SST14PRIR1C1	C300-RP890241	79995.950	36103.400	106.341	0.7	0.9	-5.2	27/09/12	22/11/12
SST14PRIR1C2	C300-RP890242	79993.519	36108.951	106.319	0.3	0.5	-4.5	27/09/12	22/11/12
SST14PRIR2C1	C300-RP890243	79995.895	36103.404	100.567	0.2	-0.4	0.6	27/09/12	08/11/12
SST14PRIR2C2	C300-RP890244	79993.481	36108.978	100.385	0.1	-0.6	0.5	27/09/12	07/11/12
SST1PRIR1C1	C300-RP890245	80003.945	36113.507	109.839	-2.6	1.9	1.2	27/09/12	05/10/14
SST1PRIR1C2	C300-RP890246	80008.254	36103.755	111.852	-2.4	1.9	3.3	27/09/12	05/10/14
SST1PRIR2C1	C300-RP890247	80003.942	36113.621	104.147	-2.1	1.3	1.4	27/09/12	05/10/14
SST7PRIR1C1	C300-RP890248	80013.080	36092.971	108.252	-0.9	-0.2	3.3	27/09/12	05/10/14
SST7PRIR1C2	C300-RP890249	80021.414	36073.637	105.653	0.9	-2.9	0.4	27/09/12	05/10/14
SST7PRIR1C3	C300-RP890250	80023.587	36068.622	105.643	1.3	-1.8	0.1	27/09/12	05/10/14



BFK ID	UCIMS ID	LOCATION			FINAL READING			First Reading Date	Last Reading Date
		Easting (m)	Northing (m)	Elevation (mATD)	Easting Settlement (mm)	Northing Settlement (mm)	(mm)		
SST7PRIR2C1	C300-RP890251	80013.09 2	36092.94 1	101.97 4	-1.2	0.2	3.2	27/09/12	05/10/14
SST7PRIR2C2	C300-RP890252	80021.44 0	36073.59 1	100.91 5	1.1	-1.9	0.5	27/09/12	05/10/14
SST7PRIR2C3	C300-RP890253	80023.55 1	36068.70 1	100.77 5	1.1	-1.4	-0.2	27/09/12	05/10/14
SST9PRIR1C1	C300-RP890254	80008.58 1	36073.91 8	107.11 0	-0.2	-5.3	-0.2	27/09/12	05/10/14
SST9PRIR1C2	C300-RP890255	80006.30 8	36079.28 4	106.50 3	-1.2	-4.0	-1.7	27/09/12	05/10/14
SST9PRIR1C3	C300-RP890256	80003.48 8	36086.08 5	106.09 5	-5.2	-2.2	-0.7	27/09/12	05/10/14
SST9PRIR2C1	C300-RP890257	80008.58 8	36074.19 2	100.05 0	0.1	-5.1	-0.4	27/09/12	05/10/14
SST9PRIR2C2	C300-RP890258	80006.24 4	36079.23 4	99.841	-1.7	-2.9	-0.7	27/09/12	05/10/14
SST9PRIR2C3	C300-RP890259	80003.51 3	36085.99 2	99.822	-3.1	-0.9	-1.2	27/09/12	05/10/14
SUTPRIR1C2	C300-RP890205	80089.10 0	36046.23 3	13.012	1.9	0.6	-1.9	27/09/12	06/03/15
SUTPRIR1C3	C300-RP890206	80097.75 3	36049.82 8	14.564	1.2	-0.6	-4.3	27/09/12	06/03/15
SUTPRIR1C4	C300-RP890207	80098.77 3	36050.24 6	14.120	2.1	-0.8	-6.7	27/09/12	06/03/15
SUTPRIR1C5	C300-RP890208	80108.43 8	36054.17 0	13.883	2.9	-3.7	-11.4	27/09/12	06/03/15
SUTPRIR1C6	C300-RP890209	80115.17 6	36056.90 3	14.022	4.0	-4.1	-13.8	27/09/12	06/03/15
SUTPRIR2C1A	C300-RP890399	80081.309	36043.062	4.310	-0.6	-5.9	-12.1	31/05/13	10/01/15
SUTPRIR2C2	C300-RP890210	80089.12 0	36046.26 7	6.946	1.2	0.4	-1.6	27/09/12	06/03/15
SUTPRIR2C3	C300-RP890211	80097.75 8	36049.83 5	7.234	1.7	0.8	-4.5	27/09/12	06/03/15
SUTPRIR2C4	C300-RP890212	80098.70 8	36050.21 8	6.752	0.1	0.2	-6.2	27/09/12	06/03/15
SUTPRIR2C5	C300-RP890213	80108.43 0	36054.17 5	6.757	2.0	-1.6	-11.6	27/09/12	06/03/15
SUTPRIR2C6	C300-RP890214	80115.07 3	36056.87 2	6.746	2.3	-2.3	-14.2	27/09/12	06/03/15



6. Displacement plots for selected areas.

The data gathered from ATs at TCR has been analysed and the vectors of horizontal movement are represented in the plot included in Section 4. Data from two areas are presented as examples:

- Soho Square – south east corner including St. Patrick's Church and House of St. Barnabus
- Dean Street – north east adjacent to the WTH

Comparison of monitoring data with manual survey is made by presentation of BRE data from these facades.

Learning Legacy Document

6.1 Soho Square South-East

The south east corner of Soho Square is within the extent of the compensation grouting TaMs installed from Grout Shaft 5 (GS5). To facilitate comparison of monitoring data with construction activities, 7 construction periods have been assigned. The construction periods and associated activities are re-produced from the GS5 close out report (C300-BFK-C4-RGN-CRT00_ST005-51229).

Figure 6.1 Soho Square South-East PRISMS – Settlement with time

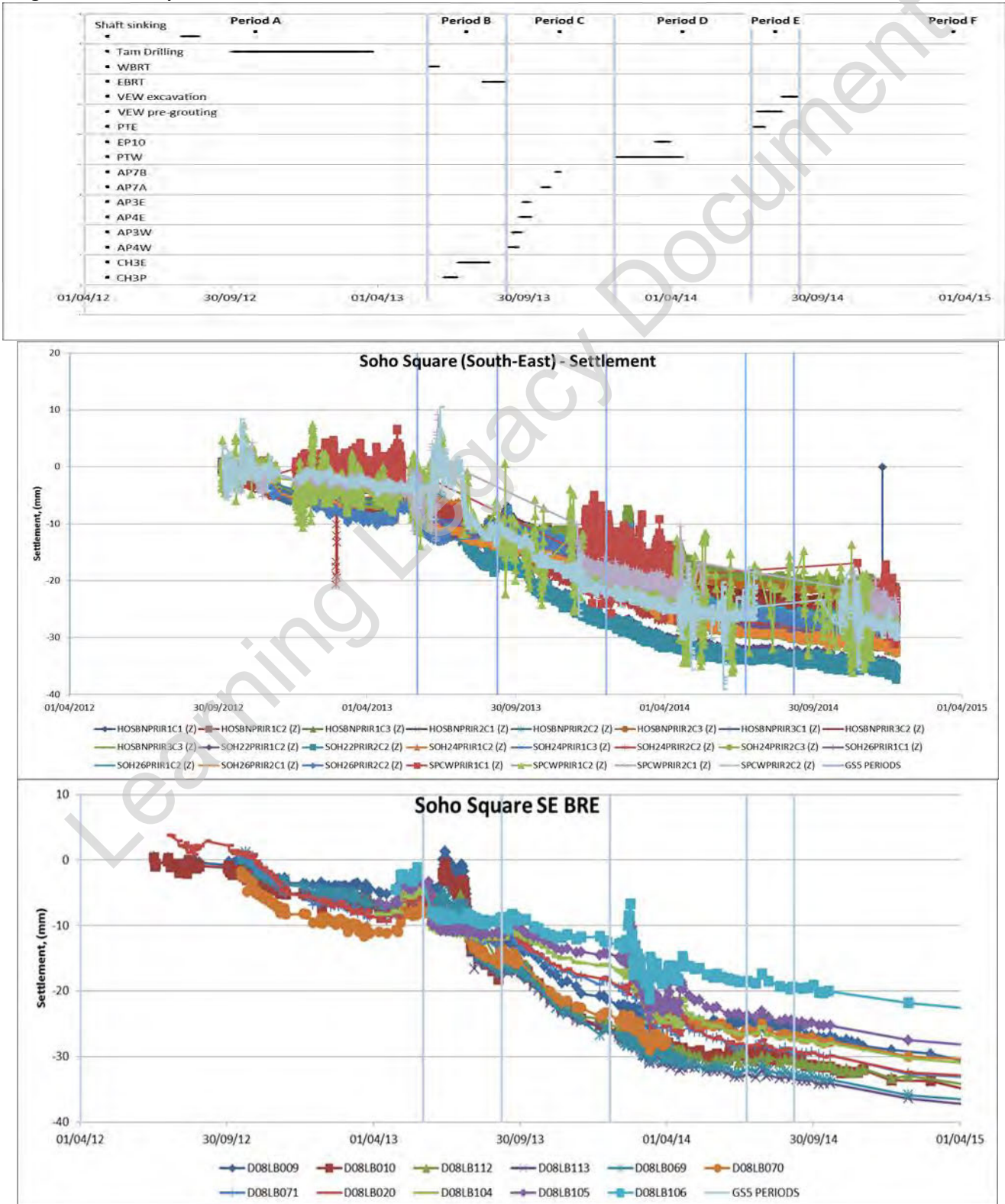
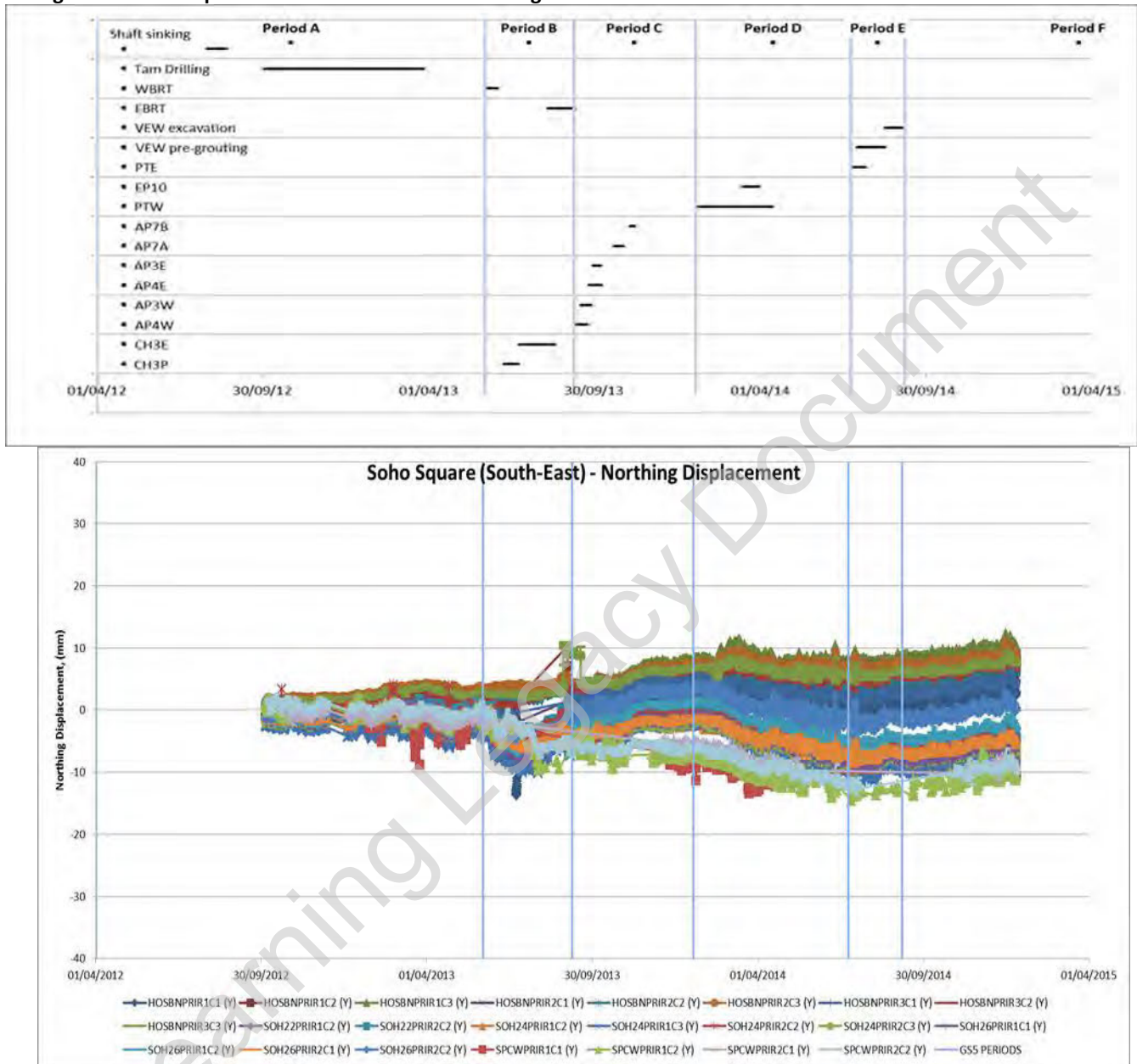


Figure 6.2 Soho Square South-East PRISMS – Eastings with time



Figure 6.3 Soho Square South-East PRISMS – Northings with time



6.2 Dean Street North-East

Figure 6.4 Dean Street East – North PRISMS – Settlement with time

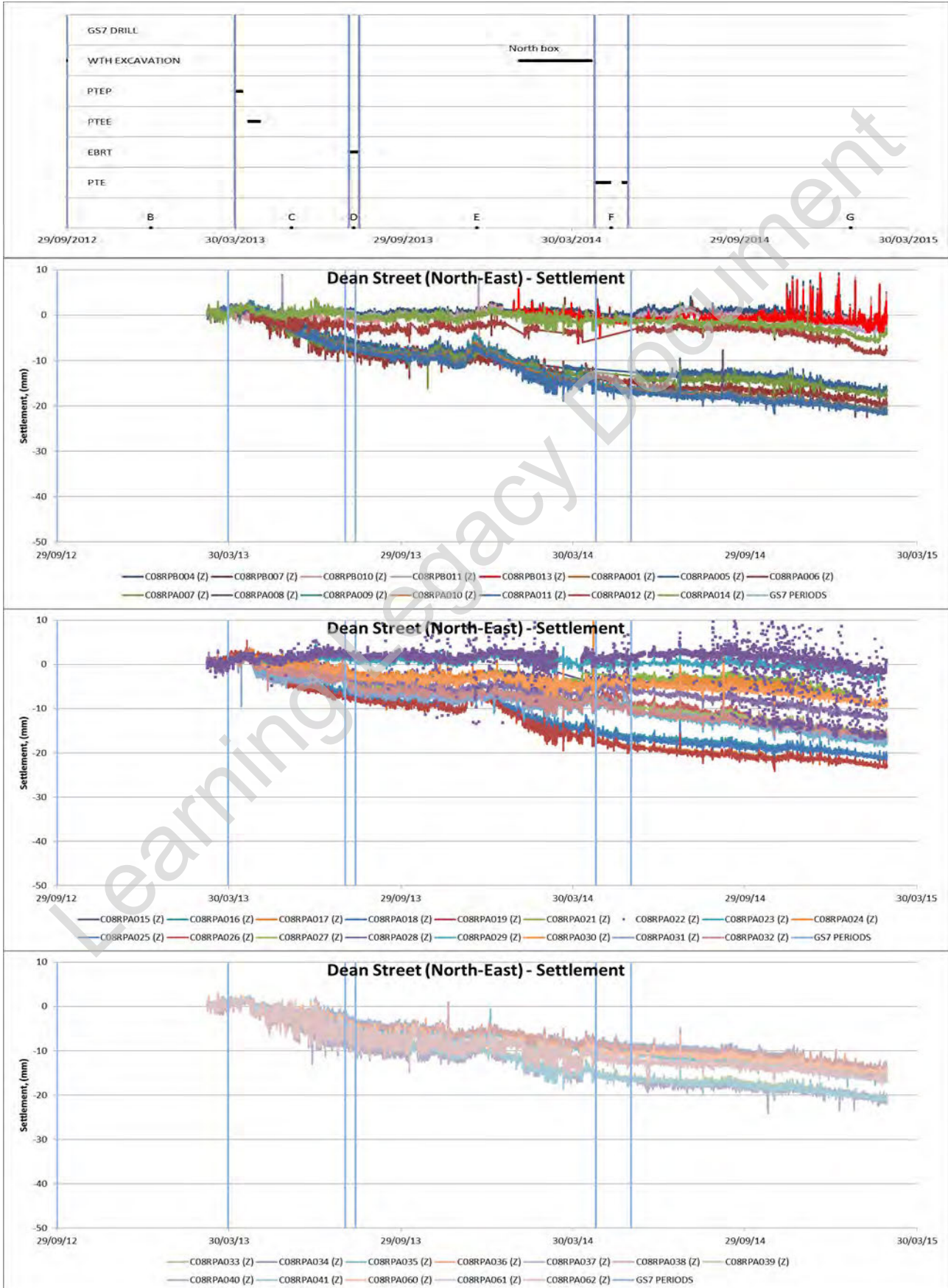
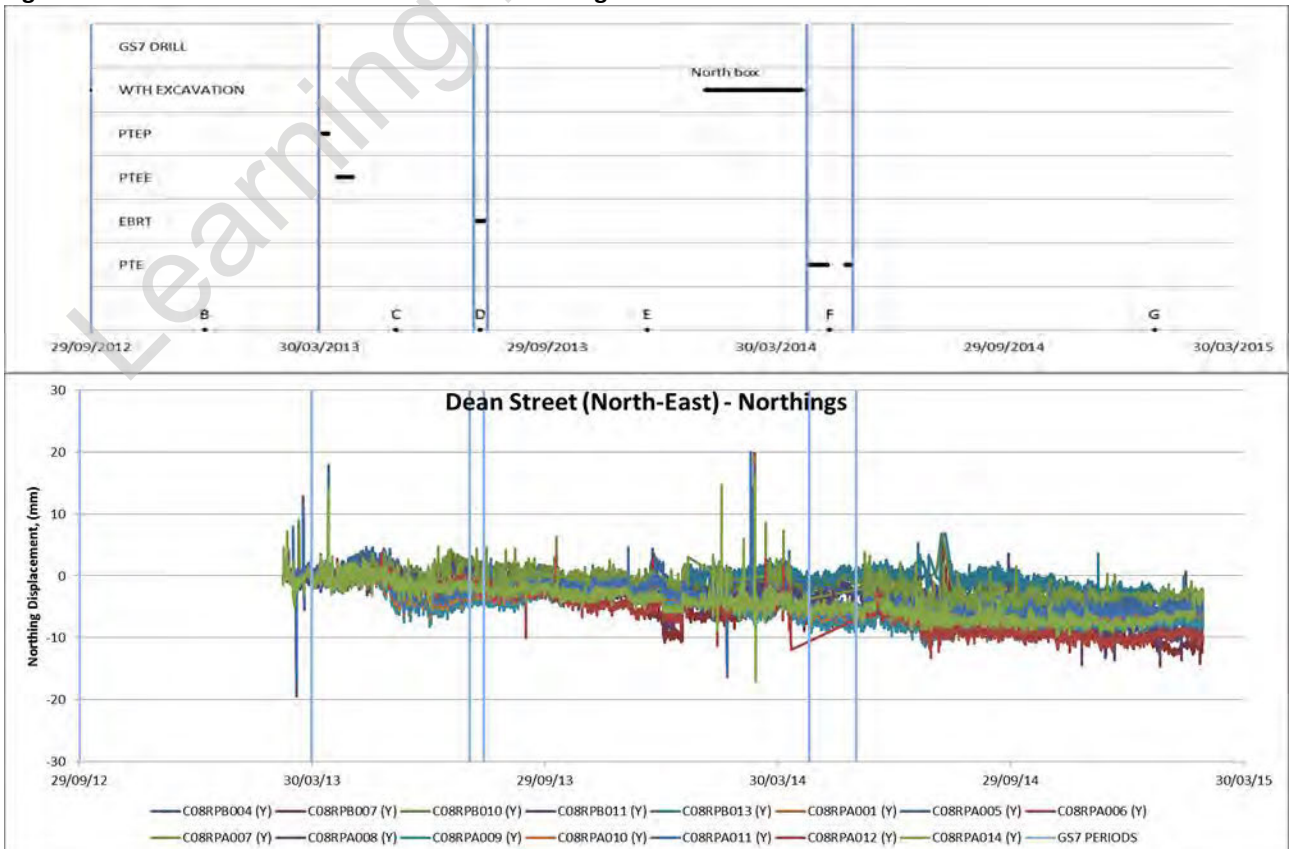


Figure 6.5 Dean Street East – North PRISMS – Eastings with time





Figure 6.6 Dean Street East – North PRISMS – Northings with time



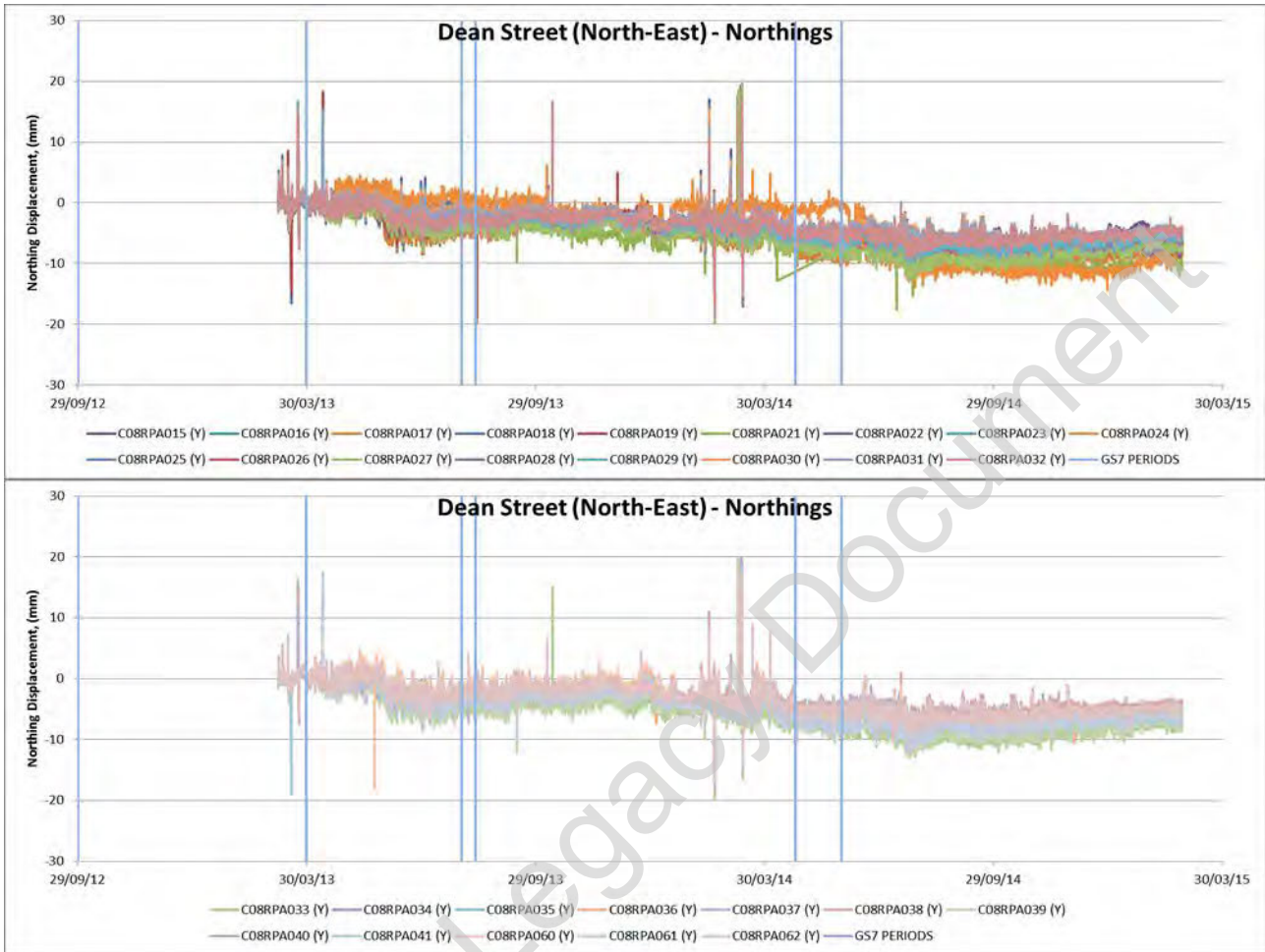
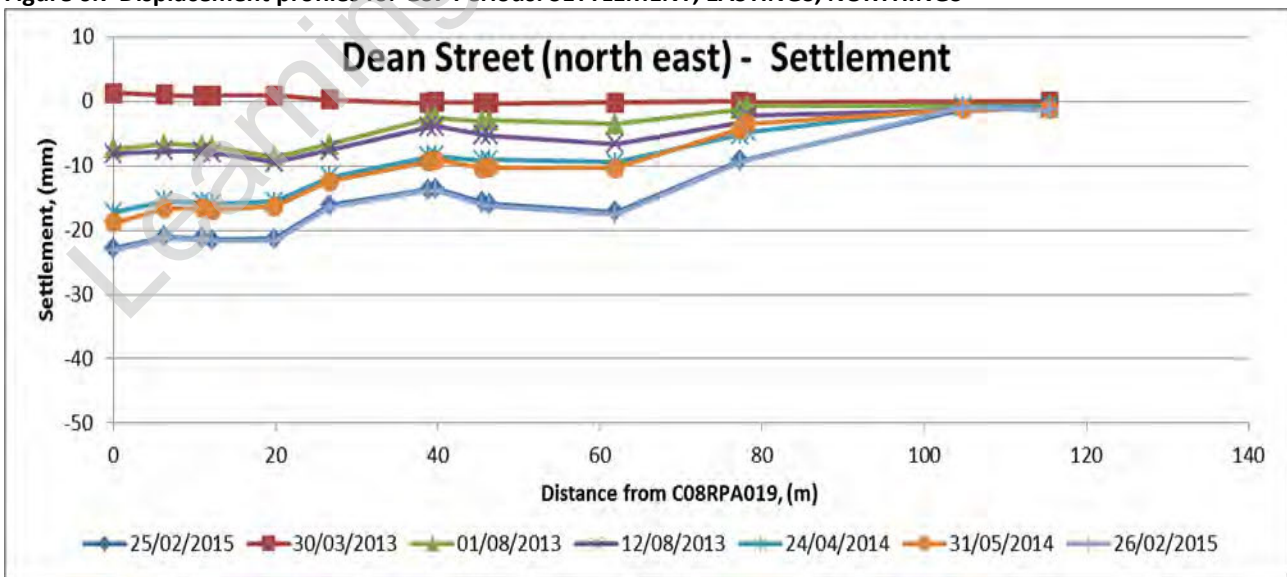


Figure 6.7 Displacement profiles for GS7 Periods: SETTLEMENT, EASTINGS, NORTHINGS



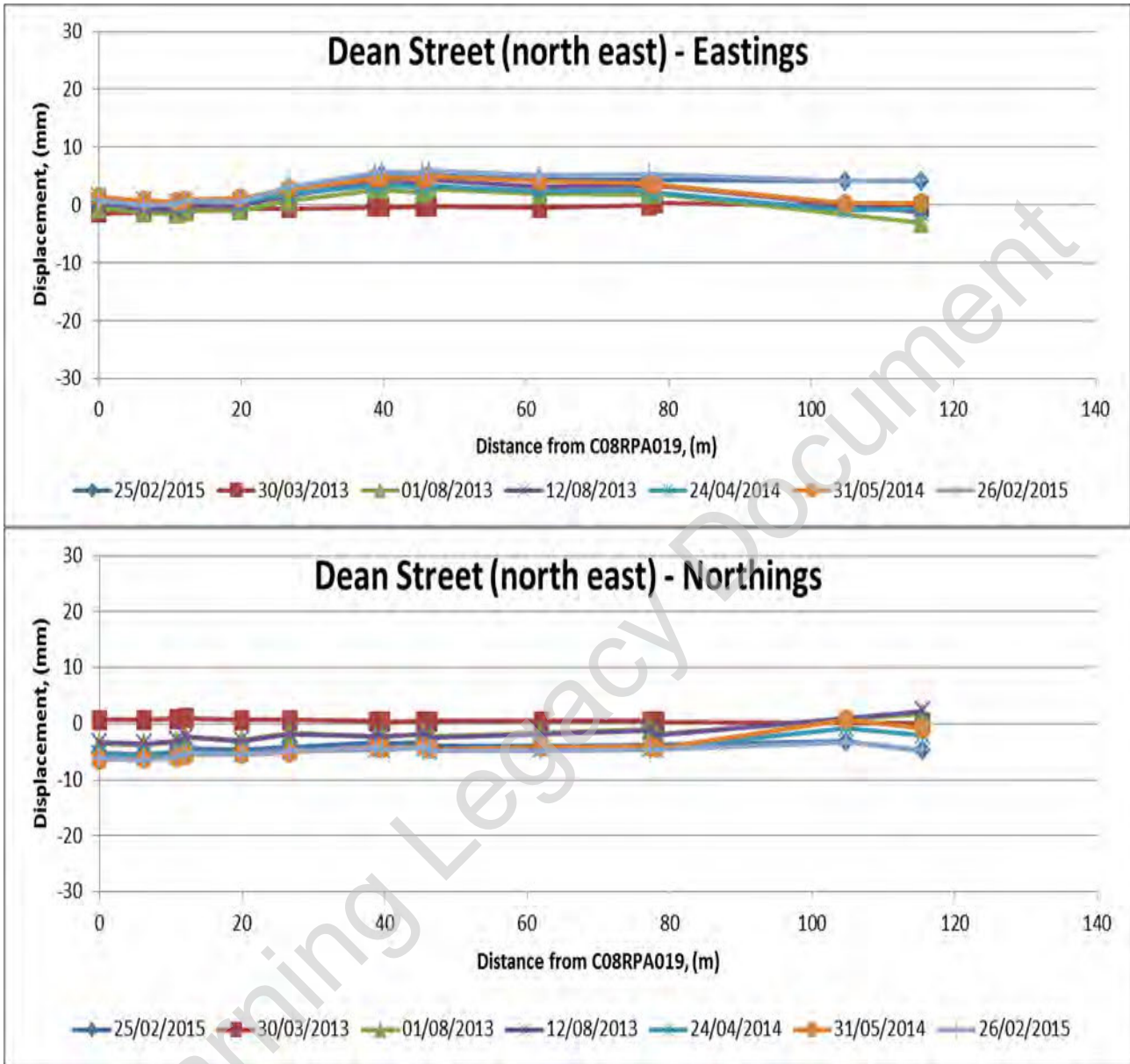
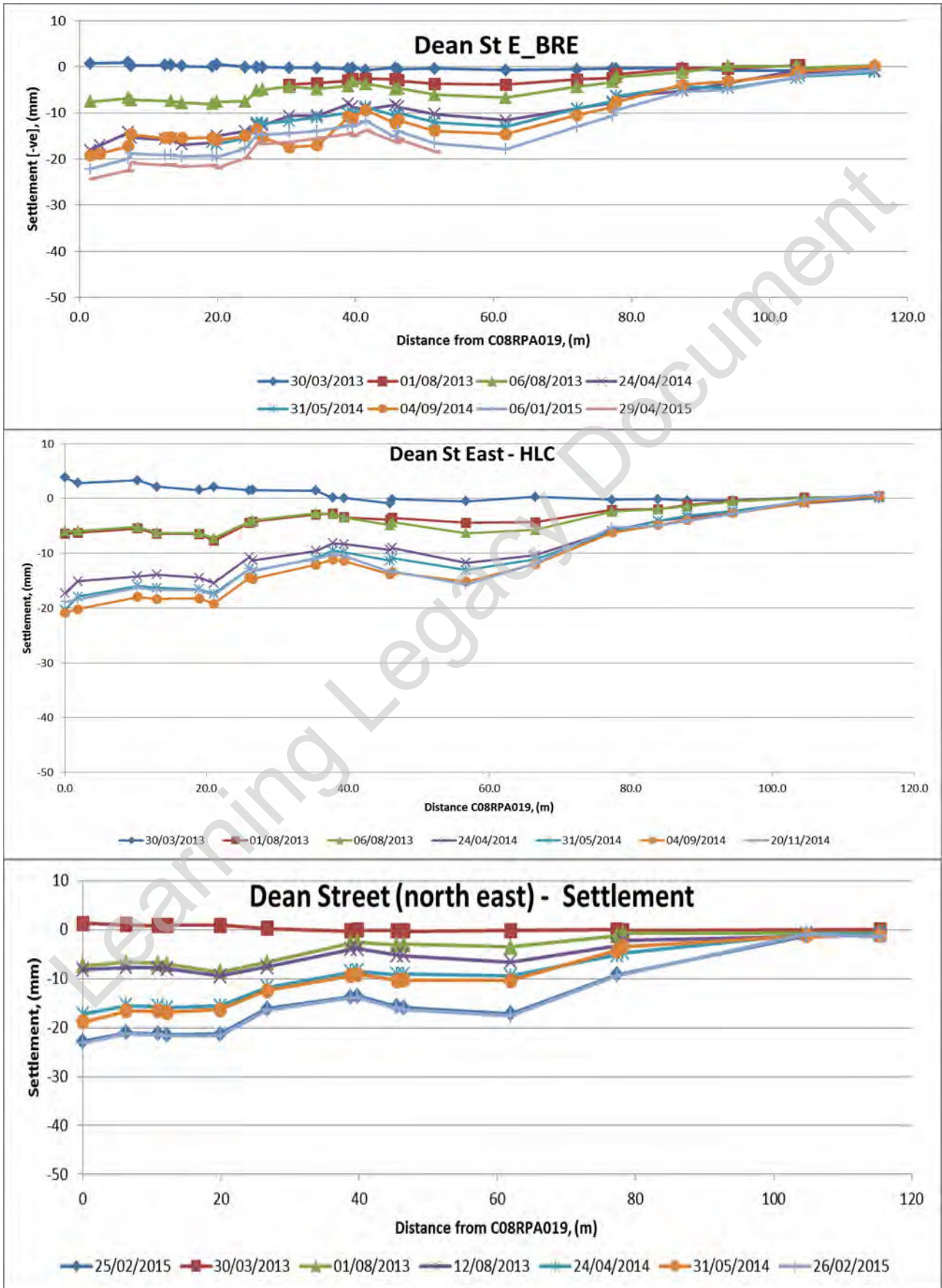


Figure 6.8 Comparison of settlement profiles from BRE, HLC and prisms





7. ATS Maintenance Schedule

Table 7.1 Abbreviations for Table 7.2:

DN	Delivery note/Return Note
LC	Location Change
RR	Repair request
MR	Maintenance request
PU	Pick-up
SR	Service report from Leica
SN	Serial Number

Table 7.2. Maintenance Schedule for ATSs

SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
361742	07-Nov-2012	LC	Tottenham Court Road - Surface	ATS 3	
361742	10-Jan-2013	RAJ	Tottenham Court Road - Surface	ATS 3	Confirmed By That the swap has taken place on 10/01/13
361742	19-Dec-2013	LC	Uckfield		Read low percentage / zero points
361742	13-Mar-2014	FC	Uckfield		Faults found. Lemo socket pins pushed in. Hz jog does not work correctly. Error 753 position not achieved when laser slightly off prism. Finds and measures when directly on prism.
361742	20-Mar-2014	RR	Uckfield		Repair request sent to SCCS
361742	21-Mar-2014	PU	SCCS		
361742	23-Apr-2014	LC	Uckfield		Returned from SCCS after repair
361742	23-Apr-2014	DN	Uckfield		Horizontal driver plate defective. Ceramic ring worn. Lubrication dry. Repair lemo socket pins. Service as Required
361742	25-Apr-2014	SET	Uckfield		Post repair tests ok. Setup for site.
361742	16-Apr-2014	CAL	SCCS		Certificate of Conformity
361742	30-Apr-2014	PU	KGI Hanover Square Office	TCR C	Taken to BFK offices.
362350	29-Jul-2011	DN	Uckfield		new instrument
362350	19-Dec-2011	LC	Tottenham Court Road	15 Holder Street	
362350	07-Mar-2013	LC	Uckfield		Returned from site - Awaiting fault report
362350	08-Mar-2013	PU	Leica		



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362350	29-Apr-2013	SR	Uckfield		Incoming inspection shows poor drive performance and was submitted for an extended maintenance. Touchscreen was faulty and as a result the front frame has been replaced. The focusing system has been stripped down, cleaned and re-greased. Both slip rings were cleaned and re-greased. Side cover seals, rubber grip and EDM seals have all been replaced. EDM baseline re-determined the additive constant. Instrument and accessories (incl Container) were cleaned. Tribach was repaired. Instrument passed an outgoing inspection and has been issued with a service certificate.
362350	01-May-2013	LC	Holborn		Taken to Holborn
362350	17-Jul-2014	LC	Tottenham Court Road - Surface	BFK B	Current position confirmed from Argus.
363038	16-Jun-2012	LC	Tottenham Court Road - Surface	ATS 7	
363038	10-Jan-2013	RAJ	Tottenham Court Road - Surface	ATS 7	Confirmed By That the swap has taken place on 10/01/13
363038	27-Feb-2013	LC	Uckfield		Returned from Holborn - Unit often produced error code -99955. Instrument was working at time of replacement. Since start of 1013, instrument was in error around 30% of the time. 16% of these errors were -99960. Remaining errors were -99955. Damaged Lemo socket
363038	27-Feb-2013	LC	Uckfield		Email sent to Leica for collection - Damaged Lemo socket
363038	05-Mar-2013	PU	Leica		Returned to Leica for repair
363038	12-Apr-2013	LC	Uckfield		Returned from Leica
363038	12-Apr-2013	SR	Uckfield		Unit done under Warranty - Touch Screen on TM30 #363038 is not working. New front frame fitted. New screen protector applied. Calibrated as necessary.
363038	12-Apr-2013	SR	Uckfield		This work was chargeable - TM30 #363038 has damaged to various pins in the Lemo socket. New funnel fitted. All keys entered. Firmware upgraded to V8.56. Applications upgraded/reinstalled. RAM cleared. Carried out cleanliness, outgoing, and baseline test protocols. Necessary adjustments made. All tests passed OK. Accessories checked. Everything cleaned. Certification issued.
363038	17-Apr-2013	LC	Holborn		



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
363038	08-Nov-2013	LC	Uckfield		Returned from SCCS after repair.
363038	08-Nov-2013	SR SCCS	Uckfield		Repair/Standard calibration. Doesn't require UKAS. Clean, check & calibrate. Annual Certification
363038	18-Nov-2013	LC	Holborn		Taken to Holborn
363038	30-Apr-2014	DN	Uckfield		Returned from SCCS after repair/service. Hz/V Motor drive board erratic. Replace part. Adjust and test.
363038	02-May-2014	SET	Uckfield		Firmware upgraded from v8.56 to v8.71. Setup for site.
363038	27-Mar-2014	CAL	SCCS		Certificate of Conformity
363038	28-May-2014	SET	Uckfield		Setup for site.
363038	10-Jun-2014	PU	KGI Hanover Square Office		Taken to site/BFK offices by Tim Brickell.
363038	29-Aug-2014	LC	Uckfield		Returned unused due to no space at BFK offices
363038	07-Oct-2014	PU	KGI Hanover Square Office		Taken to site/BFK
363038	23-Jan-2015	LC	Uckfield		Returned from site for fault investigation
363038	26-Jan-2015	FC	Uckfield		Minor faults found, suggest service.
363038	17-Feb-2015	PU	SCCS		Picked up by SCCS driver for service + repair
363038	13-Mar-2015	LC	Uckfield		Returned from SCCS after repair/service
363038	04-Mar-2015	CAL	SCCS		Certificate of Conformity
363038	16-Mar-2015	SET	Uckfield		Setup for site.
363038	07-Apr-2015	PU	Tottenham Court Road - Surface		Taken to site by Steve Maguire
360823	12-Mar-2014	SET	Uckfield		Instrument set up for site.
360823	18-Mar-2014	LC	KGI Hanover Square Office	BOS 02	Taken to site
360823	15-Oct-2014	LC	Uckfield		Returned from site.
360823	16-Oct-2014	FC	Uckfield		Faults found
360823	20-Oct-2014	RR	Uckfield		Repair request sent to SCCS.
360823	22-Oct-2014	PU	SCCS		Picked up by SCCS for repair.
360823	14-Nov-2014	LC	Uckfield		Returned from SCCS after repair/service
360823	10-Nov-2014	CAL	SCCS		Certificate of Conformity
360823	17-Nov-2014	SET	Uckfield		Setup for site.
360823	22-Jan-2015	PU	Tottenham Court Road - Surface		Taken to BFK.
362349	11-Apr-2013	LC	Holborn		Taken to be stored at Holborn by request of Chris Emery
362349	19-Apr-2013	LC	Tottenham Court Road	TCR B	Locations confirmed by Chris Emery email on 12.04.24
362349	19-Aug-2014	LC	Uckfield		Returned from site by Scott Baldwin
362349	19-Aug-2014	FC	Uckfield		Faults found
362349	20-Aug-2014	RR	Uckfield		Repair request sent
362349	21-Aug-2014	PU	SCCS		Picked up by SCCS driver for repair



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362349	25-Sep-2014	LC	Uckfield		Returned from SCCS after repair
362349	18-Sep-2014	CAL	SCCS		Certificate of Conformity
362349	26-Sep-2014	SET	Uckfield		Setup for site
362349	05-Nov-2014	PU	KGI Hanover Square Office		Taken to BFK by unknown site tech
362288	12-May-2011	DN	Uckfield		New instrument
362288	21-Sep-2011	LC	Tottenham Court Road - surface		Installed Tottenham Court Road Aboveground
362288	09-Jan-2013	RAJ	Tottenham Court Road - Surface	ATS 11	Unit is now BFK unit
362288	25-Apr-2013	LC	Uckfield		Awaiting fault report - Instrument returned for calibration
362288	25-Apr-2013	PU	Leica		Returned to Leica
362288	29-May-2013	LC	Uckfield		Returned from Leica
362288	29-May-2013	LC	Uckfield		Instrument TM30 (ser: 362288) was received into service for an extended maintenance. An incoming inspection was performed. The instrument successfully passed a circle cleanliness inspection. The instrument's focusing system, standing axis & tilting axis have all been dismantled, cleaned, greased, rebuilt and adjusted. All gaskets have been replaced. Both the horizontal and piezo motors have been adjusted as necessary. The theodolite, EDM, tilt sensor, and ATR have all been inspected and adjusted. The instrument's HZ-collimation and V-indax (coarse) has been adjusted. The instrument and its accessories (incl. container) have been intensively cleaned. The EDM optical fibre has been replaced. The instrument firmware has been updated. The instrument passed an outgoing inspection and has therefore been issued with a service certificate.
362288	25-Jun-2013	LC	Holborn		Delivered to Holborn for Simon Nevard
362288	30-Jul-2013	LC	Uckfield		Returned from Holborn - reading low percentage of points
362288	31-Jul-2013	RR	Uckfield		Email sent to Leica - Noisy vertical movement, "no prism found" even when laser had been put on prism
362288	31-Jul-2013	PU	Leica		Returned to Leica for repair
362288	20-Sep-2013	LC	Uckfield		Returned from Leica



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362288	20-Sep-2013	SR	Uckfield		Carried out inspection on TM30. Confirmed fault and diagnosed to faulty base board. Frequency sweep failed on incoming test protocol. Measured torque axis on vertical drive. Torque in tolerance. Re centered vertical and horizontal drives. Carried out 1 hour burn in test. Instrument still failing on frequency sweep. Replaced vertical and horizontal motors, ceramic ring and membrane. Carried out burn in test. Instrument now passes. Completed cleanliness check. Replaced base board and carried out adjustments including laser path alignment. Instrument now finds prisms. Carried out outgoing test protocol with full pass. Completed baseline check. Instrument left overnight tracking prisms with no errors. Cleaned equipment. Produced certificate.
362288	24-Sep-2013	LC	Holborn		Taken to Holborn to be stored
362288	17-Jul-2014	LC	Tottenham Court Road - Surface	BFK G	Current position confirmed from Argus.
362421	29-Jul-2011	DN	Uckfield		new instrument
362421	05-Sep-2011	LC	Tottenham Court Road	12-16 Derring street	
362421	09-May-2012	LC	Uckfield		Returned from Site - Faulty instrument
362421	22-Jun-2012	RR	Uckfield		Sent email to Leica for collection - HZ not working via geocom
362421	25-Jun-2012	PU	Leica		Returned to Leica for repair
362421	05-Jul-2012	LC	Uckfield		Returned from Leica
362421	05-Jul-2012	SR	Uckfield		Instrument received with irregular horizontal drive. Re-initialized and carried out motor adjustments via service. Horizontal drive now works OK. Upgraded firmware and applications to v8.56. Carried out all required adjustments via service program. Carried out full outgoing test protocol using service, cleanliness and baseline programs. Passed ok.
362421	19-Jul-2012	LC	Tottenham Court Road - Surface		Taken to Holborn for Simon Nevard
362421	19-Jul-2012	LC	Uckfield		Returned to Uckfield unable to deliver
362421	19-Jul-2012	LC	Tottenham Court Road - Surface		Taken to Holborn for Simon Nevard
362421	20-Aug-2012	LC	Uckfield		Returned 8704 Error (99955) Errors Upon arrival at site it was also noted the Horizontal jog Movement is not functioning



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362421	29-Aug-2012	RR	Uckfield		Email sent for collection
362421	30-Aug-2012	PU	Leica		Collected by courier to be returned to Leica
362421	12-Sep-2012	LC	Uckfield		Returned from Leica
362421	12-Sep-2012	SR	Uckfield		Tm30 #362421 has drive/positioning errors on Horizontal Axis. Horizontal fine drives fail to move instrument. Tested using Service Software. Horizontal attempts to move but fails to make position. Vertical movement also poor. Attempted to re-determine Gear Parameters. Horizontal movement eventually possible, but suspect this wont last due to history of instrument. Reloaded firmware V8.55. Sensor Board Add-on Chip fitted (to enhance boot-up process, precautionary measure). New drive board fitted. Gear parameters re-determined. 12 hr burn in test carried out. Cleanliness test carried out. Full outgoing test protocol carried out. Necessary adjustments made. All tests passed OK. Baseline Test Protocol carried out. Reloaded firmware v8.56. Applications reinstalled. Ram cleared. Left instrument for 3 days to replicate customer getting delivery. Movement on both axes was OK. Carried out all gear/motor Tests again using service software and all passed ok. Instrument Cleaned. Accessories checked. Cert issued.
362421	13-Sep-2012	LC	Tottenham Court Road - Surface	ATS 15	Taken to Holborn for Drew, being used at Tottenham Court Road as a replacement unit.
362421	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 15	Current position confirmed from Argus.
362421	15-Oct-2014	LC	Uckfield		Returned from site.
362421	17-Oct-2014	FC	Uckfield		Minor faults found
362421	20-Oct-2014	RR	Uckfield		Repair/service request sent to SCCS.
362421	22-Oct-2014	PU	SCCS		Picked up by SCCS driver for service.
362421	31-Oct-2014	LC	Uckfield		Returned from SCCS after service
362421	24-Oct-2014	CAL	SCCS		Certificate of Conformity
362421	04-Nov-2014	SET	Uckfield		Setup for site.
362421	22-Jan-2015	PU	Tottenham Court Road - Surface		Taken to BFK.
362901	29-Dec-2011	DN	Uckfield		new instrument
362901	12-Jan-2012	LC	Tottenham Court Road	47 South Molton Street ATS G	Taken to site



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362901	21-Oct-2013	LC	Uckfield		High compensator value, Instability of the readings, Calibration certificate expires in December 2013.
362901	22-Oct-2013	RR	Uckfield		Email sent to Leica for repair
362901	22-Oct-2013	PU	Leica		Returned to Leica for repair & service
362901	06-Jan-2014	LC	Uckfield		Returned from Leica after repair.
362901	07-Jan-2014	SR	Uckfield		Carried out extended maintenance on TM30 including replacement of seals, ceramic ring and alignment of laser paths. Cleaning and greasing of tilting and standing axis. Completed cleanliness and baseline checks. Completed outgoing test protocol with full pass. Cleaned equipment. Produced certificate.
362901	10-Jan-2014	LC	KGI Hanover Square Office		Taken to office
362901	17-Jul-2014	LC	Tottenham Court Road - Surface	BFK F	Current position confirmed from Argus.
362901	07-Nov-2014	LC	Uckfield		Returned from BFK for repair.
362901	10-Nov-2014	FC	Uckfield		Minor faults found, suggest service.
362901	17-Feb-2015	PU	SCCS		Picked up by SCCS driver for service + repair
362901	27-Feb-2015	CAL	SCCS		Certificate of Conformity
362901	04-Mar-2015	LC	Uckfield		Returned from SCCS after repair/service
362901	05-Mar-2015	SET	Uckfield		Setup for site.
362901	07-Apr-2015	PU	Tottenham Court Road - Surface		Taken to site by Steve Maguire
361755	10-Feb-2011	NI	Uckfield		
361755	11-Feb-2011	LC	Container		CONTAINER
361755	16-Mar-2011	LC	Uckfield		Brought back to Uckfield
361755	11-May-2011	LC	Tottenham Court Road - surface		Installed at Tottenham Court Road surface
361755	18-Apr-2012	LC	Uckfield		Returned from Holborn for Cleyton - Unit is not stuck on Leica Logo
361755	18-Apr-2012	RR	Uckfield		Email sent to Leica for collection
361755	18-Apr-2012	PU	Leica		Collected by Courier for return to Leica for repair
361755	14-May-2012	RAJ	Uckfield		This unit has been transferred to the BFK pool
361755	17-May-2012	LC	Uckfield		Returned from Leica



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
361755	17-May-2012	SR	Uckfield		Returned from Leica - Carried out required firmware recovery, followed by installing latest firmware version V8.55, and applications. Carried out incoming protocol (full outgoing) Last time customer settings carried out - 03/12/10 Hz motor marginal. Carried out 1hr burn in test, re-determined gear parameters. Carried out full cleanliness checks. Carried out necessary adjustments. Carried out full out going protocol. Carried out baseline checks. Checked and adjusted tribrach. Cleaned instrument and case. Replaced eyepiece cover, grub screws were seized. No customer settings obtained due to nature of fault. Customer to reload settings. Issued service certificate.
361755	05-Jul-2012	RR	Uckfield		Email sent to Leica for collection - no motor movement, answers on command
361755	05-Jul-2012	PU	Leica		Collected by Leica for repair
361755	27-Jul-2012	LC	Uckfield		Returned from Leica
361755	27-Jul-2012	SR	Uckfield		Instrument arrived into service with no movement from either gear. The final drives were completely unresponsive. After formatting the NVRAM, internal memory and system RAM, the instrument still did not move. When connected to the service programme, the instrument asked immediately for gear version to be determined. This however still did not enable the final drives to work. A gear test revealed that the motors were functioning however, the instrument failed this gear test significantly, especially in the HZ axis. In an effort to first get the drives to work, the firmware was downgraded and then updated to guard against a corruption in the instrument's data. This action lead to the vertical gear moving in one direction, however it did not function correctly and the horizontal drive was still unresponsive. After putting the instrument on a burn-in test and a determining of the gear parameters the instrument's final drives final became responsive. The gears then required an additional 12 hour burn test before they would pass the gear test. The EDM additive constant was re-determined. A sensor board upgrade has been implemented in to this instrument. This



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
					is covered under warranty and is designed to increase stability of the instruments sensor board commands. The instrument passed a full outgoing protocol and was therefore issued with a service cert.
361755	15-Aug-2012	LC	Tottenham Court Road - Surface	ATS 12	
361755	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 12	Current position confirmed from Argus.
361755	15-Oct-2014	LC	Uckfield		Returned from site.
361755	20-Oct-2014	FC	Uckfield		No faults found.
361755	20-Oct-2014	RR	Uckfield		Service request sent to SCCS.
361755	22-Oct-2014	PU	SCCS		Picked up by SCCS driver for service.
361755	31-Oct-2014	LC	Uckfield		Returned from SCCS after service
361755	30-Oct-2014	CAL	SCCS		Certificate of Conformity
361755	03-Nov-2014	RR	Uckfield		Repair request. CF card slot not working after SCCS Job 15680.
361755	04-Nov-2014	PU	SCCS		Collected for repair - CF card slot not working following service (15680)
361755	07-Nov-2014	LC	Uckfield		Returned from SCCS after secondary CF card repair, FW also upgraded to v9.0.
361755	11-Nov-2014	SET	Uckfield		Setup for site.
361755	22-Jan-2015	PU	Tottenham Court Road - Surface		Taken to BFK.
101471	29-Mar-2012	DN	Uckfield		new instrument
101471	22-Jul-2012	LC	Paddington - Station		Taken to site
101471	13-Sep-2012	LC	Uckfield		Awaiting the fault description.
101471	02-Oct-2012	PU	Topcon		Returned to Topcon for repair
101471	18-Oct-2012	CAL	Uckfield		
101471	23-Oct-2012	LC	Uckfield		Returned from Topcon
101471	23-Oct-2012	SRT	Uckfield		Troubleshooting, found that the shutter motor was defective, Replaced "shutter complete", Electronic adjustments of the EDM. Full baseline check. Calibration report.
101471	11-Jan-2013	LC	Tottenham Court Road - Surface		Taken to Holborn for Simon Nevard, unit to be installed at Tottenham Court



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
					Road.
101471	21-Oct-2013	LC	Uckfield		Slow increase of the compensator values
101471	22-Oct-2013	RR	Uckfield		Email sent to Topcon for repair
101471	24-Oct-2013	PU	Topcon		Returned to Topcon for repair
101471	15-Nov-2013	LC	Uckfield		Returned from Crossrail
101471	15-Nov-2013	SRT	Uckfield		Confirmed: Defective shutter. Replaced shutter and performed all necessary adjustments. Check and adjust according to specifications. Software upgrade (Basic 1114-32-29, MDCPU 1088-30-08, TIPU 1088-40-10 EDM 1088-94-12) Calibration report.
101471	18-Nov-2013	LC	Holborn		Taken to Holborn
101471	11-Jun-2014	LC	Uckfield		Returned from site after decommissioning.
101471	17-Jun-2014	FC	Uckfield		No faults found
101471	18-Jun-2014	SET	Uckfield		Setup for site.
101471	10-Jul-2014	PU	KGI Hanover Square Office		Taken to site.
101471	29-Aug-2014	LC	Uckfield		Returned unused due to no space at BFK offices
101471	07-Oct-2014	PU	KGI Hanover Square Office		Taken to site/BFK
102077	28-Sep-2012	DN	Uckfield		new instrument
102077	19-Dec-2012	LC	Unknown		ATS-TB PADDINGTON THROAT
102077	15-Feb-2013	LC	Uckfield		
102077	20-Feb-2013	PU	Topcon		Collected by courier, returned to Topcon for repair
102077	15-Mar-2013	LC	Uckfield		
102077	15-Mar-2013	SRT	Uckfield		Replaced shutter, Check and adjust according to specifications. Calibration report.
102077	19-Mar-2013	LC	Holborn		Taken to Holborn for Chris Emery
102077	19-Apr-2013	LC	Fisher Street	ATS K	Locations confirmed by Chris Emery email on 12.04.15
102077	19-Apr-2013	LC	Uckfield		ATS was behaving very strangely - it stopped reading any points on 10/04, but would start reading some or, sometimes, most of its points for a couple of cycles every couple of days before failing again. No error code was produced. There is no clear link between ATS failures and weather conditions (although sometimes it seemed to be working on sunny days).
102077	19-Aug-2013	RR	Uckfield		Email sent to Topcon for repair
102077	21-Aug-2013	PU	Topcon		Returned to Topcon for Repair
102077	12-Sep-2013	LC	Uckfield		Returned from Topcon



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
102077	12-Sep-2013	SRT	Uckfield		Troubleshooting. Replace and damaged parts. Full collimation and baseline test. Software upgrade (Basic 1114-32-29, MDCPU 1088-30-08, TIPU 1088-40-10, EDM 1088-94-12). Calibration report.
102077	17-Sep-2013	LC	Holborn		Delivered to Holborn for Mathieu
102077	28-Feb-2014	LC	Uckfield		Returned from site for repair
102077	03-Mar-2014	FC	Uckfield		Case+Tribrach. Unit tested in Uckfield, no fault found. Returned to stock.
102077	11-Dec-2014	RAJ	Uckfield		Reallocated back to BFK (Setup)
102077	12-Dec-2014	PU	Tottenham Court Road - Surface		Taken to site with empty Leica box and 2 Topcon batteries
102013	09-Aug-2012	DN	Uckfield		new instrument
102013	03-Oct-2012	LC	Tottenham Court Road - Surface		Taken to site
102013	11-Feb-2013	LC	Uckfield		Swapped over as possible batch issues with motors. ATS was also not reading approximately 50% of points. Data files were checked and the angles in the points file seemed to be correct.
102013	20-Feb-2013	PU	Topcon		Collected by courier, returned to Topcon for repair
102013	15-Mar-2013	LC	Uckfield		
102013	15-Mar-2013	SRT	Uckfield		Replaced shutter. Check and adjust according to specifications. Calibration report.
102013	19-Mar-2013	LC	Holborn		Taken to Holborn for Chris Emery
102013	19-Apr-2013	LC	Fisher Street	ATS J	Locations confirmed by Chris Emery email on 12.04.16
102013	16-Aug-2013	LC	Uckfield		ATS FREQUENTLY HAD CYCLES READING ZERO POINTS. ATS WAS WORKING AT TIME OF REPLACEMENT.
102013	19-Aug-2013	RR	Uckfield		Email sent to Topcon for repair
102013	21-Aug-2013	PU	Topcon		Returned to Topcon for Repair
102013	16-Sep-2013	LC	Uckfield		Returned from Topcon
102013	16-Sep-2013	SRT	Uckfield		Work Performed: Instrument was extensively tested, Problem could not be confirmed. Check and adjust according to specifications. Software upgrade (Basic 1114-32-29, MDCPU 1088-30-08, TIPU 1088-40-10 EDM 1088-94-12). Calibration Report.
102013	20-Sep-2013	LC	Holborn		
102013	17-Apr-2014	LC	Uckfield		Returned from site for investigation
102013	25-Apr-2014	FC	Uckfield		Small rubber ring on manual site cracked. Vertical jog bouncy. No faults relating to actual workings of instrument found so repair deemed unnecessary at this time. Test cycles passed. Working.



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
102013	29-Apr-2014	SET	Uckfield		Setup for site.
102013	30-Apr-2014	PU	KGI Hanover Square Office	BOS 07	Taken to BFK offices.
102013	07-Nov-2014	LC	Uckfield		Returned from BFK for repair.
102013	10-Nov-2014	FC	Uckfield		Faults found.
102013	16-Nov-2014	RR	Uckfield		Repair request sent to Topcon GB.
102013	17-Nov-2014	PU	Topcon		Picked up by TNT for repair at Topcon GB
102013	15-Jan-2015	LC	Uckfield		Returned from Topcon after repair.
102013	14-Jan-2015	CAL	Topcon		Certificate of Conformity
102013	16-Jan-2015	SET	Uckfield		Setup for site.
102013	22-Jan-2015	PU	Tottenham Court Road - Surface		Taken to BFK.
362388	05-Oct-2011	LC	Tottenham Court Road - surface		TAKEN TO SITE
362388	19-Jan-2012	LC	Uckfield		Returned to Uckfield - 99955 Error
362388	23-Jan-2012	FC	TECH DEPT	Stores	Formatted RAM, Put under test
362388	25-Jan-2012	RR	Uckfield		Email sent to Leica for collection - Format Ram - Put on test but keeps locking up
362388	25-Jan-2012	PU	Leica		Sent back to Leica
362388	29-Feb-2012	DN	Uckfield		Returned from Leica - No service report sent back with the unit - Email sent to Charlotte at Leica for a copy of the report
362388	01-Mar-2012	SR	Uckfield		Replaced defective board/component, carried out software upgrade, carried out check and adjust, checked as per factory instruction.
362388	13-Apr-2012	LC	Tottenham Court Road - Surface	ATS 1	Taken to site by Jon for Cleyton
362388	11-Apr-2013	LC	Uckfield		Instrument produced occasional -99957 errors and would read 0 points (or a low %) for some cycles. Frequency of these errors seemed to be increasing. Given that the TBM is currently passing under this site it was decided to replace the ATS to improve reliability. Instrument was working correctly on the day of replacement.
362388	19-Apr-2013	FC	Uckfield		Checks carried out by Brian - Touch screen bleeps but does not work
362388	19-Apr-2013	RR	Uckfield		Email sent to Leica for collection
362388	22-Apr-2013	PU	Leica		Returned to Leica
362388	22-Apr-2013	RAJ	Leica		Unit has been reallocated to 228 as per email from Nick De Rossi 22.04.21
362388	01-May-2013	LC	Uckfield		Returned from Leica



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362388	01-May-2013	SR	Uckfield		TM30 #362388 Touchscreen non-functioning. New front frame fitted. Screen protector applied. Sensor board Add-on chip fitted (helps prevent any potential boot up issues in the future). Tested using Service Software. Necessary adjustments made. All tests taken passed OK. Baseline test protocol carried out and new Additive constant stored. Accessories checked. Everything given quick clean (as thoroughly as possible given time allowed). Certification issued.
362388	13-May-2013	LC	Holborn		To be stored at Holborn
362388	24-Jun-2013	RAJ	Holborn		Unit has been returned to BFK project as per email from Brendon 24.06.13
362388	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 09	Current position confirmed from Argus.
362394	29-Jul-2011	DN	Uckfield		new instrument
362394	24-Nov-2011	LC	Tottenham Court Road	31 Soho Square	Taken to Site
362394	06-Mar-2013	LC	Uckfield		A power failure at 31-32 Soho Square in early February resulted in the ATS losing power. Following restoration of power to the building, the ATS produced error code -99960. Power was checked at the data logger and found to be ok.
362394	06-Mar-2013	PU	Uckfield		Email sent to Leica for collection - unit needs a service, also tribrach was very stiff on the lock lever.
362394	12-Apr-2013	LC	Uckfield		Returned from Leica
362394	12-Apr-2013	SR	Uckfield		TM30 received with error code. Carried out inspection and test protocol including burn in test. Burn in test failed, speed out of tolerance. Removed piazo drive and measured torque on vertical axis. Axis out of tolerance. Extended maintenance required as axis will need cleaning and regreasing. Carried out extended maintenance including greasing, replacement of seals and alignment of laser paths. Updated firmware to latest v8.56. Cleaned equipment. Tribrach checked and adjusted. Produced certificate.
362394	17-Apr-2013	LC	Holborn		
362394	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 17	Current position confirmed from Argus.
362394	22-Dec-2014	LC	Uckfield		Returned from site
362394	06-Jan-2015	FC	Uckfield		Working but suggest service
362394	17-Feb-2015	PU	SCCS		Picked up by SCCS driver for service + repair



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362394	13-Mar-2015	LC	Uckfield		Returned from SCCS after repair/service
362394	12-Mar-2015	CAL	SCCS		Certificate of Conformity
362394	16-Mar-2015	SET	Uckfield		Setup for site.
362394	07-Apr-2015	PU	Tottenham Court Road - Surface		Taken to site by Steve Maguire
362933	29-Dec-2011	DN	Uckfield		new instrument
362933	27-Jan-2012	LC	Paddington - Station		Taken to site
362933	07-Feb-2012	LC	Uckfield		Returned from site - unused unit - not installed
362933	16-Mar-2012	LC	Paddington - Station		Taken to Site
362933	19-Mar-2012	LC	Uckfield		Returned from site - unused
362933	12-Apr-2012	LC	Oxford Street	94-98	Taken to Site
362933	25-Apr-2013	LC	Uckfield		ATS was not not reading any points
362933	02-May-2013	RR	Uckfield		Email sent to Leica for collection
362933	02-May-2013	PU	Leica		
362933	12-Jun-2013	SR	Uckfield		Instrument TM30 was received into service for reported HZ Movement issues, an incoming inspection was performed and as a result an extended maintenance was required. The instrument successfully passed a circle Cleanliness inspection. The Instrument's focusing system, standing axis and tilting axis have all been dismantled, cleaned , greased, rebuilt and adjusted. All Gaskets have been replaced. Both the horizontal and vertical piezo drives have been inspected and adjusted as necessary. The Theodolite, EDM, tilt sensor, and ATR have all been inspected and adjusted. The Instrument's HZ-collimation and V-index (coarse) has been adjusted. The instrument and its accessories (incl. container) have been intensively cleaned. The EDM additive constant has been re-determined This instrument passed an outgoing inspection and has been issued with a service Certificate.
362933	25-Jun-2013	LC	Holborn		Delivered to Holborn for Simon Nevard
362933	30-Aug-2013	LC	Holborn		
362933	20-Sep-2013	LC	Uckfield		Returned from Holborn
362933	20-Sep-2013	FC	Uckfield		Have re set up the unit and done a test with unit from the logger and all works ok. Andor confirmed that unit is ok to place back on to a site environment.
362933	24-Sep-2013	LC	Holborn		Taken to Holborn to be stored



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362933	30-Sep-2013	LC	Uckfield		When connected to main power, the ATS start flashing and didn't take any readings. General EDM error 84. This RTS was set up the 29/08/2013 and sent to Holborn the 20/09.
362933	30-Sep-2013	FC	Uckfield		Firmware 8.71, horizontal movement jerky. Laser will not turn on. General EDM error (84).
362933	30-Sep-2013	RR	Uckfield		Email sent to Leica for repair.
362933	01-Oct-2013	PU	Leica		Returned to Leica for repair
362933	17-Oct-2013	LC	Uckfield		Returned from Leica
362933	17-Oct-2013	SR	Uckfield		TM30 received with positioning errors and no ATR/EDM function. Carried out inspection/test protocol. Confirmed fault on both accounts. Diagnosed positioning errors to faulty drivers and modification required. Diagnosed ATR/EDM faults down to faulty base board. Modification, replacement driver and replacement base board will all need to be carried out. Completed cleaning and greasing of tilting and standing axis. Replaced Vertical ceramic ring and membranes. Horizontal driver had been replaced in previous job. Re centered HZ driver and carried out burn in test. HZ driver now not jumping however vertical motor power has failed in motor function test. Replaced Vertical motor and carried out a further burn in test. Both drivers now pass in motor function test and frequency sweep. Replaced faulty base board and completed all required adjustments including alignment of laser paths. Completed cleanliness and baseline checks. Carried out outgoing test protocol with full pass. Cleaned equipment. Produced certificate.
362933	22-Oct-2013	LC	Holborn		Taken to Holborn for Mathieu
362933	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 11	Current position confirmed from Argus.
362937	29-Dec-2011	DN	Uckfield		new instrument
362937	16-Mar-2012	LC	Paddington - Station		Taken to site
362937	19-Mar-2012	LC	Uckfield		Returned from site - Unused
362937	13-Apr-2012	LC	Tottenham Court Road - Surface	ATS 6	Taken to site by Jon for Cleyton
362937	16-Apr-2012	LC	Tottenham Court Road - Surface	BOS06	
362937	08-Jun-2014	LC	Uckfield		Returned from site after decommissioning



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
362937	23-Jun-2014	FC	Uckfield		Working but minor faults found. Service requested by Dom K.
362937	30-Jun-2014	RR	Uckfield		Repair request sent to SCCS.
362937	01-Jul-2014	PU	SCCS		Picked up for SCCS repair
362937	11-Aug-2014	SR SCCS	Uckfield		Service Report
362937	05-Aug-2014	CAL	SCCS		Certificate of Conformity
362937	11-Aug-2014	LC	Uckfield		Returned from SCCS after repair
362937	14-Aug-2014	SET	Uckfield		Setup for site
362937	07-Oct-2014	PU	KGI Hanover Square Office		Taken to site/BFK
362202	12-May-2011	DN	Uckfield		New instrument
362202	02-Sep-2011	LC	Tottenham Court Road - surface	ATS 17	BONDSTREET ATS 17
362202	09-Jan-2013	RAJ	Tottenham Court Road - Surface	ATS 17	Unit is now BFK unit
362202	25-Apr-2013	LC	Uckfield		Awaiting fault report - Instrument returned for calibration
362202	25-Apr-2013	PU	Leica		Returned to Leica
362202	18-Jul-2013	LC	Uckfield		Returned from Leica
362202	18-Jul-2013	SR	Uckfield		TM30 #362202 sent in for servicing. Extended use maintenance carried out. carried out incoming test using service software. New horizontal piezo fitted. New ball cage and axial bearing fitted. sensorboard add-on chip fitted. New membrane fitted. All major seals and gaskets replaced with new items. Firmware V8.71 installed Applications upgraded where necessary. RAM cleared. Carried out cleanliness, outgoing, and baseline test protocols. Necessary adjustments made. All tests passed OK. Accessories checked. Everything cleaned. Certification issued.
362202	30-Jul-2013	LC	Holborn		Delivered to Holborn
362202	17-Jul-2014	LC	Tottenham Court Road - Surface	BOS 14	Current position confirmed from Argus.
362343	09-Nov-2011	LC	BFK		Taken to Site
362343	11-Nov-2011	LC	Uckfield		Returned from site, Not used.
362343	14-Nov-2011	LC	TCR	14-15 Carlisle Street	Taken to site
362343	20-Feb-2014	LC	Uckfield		Returned after repair from SCCS. Main record created for this instrument as one didn't exist.
362343	20-Feb-2014	SR SCCS	Uckfield		Instrument received for Calibration. Relubricate tilt axis. Service as Required. Carry Out Incoming and Outgoing Checks. Circle Clean Checks. Partially



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
					Strip. Realign Vertical and Horizontal Drives. Overhaul Dust Ring and Focus Assemblies. Realign Tilt Axis. Upgrade Firmware to V8.71. Replace Parts as Listed. Realign Diodes and Optics. Adjust Electronics. Test Compensator. Reassemble and Reseal. Base Line Test. Clean, Check and Adjust. Clean Case. Issue Test Certificate.
362343	01-Apr-2014	SET	Uckfield		Setup for site
362343	02-Apr-2014	PU	KGI Hanover Square Office		Taken to site
362343	13-Feb-2014	CAL	SCCS		Certificate of Conformity
362343	22-Aug-2014	LC	Uckfield		Returned from site by Scott Baldwin
362343	22-Aug-2014	FC	Uckfield		Faults found
362343	26-Aug-2014	RR	Uckfield		Repair request sent.
362343	27-Aug-2014	PU	SCCS		Picked up for repair by SCCS driver
362343	03-Sep-2014	CAL	SCCS		Certificate of Conformity
362343	05-Sep-2014	LC	Uckfield		Returned from SCCS after repair
362343	05-Sep-2014	SR SCCS	Uckfield		Service report - initialisation fault found requiring sending back to SCCS
362343	08-Sep-2014	PU	SCCS		Picked up by SCCS driver for post-repair repair.
362343	10-Sep-2014	LC	Uckfield		Returned from SCCS.
362343	11-Sep-2014	SET	Uckfield		Setup for site
362343	09-Oct-2014	PU	KGI Hanover Square Office		Taken to site/BFK
102096	17-Oct-2012	DN	Uckfield		new instrument
102096	26-Nov-2012	LC	Tottenham Court Road - Surface		Taken to site
102096	20-Sep-2013	LC	Uckfield		Unit returned from Holborn, No point read since 22/07/2013. Intermittent error -99955 error on positioning.
102096	20-Sep-2013	RR	Uckfield		Email sent to Topcon for repair - Boots up to "error self check" Unit will not take a distance measurement unit just searches for a prism, does not even come up with "target not found"
102096	23-Sep-2013	PU	Topcon		Returned to Topcon for repair
102096	09-Oct-2013	LC	Uckfield		Returned from Topcon
102096	09-Oct-2013	SRT	Uckfield		Confirmed: defective shutter. Replaced shutter and performed all necessary adjustments. Check and adjust according to specifications. Software upgrade (Basic 1114-32-29, MDCPU 1088-30-08, TIPI 1088-40-10, EDM 1088-94-12). Calibration report.
102096	16-Oct-2013	LC	Holborn		Taken to be stored at Holborn
102096	10-Jun-2014	LC	Uckfield		Returned from site after



SN	Date Received / Sent away	Record Type	Location/Site	Position	Notes
					decommissioning.
102096	16-Jun-2014	FC	Uckfield		No faults found.
102096	17-Jun-2014	SET	Uckfield		Setup for site.
102096	10-Jul-2014	PU	KGI Hanover Square Office		Taken to site.
102096	29-Aug-2014	LC	Uckfield		Returned unused due to no space at BFK offices
102096	05-Nov-2014	PU	KGI Hanover Square Office		Taken to BFK by unknown site tech
102096	23-Jan-2015	LC	Uckfield		Returned from site for fault investigation
102096	23-Jan-2015	FC	Uckfield		Faults found. Instrument not working.
102096	28-Jan-2015	PU	Topcon		Picked up by TNT for repair/service at Topcon GB
102096	08-Apr-2015	LC	Uckfield		Returned from Topcon GB after repair/service
102096	07-Apr-2015	SRT	Topcon		Service report
102096	07-Apr-2015	CAL	Topcon		Certificate of Conformity
102096	09-Apr-2015	SET	Uckfield		Setup for site
102096	07-Jul-2015	PU	Tottenham Court Road - Surface	BOS16	Taken to site to replace BOS16
362346	07-Nov-2011	LC	TCR	ATS J 183-185 Wardour Street	Taken to Site
362346	04-Feb-2014	DN	Uckfield		new instrument
362346	04-Feb-2014	LC	Uckfield		Returned after repair from SCCS
362346	04-Feb-2014	SR SCCS	Uckfield		Calibration required. Instrument received very dirty. EDM diode alignment required adjustment. Service as required. Carry out incoming and outgoing checks. Circle clean
362346	05-Feb-2014	LC	KGI Hanover Square Office	TCR F	Taken to the offices for Mathieu
362346	29-Jan-2014	CAL	SCCS		Certificate of Conformity